

*"Make Energy a Consideration in All We Do"*

# ENERGY express

The Air Force Facility Energy Center Newsletter

January/February 2011

## A New Vision for ECIP

*This information is taken from a December 2010 memo from Dr. Dorothy Robyn, Deputy Undersecretary of Defense (Installations and Environment).*

The Energy Conservation Investment Program (ECIP) is a critical element of the Department of Defense's (DOD) strategy to improve the energy performance of its permanent installations. As part of the Military Construction appropriation program, ECIP traditionally has funded energy conservative projects that promise a significant payback in reduced energy costs. Although ECIP has enjoyed strong support in Congress as well as the Office of Management and Budget, it is and will remain a relatively small program: the President's FY2011 budget requested \$120M, and the House and Senate recommended \$130M and \$290M, respectively. Thus, it can achieve only a small fraction of the Department's energy goals. Moreover, the Services are establishing and funding their own, much larger programs aimed at reducing the demand for traditional sources of energy and expanding the supply of clean energy.

OSD is trying to change the role that ECIP plays from one of funding the services' routine energy projects to one of leveraging the investments in ways that will produce "game-changing" improvements in energy consumption, costs and/or security.

To help the services refocus their efforts, OSD identified the following goals for projects to be competitive:

- Dramatically change the energy consumption at an individual or joint installation, for example, by improving the performance of a power or steam plant;
- Implement across multiple installations a technology validated in a demonstration program sponsored by DOD or Department of Energy (DOE) (e.g., the Installation Energy Test Bed Initiative);
- Integrate multiple energy savings, monitoring, and renewable energy technologies to realize synergistic benefits;
- Integrate distributed generation and storage to improve supply resiliency for critical loads;
- Implement the capital investments from an energy security plan, especially where such an investment would leverage a partnership with DOE.

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*Workers install a geothermal heating system at a Minot AFB dormitory to replace an outdated heating system. (Air Force photo by A1C Aaron-Forrest Wainwright)*





# Air Force Energy Leader Visits AFCESA

Jennifer Elmore  
AFCESA/CEBH

1/11/2011 – TYNDALL AFB, Fla. -- The new Deputy Assistant Secretary of the Air Force for Energy, Dr. Kevin Geiss, visited the Air Force Civil Engineer Support Agency 6-7 Jan. to learn about AFCESA's Facility Energy Center. "Part of my job at the secretariat level is to advocate for what you're doing," Dr. Geiss told AFCESA leaders. "The better you can help me understand your issues and challenges, the better I can talk about these things either to the Headquarters staff or as I go around to the Hill. I feel like I've learned a lot during my visit about your operations, how they contribute to the Air Force's energy goals, how we can strengthen the partnership between our offices, and about the criticality of our working together toward a common goal."

While Dr. Geiss' tour of AFCESA concentrated on the energy division, he also visited the Airfield Pavement Evaluation team; the Civil Engineer Maintenance, Inspection, and Repair Team; and Tyndall's new fitness center.

Dr. Geiss was selected as the Air Force Deputy Assistant Secretary for Energy in November 2010. His office includes a staff of 11 people dedicated to energy policy development and support of energy-focused programs.

Prior to leading the Energy Office, Dr. Geiss spent two years as the program director for energy security in the Office of the Assistant Secretary of the Army for Installations and Environment.

In 2010, Air Force leaders recognized that the continued emphasis and importance of energy policy in support of the mission warranted a dedicated and separate deputy assistant secretary and took steps to establish the position.



*Dr. Kevin T. Geiss, a member of the Senior Executive Service, is the Deputy Assistant Secretary of the Air Force for Energy.*

While the Deputy Assistant Secretary for Energy position is a new one, the office originated as the Energy Program Management Office and has been operational since 2009, but previously reported to the Deputy Assistant Secretary for Energy, Environment, Safety and Occupational Health. The establishment of this new position and the realignment of capabilities emphasize the Air Force's dedication to energy efficiency.

AFCESA's energy division, known as the Air Force Facility Energy Center, is made up of more than 50 engineers and energy experts who identify, evaluate and help implement technologies and funding strategies to enable the Air Force to meet and surpass federal energy goals. AFFEC Director Mr. Rick Stacey said having Dr. Geiss' support in Washington is a big plus for AFFEC. "We were very pleased to have the opportunity to host Dr. Geiss, and particularly happy to hear his views on Air Force energy policy and program execution. We are looking forward to strengthening our alliance with Dr. Geiss and his staff in the coming months and years."



*Air Force Civil Engineer Support Agency Commander Col David Reynolds (right) hosts Col Jon Ostertag, A7CA and Dr. Kevin Geiss, Air Force Deputy Assistant Secretary for Energy, during a visit to AFCESA, Tyndall AFB, Fla., Jan. 6-7.*

# Air Force Looks to Industry for Innovative Energy Ideas

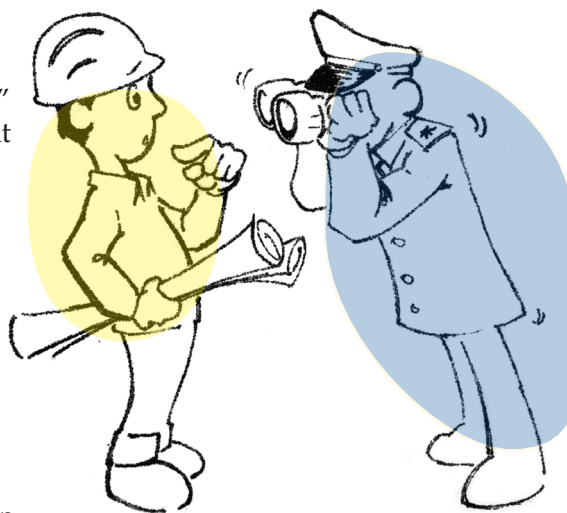
1/7/11 - DALLAS, Texas – The Air Force is making good progress in its efforts to develop on-base renewable energy projects with 45 in operation and many more in the pipeline. According to the 2010 Air Force Energy Management Report, renewable energy accounted for 6.4 percent of the total energy consumed, exceeding the 5 percent goal for the year.

The first-ever Air Force Renewable Energy Industry Day, held in Dallas in December, helped foster momentum among Air Force engineers and more than 250 industry professionals to produce more green power on installations. "The Air Force is serious about renewable energy," said Mr. Terry Yonkers, Assistant Secretary of the Air Force for Installations, Environment, and Logistics, who delivered the keynote address. "We remain flexible and open to industry ideas and recommendations to start building projects."

The Air Force Civil Engineer Support Agency (AFCEA), Tyndall Air Force Base, Fla., is preparing request for information documents that will be posted on the Federal Business Opportunities website ([www.fedbizopps.gov](http://www.fedbizopps.gov)). "We want contractors to give us new ideas and inputs that we can incorporate into our planning," said Mr. Ken Gray, Energy Rates and Renewables Branch Chief at AFCEA. The responses will be reviewed and used for additional project ideas, technology evaluation and RFP development.

To lay the groundwork for solicitation and evaluation of business proposals over the next several years, Mr. Yonkers cited Executive Order 13514, signed by President Barack Obama in October 2009, which called for

federal agencies to increase the use of on-base renewable energy and reduce greenhouse gases. Mr. Yonkers also affirmed the need for private sector investment. Executive Order 13514 is one of several executive orders and statutes enacted over the past six years that address federal leadership concerning on-base renewable energy, reduction of greenhouse gases, the management of scarce resources, and ensuring water air quality and even recyclable waste are treated with due diligence.



"We're reaching out to qualified companies able to propose designs, business plans, and renewable energy products to build on our bases," Mr. Yonkers said. "Your involvement as we implement the renewable energy game plan is absolutely critical as we continue to reduce energy demand, increase the available supply, and change the culture of energy awareness in the Air Force."

Industry professionals heard from a panel of Air Force energy experts including Mr. Gray; Dr. Kevin Geiss, the Deputy Assistant Secretary of the Air Force for Energy; Jeffrey Domm, Air Force Real Property Agency; and Steven

Sample, Air Force Operations for Mission Compatibility.

Industry experts were also asked what issues they foresee as limiting factors to executing the Air Force RE program. "The sheer volume of necessary renewable energy projects will inevitably present manpower challenges for both the Air Force and industry," said Mr. Gray. "Technical issues such as storage, radar interference with wind turbines, and utility company standby charges for back-up generation must be discussed and resolved. Energy storage is a significant problem. The solar array at Nellis (AFB, Nev.), is wonderful, but it doesn't get us any electricity at night."

The space needed for photovoltaic panels, wind power and other renewable energy endeavors poses yet another obstacle, Mr. Domm said. He encouraged industry leaders to explore enhanced use leases (EULs) as another resource in the Air Force's renewable energy toolkit. An EUL is essentially a ground lease for non-excess installation property that may be under-utilized, said Mr. Domm. "The Air Force can lease property to a private sector organization, and in lieu of money, in certain cases, receive in-kind consideration, renovations or repair, including construction," said Mr. Domm. "In many cases, the best use for a parcel of land is an energy project, and the goal is to optimize the value of the land ... to optimize every square foot of property on an Air Force installation."

"As we gain momentum, (the goal of) 25 percent renewable energy will become 30, 30 will become 35 and eventually we're going to start moving into a really green economy based on this change," said Mr. Yonkers.

*Tech. Sgt. Amaani Lyle, Secretary of the Air Force Public Affairs, contributed to this article.*



U.S. DEPARTMENT OF  
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## Federal Energy Management Program


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### Upcoming Seminars: 2011

**February 3: Federal Fleet Management 101**

**Instructor:** Amanda Sahl, Federal Energy Management Program

**FEMP Expert:** Brad Gustafson

Meet E.O. 13514 and other Federal fleet requirements through best practices that reduce greenhouse gas emissions and petroleum consumption while increasing alternative fuel use and fleet fuel efficiency.

**March 3: Energy Savings Performance Contracts**

**Instructor:** John Shonder, Oak Ridge National Laboratory

**FEMP Expert:** Skye Schell

Learn how to work with ESCOs to streamline contract funding for energy management projects while meeting energy efficiency, renewable energy, water conservation, and emissions reduction goals.

**April 7: Utility Energy Service Contracts and Public Benefit Funds**

**Instructors:** Julia S. Kelley, Oak Ridge National Laboratory, and  
Phil Coleman, Lawrence Berkeley National Laboratory

**FEMP Expert:** David McAndrew

Learn more about financing the capital costs of energy improvement projects from savings generated through energy efficiency measures funded by utilities, public benefit funds, and other resources.

**May 5: Renewable Energy**

**Instructor:** Andy Walker, National Renewable Energy Laboratory

**FEMP Expert:** Anne Crawley

Learn about requirements and best practices for utilizing renewable energy for electricity, heating, cooling, and other applications at Federal facilities.

**June 2: Federal Fleet Infrastructure & Electric Vehicles**

**Amanda Sahl, Federal Energy Management Program**

Gain insight into ways to accelerate infrastructure upgrades and partner with other entities to advance the use of electric vehicles and other alternative fuel vehicles in Federal fleets.

**July 7: Labs, Data Centers, & High-Tech Facilities**

**Instructors:** Dale Sartor and Paul A. Mathew, Lawrence Berkeley National Laboratory

**FEMP Expert:** Will Lintner

Learn about E.O. 13514 requirements and best practices for improving the energy and environmental performance of Federal laboratories, data centers, and high-tech facilities.

**August 4: Energy Efficient Product Procurement**

**Instructors:** Linda Mesaros, Mesaros Associates, Inc. and  
Christopher Payne, Lawrence Berkeley National Laboratory

**FEMP Expert:** Shawn Herrera

Learn how to meet Executive Order and FAR requirements on purchasing FEMP-designated and ENERGY STAR products.

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# Spotlight on Success



## AFSOC to use Meters to Validate Roof Energy Savings

HQ AFSOC engineers say implementing inexpensive rooftop improvements to 500 buildings will save the major command significant amounts of energy. Six million square feet of rooftops at Hurlburt Field, Fla., and Cannon Air Force Base, New Mexico, were audited during the summer of 2010. Engineers are using the investment-grade audits to identify, develop, prioritize, program, and implement energy efficiency and renewable energy projects. The energy assessment focuses on four common energy savings scenarios for roofs: air infiltration, ventilation, insulation, and reflectivity.

Energy conservation projects must have a savings to investment ratio (SIR) of  $\geq 1.25$  to meet Air Force requirements and have a simple payback period (SPB) of no more than 10 years. The AFSOC roof energy audits used ASHRAE standards and calculations to identify two energy initiatives that far exceed Air Force minimum

funding criteria: mitigating air infiltration at both installations; and installing rooftop ventilators at Hurlburt Field.

AFSOC is investing nearly \$278K in with an expectation of saving 8,313 MBtus and \$134K annually. The projects exceed Air Force energy reduction targets with SIRs of 4.28 to 6.69 and SPBs 1.18 to 2.29 and equate to a 0.97 percent command-wide energy reduction.

AFSOC will provide meter validation data for the actual energy savings by taking baseline meter readings prior to the air infiltration mitigation project and comparing it to meter readings post mitigation. This data will be made available to all MAJCOMs in support of future air barrier retrofits for building envelope energy projects. It will also hopefully validate the engineering calculations used prospectively to estimate the savings potential from these projects.

According to the National Institute of Standards and Technology, air barriers can reduce air leakage by up to 83 percent and energy consumption for heating and cooling by up to 40 percent. *POC: Mr. Scott Pogue, AFSOC Resource Efficiency Manager, DSN 579-8974.*

## PACAF Launches New “ECO” Program

PACAF's new Energy Condition and Optimization program involves comprehensive, base-wide facility assessments to determine current facility energy intensity, condition, and space utilization. This information will help guide facility sustainment, restoration, and modernization investments and allow PACAF to meet energy reduction and demolition program goals.

Collecting facility energy audit, condition assessment, and space utilization information at the same time will allow PACAF to achieve significant program efficiencies by reducing the amount of redundant data and allowing for efficient data assessment. Use of an existing Geobase IT system will create a fusion of data into one integrated enabler platform. Eielson AFB and Kadena AB pilot ECO contracts are currently underway, with ECO contracts planned in FY11 for Osan, Yokota, and Kunsan. PACAF plans to conduct ECO contracts at Misawa AB and Joint Base Elmendorf-Richardson in FY12. *POC: Mr. Chris Wright, PACAF, DSN 449-2819.*

## Air Force Energy Reporting System (AFERS):

Gunter Annex (near Maxwell AFB, Alabama) will delay the AFERS release from 14 Jan to 11 Feb in order to resolve a significant data input problem. This issue was

not present in the “integration zone” during AFERS testing, but came to light during the training sessions last week. The 11 Feb priority release incorporates a

fix for this glitch as well as other modifications originally scheduled for March. *POC: Ms. Jaika Stone, AFCEA/CENE, DSN 523-6556.*



# EXPANDING Awareness

The Energy Strategic Communications Working Group made up of SAF/IEN, A7C, AFCESA, and others, meets twice a month to discuss Air Force energy communication efforts. Here's a look at what we're working on.

## *Awareness Materials Online –*

There are two websites energy managers and resource efficiency managers will find useful for awareness materials. First, go to the Air Force Energy Dashboard at <https://cs.eis.af.mil/af-energy/default.aspx>. Click on Governance, then FY11 Campaign Plans in the bottom right corner to view after-action reports from Energy Awareness Month 2010. See what your counterparts are doing and copy their great ideas! Second, the CE portal has a page devoted to energy awareness materials <https://cs.eis.af.mil/a7cportal/Pages/EAM.aspx>.

If you cannot log onto the CE portal contact: AFA7C. [StrategicComms@pentagon.af.mil](mailto:StrategicComms@pentagon.af.mil).

**Earth Day Plan** – Earth Day is April 22. An Air Force Earth Day plan has already been drafted and is working its way through the approval process. The plan will include articles and other awareness materials for MAJCOMs and bases. One idea would be to

have a senior AF official visit 2 or 3 locations where the AF has made great environmental and energy successes to highlight the accomplishments. Look for more information soon. POC is Ms. Diane Keefe, A7CAN, DSN 664-4471.

**FEMP incentives** – Ms. Vicky Davis, SAF/IEN, is working a plan to encourage MAJCOMs to submit more FEMP awards. The draft plan includes more publicity for winners and cash awards. Look for more information soon.

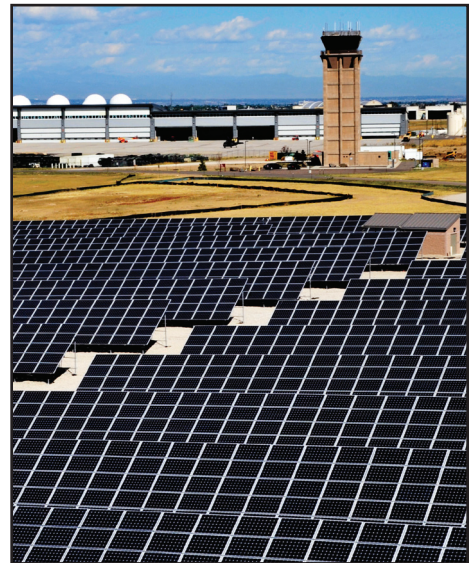
**Energy Forum** – This year's Energy Forum is tentatively set for Washington DC in June or July. SAF/IEN is visiting locations in February and plans to choose a venue and date soon.

**AF Energy Strategic Communications Plan** – A plan for Air Force-wide energy communications is in the works. SAF/IEN is leading the effort along with SAF/PA, A7C, and others. Look for it in the coming months.

POC: Ms. Jennifer Elmore, AFCESA/CEBH, DSN 523-6572.

## A New Vision for ECIP

STORY CONTINUED FROM PAGE 1



*This new solar array at Buckley AFB, Colo., covers six acres and is capable of generating up to 1.2 MWs of electricity.*

Additional guidance:

- Consider factors beyond financial return on investment.
- Avoid seeking ECIP funding for projects that would be good candidates for third-party financing arrangements.
- Do not request ECIP funding for projects that can be accomplished using Operation and Maintenance funds.

The Air Force has submitted our FY11 ECIP project list of 13 projects at \$35 million to OSD. The projects will go forward for congressional notification.

POC: Mr. John Byrnes, AFCESA/CENI, DSN 523-6464.



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