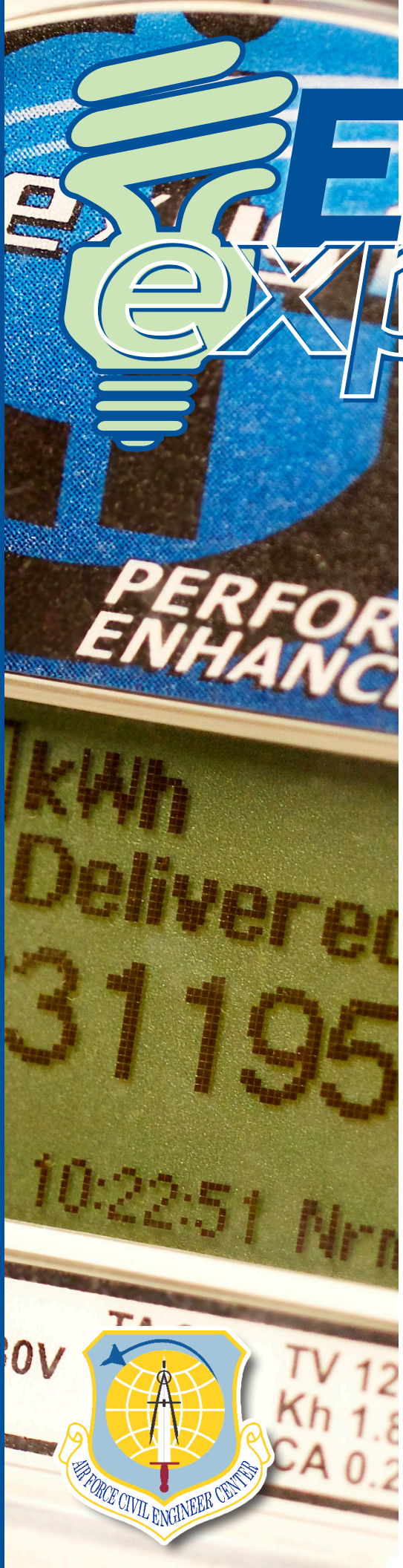

"Make Energy a Consideration in All We Do"

ENERGY eXpress

The Air Force Civil Engineer Center Energy Newsletter *January 2013*

New Year brings new ESPC process

Jennifer Elmore
AFCEC Public Affairs

The New Year brings with it a new and improved process for implementing Air Force Energy Savings Performance Contracts. The overhaul began in November when Air Force energy leaders suggested holding an Industry Day event at Tyndall Air Force Base, Fla., also home to the Air Force Civil Engineer Center, which centrally manages the ESPC program. Representatives from more than 20 energy service companies and utility companies participated.

Rather than use taxpayer dollars up-front, the Air Force uses ESPCs to provide energy-efficient improvements with third-party funds. They typically have performance periods of 10 to 20 years and come with complex financial terms. ESCOs recover investment costs plus overhead and profit from funds made available via lower utility and operation and maintenance costs.

Since 2010, the Air Force has set aside what it calls "energy focus funds" – $250 million a year. "Those dollars are going away in two years. We have to leverage third-party partnerships to get after these energy goals because a shrinking budget is coming," said the Air Force Civil Engineer, Maj. Gen. Timothy Byers.

Industry Day gave the Air Force an opportunity to share its philosophy and practices in regards to the energy program and the role of ESPCs. They discussed ideas such as establishing a centralized contracting mechanism at AFCEC, educating base energy managers on how to engage with ESCOs and educating wing leadership about ESPCs.

Following industry day, AFCEC conducted a three-day Rapid Improvement Event. Representatives from AFCEC, Air Staff, the office of the Secretary of the Air Force, the Department of Energy, installations and major commands evaluated ways to streamline and improve the ESPC process and industry partnerships. In the past, it was not uncommon for an ESPC to take three to four years to implement.

AFCEC Energy Director Rick Stacey said, "We are targeting 12 months. Not all projects will fit into that mold but to the extent we can, we want a tighter schedule." Stacey also noted that the ESPC Engineering Technical Letter last updated in 2011 may be difficult to interpret. "We discovered that our ETL may not be as useful as we had hoped it was and there are opportunities to make it better," said Stacey. For example, he says engineering steps are specified in the ETL but the contracting steps are not. "Additionally, the previous policy letter on ESPC left some base engineers uncertain how to engage with ESCOs," said Stacey. "We're going to fix that."

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The Air Force is testing a standardized advanced meter reading system which manages utility data and provides critical information required by the Energy Independence and Security Act of 2007. The AMRS contract is the first enterprise wide CE contract managed by AFCEC which will deploy the AF standard meter reading system at 80 bases. (US Air Force Photo/Eddie Green)

new process

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As a result of the RIE, several key improvements to the acquisition process were identified and will be incorporated into a revised ETL. Les Martin, AFCEC ESPC program manager, said, "There are three main areas of focus we believe will make a big difference. First, centralize the acquisition and legal review process at AFCEC. Next, move from a "submit/review" process to a more collaborative partnership with industry. Finally, eliminate over-engineering by the government in several key points in the process." Martin said these changes will make the 12-month timeline a more realistic target for future projects.

The Honorable Terry Yonkers, Assistant Secretary of the Air Force for Installations, Environment and Logistics speaks to representatives from more than 20 energy service companies and utility companies during AFCEC's Energy Savings Performance Contract Industry Day event at Tyndall AFB, Fla., Nov. 26, 2012. (U.S. Air Force Photo/Eddie Green)

ESPC Process

- ✓ Gov't team develops project scope
- Contracting officer (CO) sends Notice of Opportunity (NoO) to all 16 ESCOs on Department of Energy IDIQ
- Interested ESCOs conduct site visit and develop Preliminary Assessment (PA)
- ✓ Gov't team evaluates PAs in accordance with selection criteria and down selects to one ESCO to conduct an Investment Grade Audit (IGA)
- ESCO conducts IGA
- Gov't team reviews IGA at 30% / 60% / 90% stages and provides comments
- ESCO delivers 100% proposal to Gov't team
- Gov't team reviews, comments and CO negotiates with ESCO
- ✓ CO awards task order

✓ = AFCEC approval point

Energy Costs go down, comfort level goes up

Amy Ausley
AFCEC Public Affairs

When the sun goes down in the winter at the Transit Center at Manas, Kyrgyzstan, the temperatures can plummet to 20 degrees below zero. In the summer months, the thermostat can shoot as high as 110. Imagine sleeping in an uninsulated tent in those conditions and trying to get comfortable.

The Transit Center serves as a main transit hub for U.S. and Coalition personnel coming and going from Afghanistan. The base uses tents to house transiting personnel while they wait, but it is a major undertaking to heat and cool those tents. Previously it took two environmental control units to cool each tent and two Polar Bear heating units for heat. Using that much power is a costly endeavor.

The base installed Alaska Small Shelter Systems to 54 Double Alaska tents in January 2012 to try and reduce the cooling and heating loads. The AKSSS consists of flys installed on the outside of the tents and liners for insulation added to the inside. Not only did the Transit Center reduce its fuel oil load for these 54 tents, it managed to cut it nearly in half!

The flys are made of a fine mesh which stretches across the top and sides of a tent and are secured to the ground with metal rods. The flys provide shade from the blazing sun and act as a wind barrier as well. The liners go on the inside of the tent and provide insulation against the extreme temperature. They also reduce the effort to regulate the internal temperature.

"The flys and liners are easy to install. The 376 ECES [Expeditionary Civil Engineering Squadron] used an all-volunteer labor force this summer to add the kits to the transient lodging tents and the pay-off thus far has been well worth the effort," stated Capt Dustin Creed, 367 ECES Chief, Programs Flight. With the flys and liners in place, each tent now only requires one ECU and one Polar Bear Unit for heating and cooling. For the 54 tents

STORY CONTINUED ON PAGE 5

Pictured above is the Alaska Small Shelter System attached to one of the tents at the Transit Center at Manas, Kyrgyzstan. The fly, which goes over the top of the tent, helps block the sun in the summer and the wind in the winter. An insulated liner on the inside of the tent helps regulate the temperature year-round.

AMC announces Energy Incentive Awards

by Airman 1st Class Victor J. Caputo
22nd Air Refueling Wing Public Affairs

Air Mobility Command recently announced the winners of the 2012 Energy Incentive Awards. Fairchild Air Force Base, Wash., won first place and $100,000, Travis AFB, Calif., came in second place and received $75,000 and McConnell AFB, Kan., was awarded third place and $50,000.

The awards are designed to recognize the top bases and people in the command in energy conservation and improvement.

Using an energy management control system, Fairchild reduced energy consumption and costs by thousands of dollars. Another $2.3 million was saved on fuel costs by the 92nd Operations Group.

Travis installed window film base-wide and is leading a solar Enhanced Use Lease proposal effort. Wing leadership uses hybrid powered staff vehicles, demonstrating their commitment while saving fuel.

In addition to winning third place in the competition, McConnell also had an individual award winner. Rex Bluml, 22nd Civil Engineer Squadron chief asset manager, won second place on the individual level.

"Renewable energy is always something we're interested in," said Maj. Robert Liu, 22nd CES acting commander. "Here in [the 22nd CES] compound, we're always experimenting to see if projects are feasible and will work out for us."

McConnell made strides in conserving water through leak detection and solar-powered ground water cleaning; trained 150 facility managers on the energy policy and won the Kansas Water Environment Association 2011 Gold Award for industrial water and wastewater operations.

"There are a lot of projects we've done," said Liu. "There are the direct digital controls we installed for air conditioning units on base; we're working on a smart metering project and new digital thermometers in some buildings."

Bluml was honored for being the "man behind-the-scenes" for many of the base's achievements.

He managed the purchase of the water leak detector, which saved the base 3.6 million gallons of water, and trained dozens of facility managers on the energy policy. He also spearheaded an in-house development of energy programs, saving McConnell thousands of dollars.

"I've got a great group of people here to work with," said Bluml. "It's never about what one person's going to do; no one person will ever have all the answers. Having a team of people to collaborate with and come up with ideas is really the key to success."

The biggest energy project that the 22nd CES is working on involves an increase in wind power to the base.

A single wind turbine was installed outside of the 22nd CES utility shop in May 2012, to test the efficiency of the unit's powering capabilities. The success of the turbine has prompted a plan to install several more on base.

A wind turbine slowly rotates on a calm day at McConnell Air Force Base, Kan. The turbine, currently the only one on base, generates power for the 22nd Civil Engineer Squadron utility shop, pictured behind the turbine. The performance and benefit from this turbine is being studied to determine if more could be implemented around base. (U.S. Air Force photo/Airman 1st Class Victor J. Caputo)

Air Force holds successful Energy Action Month

Amy Ausley
AFCEC/PA

Energy Action Month 2012 was a huge success. Air Force bases across the world participated with activities focused around the theme "I am Air Force energy." Events included everything from energy-saving contests to displays and mascots at Air Force football games. The following is a brief round-up of some of the things we saw in October.

Arnold AFB, Tenn.
Arnold held the "How Low Can You Go" energy competition between five office buildings to determine how much each facility could reduce its individual energy consumption from the previous year's level. Data from specific "How Low Can You Go" days was measured to determine the affects of the energy savings measures that were taken.

Edwards AFB, Calif.
Edwards' Energy Team had a display at the annual Salute to Youth Conference in the Antelope Valley and did energy crafts at the Youth and Child Development Center. The installation commander signed an Energy Action Month declaration. The mobile utility conservation awareness van was parked at the BX and there were Energy Action Month posters and plaques at each entry gate

Eglin AFB, Fla.
Eglin hosted its annual Energy Expo, featuring approximately 30 vendors and companies providing energy-related product demonstrations and information. Gulf Coast Energy Network gave

STORY CONTINUED ON PAGE 5

Energy mascot "Pete Light" pauses from his duties of promoting energy awareness during the Air Force/Navy football game to pose with Air Force Cadets and Navy Midshipmen. Pete's appearance at the game was part of the activities surrounding Energy Action Month in October.

Airmen reduce energy use in competition

by Kirtland AFB Resource Efficiency Manager

The final results of the October Dormitory Energy Competition at Kirtland Air Force Base, N.M., are in. The Pararescuemen and 58th Training Squadron personnel living in building 20351 won first place by reducing their energy consumption by 20 percent.

Residents in all four dormitories on base competed to achieve the greatest reductions in energy consumption during October's Energy Action Month. Overall, energy consumption in the four dormitories was 15 percent lower in October 2012 than in October 2011.

Dormitory residents were challenged to reduce energy without compromising their comfort. They were provided with energy saving tips and energy awareness posters were placed in common areas.

Both residents and managers contributed to these successful competition results by adjusting thermostats and turning off lights, TVs and other electronic equipment when leaving rooms unoccupied.

October was the month to transition from using air conditioning to heating, so when airmen left their rooms for extended periods of time, thermostats were adjusted up to about 80 F for air conditioning or down to 62 F for heating. With about 50 percent of the energy in a building being used for heating and cooling, thermostat settings can have a tremendous influence on energy savings. Reducing energy wasted to heat or cool unoccupied rooms is one of the most effective ways to save energy and reduce costs.

The Airmen demonstrated that we all have the power to contribute to the Air Force's energy reduction goals. It's estimated that up to 20 percent of energy consumed in buildings is wasted. Becoming more aware of how energy is used, and often wasted, in our personal and professional lives is the first step to making necessary changes.

Energy Action Month

CONTINUED FROM PAGE 4

energy presentations and there was a display of vehicles that run on CNG, electricity, etc.

The vice wing commander gave awards to the first place winners of the grades 1-4 energy poster contest.

Hanscom AFB, Mass.
An energy canopy was displayed in high-traffic areas on base and an Energy Action Month pop-up screen was shown during initial daily computer log-on. The energy team did an interactive energy project with students at the base elementary school and conducted random, unannounced facility "energy sweeps".

Kirtland AFB, N.M.
The base gave a presentation of energy saving Air Force activities at the New Mexico State Fair Booth and distributed energy-related handouts and tips.

Robins AFB, Ga.
Robins provided energy-related speakers at different locations on base.

Tinker AFB, Okla.
Tinker hosted a media event with Dr. Kevin Geiss, Deputy Assistant Secretary of the Air Force for Energy, Office of the Assistant Secretary of the Air Force for Installations, Environment and Logistics relating to the launch of an Energy Savings Performance Contract at the base. The base also announced the 552nd Air Control Wing as the winner of their first ever "Off We Go Energy Reduction" competition.

Wright-Patterson AFB, Ohio
The base hosted a "Base-wide Holiday Weekend Challenge" energy contest asking personnel to make a combined effort to turn off and unplug all unnecessary devices (printers, copy machines, monitors, speakers) and lights for the weekend.

Whiteman AFB, Mo.
Whiteman created an Energy Facebook page and posted "person on the street" interviews asking "What do you do to conserve energy resources" as well as other energy saving tips and information. You can check it out at: http://www.facebook.com/WhitemanEnergyProgram

US Air Force Academy, Colo.
The Academy had mascot "Pete the light" at the Navy game and displayed electric cars at their energy booth at the October football games.

Joint Base Andrews, D.C.
The base provided tours of LEED certified buildings, held outreach events, published articles on the base website and in the base newspaper. The energy team also set up an energy booth at the commissary.

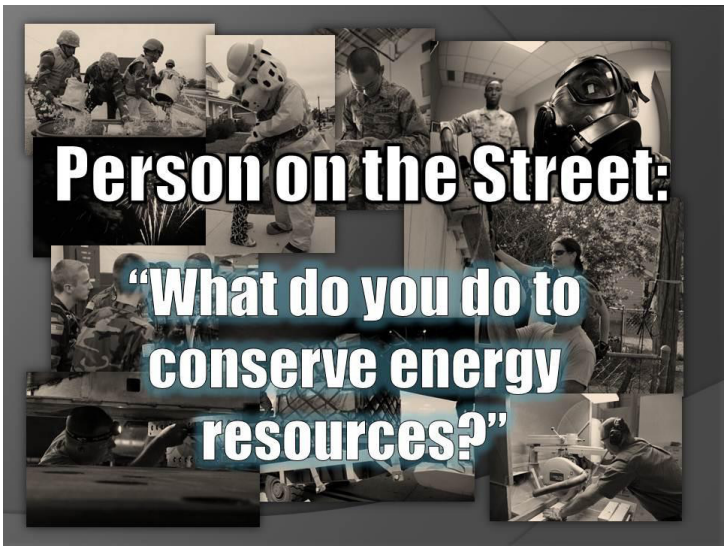
tents

CONTINUED FROM PAGE 2

with AKSSS, fuel oil requirements are down nearly 47 percent with a monetary savings of $582,162 for the year.

Another benefit of the flys and liners is the increased quality of life for our deployed personnel. The tents are now much more comfortable temperature wise and much quieter because the fly is so buttoned down it provides a bit of a sound cushion. "The tents have proven to have sufficient cooling using only one ECU and there were no complaints from the personnel that occupied the tents during the hottest part of the summer," according to Capt Creed.

There are currently 100 more flys and liners in prepositioned storage which can be deployed rapidly when requested by units with Alaska Tents already in the field. The U.S. Air Forces Central Command, which oversees the Transit Center as well as bases within the Southwest Asia region, is so pleased with how well the units work they want to include the AKSSS with every tent. Joe McManus, AFCENT A7 Energy Program Manager, says, "These flys and liners are the way forward for AFCENT. We are waiting for approval to purchase the flys and liners for every tent unit that will be deployed in the future as part of our housekeeping sets. The beauty of these systems is that they are completely redeployable."



Whiteman Air Force Base, Mo., created a Facebook page to promote energy awareness across the installation. One of their posts during Energy Action Month in October was a group of 'person on the street' interviews asking the question "What do you do to conserve energy resources?"

Visit us online

facebook.com/AirForceCE

youtube.com/AFCivilEngineer

Spotlight on Success

CPS Energy rewards JBSA-Randolph

Randolph and CPS Energy representatives hold a check representing a $23,048 credit on Randolph's utility bill, the result of the installation's participation in CPS Energy's Demand Response Program this summer. From left are Col. Christine Erlewine, 902nd Mission Support Group commander; Luis Medina, 902nd Civil Engineer Squadron Energy Management Control System; Bruce Dschuden, JBSA resource efficiency manager; Yvonne Haecker, CPSE energy solutions manager; and Ruben Ramos, 902nd CES energy manager.

Annual Energy Management Report

AFCEC/CNA submitted the AF AEMR for staffing on Nov. 9, 2012. Goal subject energy intensity reflects a reduction of 20% from 2003 (goal 21%), renewable electricity accounted for 5.5% of total goal subject electrical consumption (goal 5%), goal subject potable water intensity reflects a reduction of 18.4% from 2007 (goal 10%), 85% of required electrical meters were installed (goal 100%), and 100% of new building designs were 30% more efficient than relevant code, where life cycle cost effective (goal 100%). These metrics are current as of Nov. 9, 2012 but subject to change. Historically, the numbers are adjusted as the AEMR package makes its way through HAF, SAF, OSD, and DoE/FEMP. (Ms. Stone, AFCEC/CNA, DSN 523-6556)

Air Force Energy Reporting System training

The new ("11g") version of Automated Civil Engineer System, including the AFERS module, went online Dec. 7, 2012. AFCEC/CNA held five DCO training sessions and trained over 70 MAJCOM/base personnel on the new AFERS module. The recorded training sessions can be accessed via web at: https://connect.dco.dod.mil/p2lxs6p4wt2/?launcher=false&fcsContent=true&pbMode=normal. (Ms. Stone, AFCEC/CNA, DSN 523-6556)

Utilities Privatization pre-proposal conference

DLA Energy released the Joint Base San Antonio UP Request for Proposal in Nov 2012. This project includes utility systems at Lackland AFB (electric, gas, sewer, water), Randolph AFB (electric, gas, water), and Ft Sam Houston (sewer, water). More than 50 individuals representing over two dozen companies registered to attend the Pre-Proposal conference, indicating significant interest by industry in acquiring one or more of the systems. Award decisions are projected for FY 15. (Ms. Coleal, AFCEC/CNU, DSN 523-6655)

Florida Power and Light rate case settled

Florida Public Utility Commission approved a settlement agreement in a Utility Rate Case involving FP&L. Settlement provides an aggregate cost avoidance to Patrick AFB, Cape Canaveral AFS, NASA and Homestead ARB of $2.7M annually for FY13-FY16 totaling $10.8M. FP&L had requested an increase that would have required $3.49M in additional cost per year but settlement reduced this to only $781K. Lt Col Greg Fike, AFLOA/ULT, lead the rate intervention effort and key testimony was provided by Mr. Ryan Allen, 45 CPTS, from Patrick AFB. (Mr. Gray, AFCEC/CNR, DSN 523-6357)

Sustainable Infrastructure Assessment beta test

AFCEC and USACE jump-started the FY12 SIAs with a beta test at JBSA Randolph Dec. 3-14. The six other regional SIA teams observed the southwest regional team and will incorporate lessons learned into future site visits. (Mr Giniger, AFCEC/CND, DSN 523-6398)

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

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