

"Make energy a consideration in all we do"

ENERGY | express

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July 2016

Energy Exchange Air Force Day

By AFCEC Public Affairs

Air Force energy programs take to billing Aug. 11-12 at the 2016 Energy Exchange trade show in Providence, Rhode Island.

The U.S. Department of Energy hosts the annual event which runs from Aug. 9-11.

The Air Force has expanded the schedule for a service-specific discussion. The expanded "Air Force Day" schedule goes from Aug. 11 to Aug. 12 at 2 p.m., and will feature secretariat,

headquarters Air Force and Air Force Civil Engineer Center leaders.

Multiple issue-specific briefings, as well as an open question and answer forum, will take place during the event.

All Air Force participants attending the Energy Exchange are asked to plan their trip to include this additional time.

To register, visit [2016 Energy Exchange Registration](http://www.2016energyexchange.com/registration) or visit <http://www.2016energyexchange.com/registration>.

The cost is \$250 for government employees and \$425 for contractors or private industry.



Training & Trade Show Aug. 9-11
femp.energy.gov/energyexchange

Rhode Island Convention Center
Providence, Rhode Island

In this issue:

- Your introduction to the new AFIMSC energy team
- Base energy managers will see TRIRIGA soon
- AFCEC speakers at Energy Exchange
- ... and more!



AFCEC Energy Team works with base personnel to prepare for TRIRIGA

By AFCEC Public Affairs

The AFCEC Energy team at Tyndall Air Force Base, Florida, has been busy preparing base energy managers for the arrival of TRIRIGA, a Commercial Off the Shelf Integrated Work Management system that will replace several legacy civil engineer databases to include ACES-RP, ACES-PM, IWIMS and ACES-AFERS.

Introduction training has already been provided to 12 installation energy management personnel and 1-on-1 training is at various stages for each installation. Training for different areas of responsibility has been conducted in the evening to accommodate the time differences.

TRIRIGA implementation will drive major changes to base civil engineer operating procedures, and energy management business practices are certainly not immune to these changes. TRIRIGA will increase the amount of energy information captured in databases and this data will be available for use by individuals from the base to the pentagon. Data that will be captured include:

- Reportable energy water, industrial, and landscaping, and agricultural water, consumption and cost
- Utility reimbursements
- Covered buildings
- Energy contracts
- Energy conservation opportunities

Most installation energy managers are capturing energy information in various forms.

"TRIRIGA provides a place to put information that, in many cases, already exists," said Deven Volk, TRIRIGA energy lead for AFCEC.

Much of this information is gathered annually by the Air Force through data calls. Entering this information in TRIRIGA will reduce the need for expansive data calls. Instead, AFCEC can access and extract data from TRIRIGA.

The AFCEC energy TRIRIGA team's primary focus is on training base energy managers. There are several training avenues for energy managers as their go-live date approaches:

- 120 days out: TRIRIGA implementation team presents key information to CE personnel via DCS
- 90 days out: AFCEC/CNA provides Introduction training to energy managers via DCS
- 85 days out: Energy managers receive 1-on-1 distance training from our contract support team
- 30 days out: General TRIRIGA Web Based Training is available on ADLS
- An Energy TRIRIGA Reference Guide is available on the NexGen IT/TRIRIGA SharePoint site on the [CE Portal](#).

Energy managers can access the current go-live schedule on the NexGen IT/TRIRIGA SharePoint site to determine when to expect introduction training.

"Introduction training is updated after every presentation based on questions and feedback," Volk said. "Everyone has a high learning curve and we want to present the most current and accurate information every time the training is provided."

Energy managers are encouraged to ensure the deployment point-of-contact list located on The NexGen IT/TRIRIGA SharePoint site is kept up to date. AFCEC/CNA uses it to initiate training contact with installations.

The AFCEC energy team works with bases to prepare for TRIRIGA. For more information, call at DSN 523-6843 or afcec_rbc@us.af.mil.

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AF energy personnel revise, simplify guidance

By Jess Dupree
AFCEC Public Affairs

In an effort to streamline service guidance, experts at the Air Force Civil Engineer Center's Energy Directorate worked with a team at Headquarters Air Force to revise and release Air Force Instruction 32-1061, *"Providing Utilities for U.S. Air Force Installations."*

The revision is a response to an order from former Air Force Chief of Staff Gen. Mark. A. Welsh, to simplify AFIs after determining many are too complicated and give unnecessary policy information.

The Air Force Departmental Publishing Office revised and released AFI 32-1061 in January. As a result of this joint effort between the Headquarters Air Force Logistics and Installations Energy and Environmental

Division and the AFCEC Energy Directorate, the AFI was substantially rewritten, removing execution and guidance information.

This information was then released March 2016 in a new Air Force Pamphlet, AFPAM 32-10144, *"Implementing Utilities for U.S. Air Force Installations,"* to comply with the edict.

"We wanted to ensure we were releasing information that is pertinent and concise," said Frederick Cade, the Air Force utilities reimbursements program manager at AFCEC.

"In following the guidance, we completely overhauled the roles and responsibilities of different entities for those who provide utilities to installations," Cade said. "We also included a more robust policy for utilities privatization requirements and processes that are supplemented by

execution and management guidance found in the utilities privatization playbook."

Cade noted the team also updated several Air Force Forms, including 3553, 3554, 3556, and 3557, as well as making administrative changes to office symbols and identifying tiered waiver authorities for unit level compliance items.

"It is important that the things we put out in the engineering community, and the Air Force, are logical as well as easy to comprehend and use for everyone," said Dan Gerdes, chief of the AFCEC Rates and Renewables Division.

"This ensures policies and guidance are being implemented equally across the service," Gerdes said. It also ensures quality and best practices are able to be duplicated regardless of command or unit."

Interior Lighting Campaign provides resources, expertise to AF facility managers

By Jess Dupree
AFCEC Public Affairs

Subject matter experts at the Pacific Northwest National Laboratory, or PNNL, want to assist Air Force installations in lowering energy costs.

The Interior Lighting Campaign, or ILC, is a free program designed to help facility and energy managers take advantage of the savings opportunities that come with high efficiency interior lighting solutions.

Lighting accounts for about 20 percent of the electricity used in the average commercial building. Most buildings in the Air Force were outfitted with fluorescent lighting troffers, with only a few of those installations making the switch to LED lighting. PNNL works closely with the Federal Energy Management Program and the Better Business Administration to identify lighting products on the market that meet their specifications for efficiency and efficacy.

According to the Department of Energy, it could be possible to save more than 25 percent of an installations' energy by making the switch.

"What we are really trying to do for our participants is to provide them technical assistance and, at the same time, get that high-efficiency troffer specification more widely used," said Tracy Beeson, Pacific Northwest National Laboratory lighting specialist.

Another goal of the ILC is to facilitate communication between different organizations about completed and ongoing lighting projects. For example, a retail company might retrofit their stores with new LED lamps and consequently experienced failures. Lighting specialists like Beeson will be able to relay that information to others participating in the ILC along with valuable lessons learned.

Francis Sheridan, a recourse efficiency manager at Vandenberg Air Force Base, California, said the ILC's data compilation has made it easier for him to continue with lighting projects at his installations.

"Lighting technology advances so quickly," he said. "It is better to have someone whose job is solely lighting to recommend what is going to work best for your installation."

By signing up to participate in the ILC, energy managers will be granted access to online resources. The information collected from each participating installation contributes to the growing databases, so there is always new information on the latest technologies and products available on the market.

"We also want to recognize participants that are really doing high-quality projects," Beeson said. "We want to write case studies that will share the information from sector to sector."

To sign up as a participant, visit www.interiorlightingcampaign.org.

Lt. Col. Edward Phillips, Janie George, Ruben Ramos, Tim Pugh and Senior Master Sgt. Jerry Ruiz

Members of the new Air Force Installation and Mission Support Center energy team are ready to step in to help the Air Force energy community meet its facility energy goals. With team members coming from various backgrounds, they are well-poised to work along side the AFIMSC and the Air Force Office of Energy Assurance to support Airmen in the field.



From left to right, Tim Pugh, Ruben Ramos and Senior Master Sgt. Jerry Ruiz pose at the Air Force Installation and Mission Support Center headquarters building. Not pictured: Lt. Col. Edward Phillips and Janie George. (U.S. Air Force photo/Caroles Chiles-Fuller)

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What is the AFIMSC energy team's mission? How do you plan to execute it?

Let us start by making the distinction that Air Force Installation and Mission Support Center is composed of Headquarters AFIMSC staff, AFIMSC detachments and primary subordinate units, or PSUs, of which the Air Force Civil Engineer Center is one. AFIMSC is the single intermediate-level headquarters providing installation and mission support, or I&MS, services to 10 major commands, two direct reporting units, and 77 installations around the world. Principally, facility energy functions reside for the installations, HQ AFIMSC and the AFCEC Energy Directorate, or AFCEC/CN, with each office having its respective roles and responsibilities.

Our office role is to provide strategic input, integration and direction for planning, programming, budgeting and execution processes required to allocate resources to fund facility energy requirements. We work closely with AFCEC/CN and AF Office of Energy Assurance, or AF-OEA, to integrate their investment planning proposals with other AFIMSC I&MS communities and align investment strategies with the highest Air Force priorities.

To perform this, we provide the Program Objective Memorandum, or POM, input for facility operations, utilities and sustainment, restoration and modernization facility energy I&MS requirements and advocate for resources to assure continued installation operational capability for those programs. AFCEC provides technical expertise and execution for the Air Force's programs and HQ AFIMSC staff provide integration and resource advocacy for the facility energy portfolio.

How does this team align with the Air Force's overall energy plan? How will you contribute to "Mission Assurance through Energy Assurance?"

Our team leverages the Air Force

strategic vision for facility energy to align resources to fulfill those facility energy requirements. We have to evaluate if the requirement results in an unacceptable level of risk.

AFIMSC will assess facility energy use and risks to identify investment opportunities and efficiency measures that can enhance capability and mission success for the Air Force enterprise to move from a focus on mandated goals to a focus on mission assurance.

At HQ AFIMSC we will be looking at enterprise-wide opportunities and integrating major command requirements for facility energy that enhances mission assurance. We do most of those things now – right-sizing our requirements through conservation, ensuring our supply of necessary energy and making sure our systems are resilient with the correct emphasis on hardening, diversity and recoverability.

We now need to stretch and ensure our missions and our installations can sustain longer utility outages either man-made or natural and to do so we must now incorporate the basic tenants of reliability of our systems, availability of the utility commodities, and the extended sustainability of both. There are many paths to achieve mission assurance. Our focus will be to integrate the larger energy resiliency into the current model of cost effectiveness and cleaner, diversified sources.

How will this team integrate into the Air Force energy enterprise, including AFCEC, SAF/IE and OEA?

HQ AFIMSC Facility Energy Office will work closely with other Air Force facility energy enterprise offices on the development of the execution guidance for the facility energy program. Our role is mainly to consult and assist on Air Force strategy development and execution. Once we know the framework for these two strategic actions, our office will establish and track the appropriate funding to link energy requirements

to the POM to fulfill the function of resource advocates. We will support AFCEC/CN as well as AF-OEA on the facility energy program oversight in order to understand the current program status and requirements to effectively implement it.

What changes can base energy managers and civil engineers expect to see as your role progresses?

As time progresses, the HQ AFIMSC Facility Energy Office will be better integrated in the whole Air Force energy governance structure. Base energy managers and civil engineers will have an enriched understanding on our roles and responsibilities and those at AFCEC/CN. They will be able to easily delineate between the two offices to find responses to their inquiries. We will be working closely with the installations to review and validate their funding requirements related to their utility and facility energy program.

As the technical experts, AFCEC will directly support the installations on the execution of their energy projects related to the different implementation venues (e.g. direct investment or third party financing) specific utility contract support, and utilities privatization.

What are you most excited about doing or accomplishing on this team?

The HQ AFIMSC Facility Energy Office is very excited to have the opportunity to integrate the Air Force facility energy portfolio. We will be able to work closely with other offices within the Air Force energy governance structure to evaluate and determine strategies to build a framework to assure energy advantage in air, space and cyberspace.

Being at HQ AFIMSC gives you access to the policy makers at Secretary of the Air Force/Installations Energy, or SAF/IE, and Headquarters Air Force, or HAF, and the experts at AFCEC, so we can work together on developing strategies to integrate technological

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advances to improve energy resiliency.

Our goal is to support the Air Force in implementing intelligent investment choices in energy resiliency demonstration projects targeted to produce model systems which can be replicated across the enterprise. It is also an opportunity to assist the installations with their programs and garner feedback from them on the strategies, policies and implementation and whether they are effective.

What are some obstacles you expect to encounter? How will you overcome them?

It can be expected to see significant challenges when an organization is built from the ground up. Sometimes there are mixed expectations and uncertainty on what the final structure will be like.

A way to help resolve this

uncertainty is to over communicate with all team members at all levels to portray each organization's significant accomplishments and their value added. Communication brings unity and efficiencies to the corporation. It sets up the current state and end state expectations.

Defining and understanding everyone's roles and responsibilities is key to resolving program issues at a new organization.

Is there anything you would like to add?

HQ AFIMSC Facility Energy Office really appreciates all of the hard work and effort given by the installation energy managers. They are invaluable Air Force assets and should be proud of all their energy conservation accomplishments.

There is no doubt they are making a positive impact supporting the

warfighter directly. Every kilowatt hour they help the Air Force reduce by implementing efficiencies is one which brings resources back to the warfighter.

Reducing our dependency on energy is the first step and best action we can take to improve our installations' energy resiliency. We ask them to be open to new ideas and processes to enhance the Air Force capability on the 21st century and support the new vision on mission assurance through energy assurance.

Let's not forget there are experts who are ready to support you and work with your installation to develop executable energy projects enabling our ability to secure energy for the Air Force mission operations. Remember, we all do our business a little differently, don't be afraid to ask questions we support the "art of the possible."

Green Spotlight

Minot AFB Air Traffic Control Tower

By Amanda Pagan
AFCEC Public Affairs

MINOT AIR FORCE BASE, N.D.

-- The truly integrated approach of the Minot Air Traffic Control Tower project team allowed achievement of its sustainability goals -- minimizing the resources the building consumes, minimizing waste generated by the building and maximizing benefits the building provides.

Taking cues from the installation's energy strategy, the project team improved energy consumption 35 percent, relative to American Society of Heating, Refrigerating, and Air-Conditioning Engineers, or ASHRAE 90.1, baseline building by designing and constructing a ground-source heat pump.

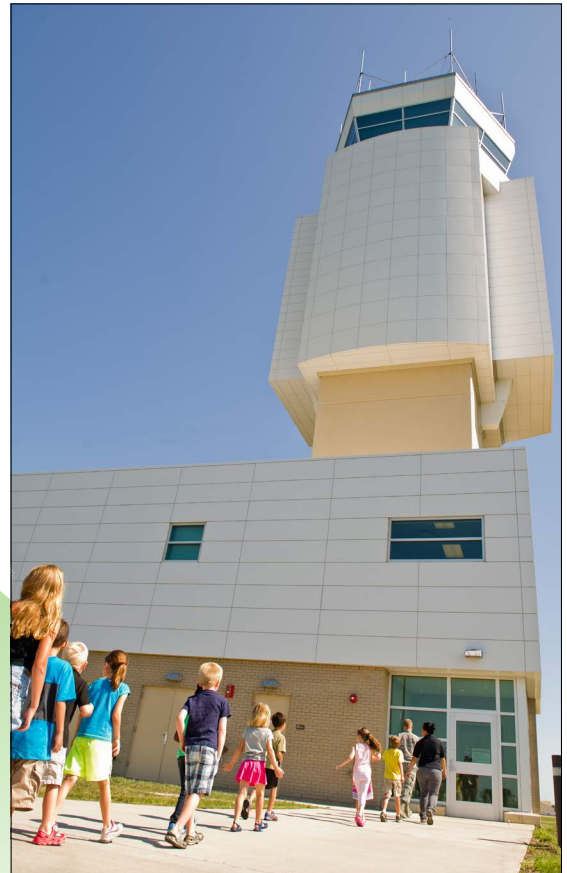
Mission enhancements to the control tower include a

significant increase in cab visibility and capacity, and co-locating administrative and training functions.

The following improvements helped the project become certifiable for a Leadership in Energy and Environmental Design Silver:

- 30-percent reduction in indoor potable water use
- 100-percent reduction in irrigation water use
- 50-percent construction and demolition waste diversion
- 10-percent recycled content
- 20-percent use of regional materials
- Use of low-emitting materials

Can an industrial facility like an air traffic control tower be sustainable? You bet!



The air traffic control tower's sculptural appearance serves as a landmark to base personnel and visitors at Minot Air Force Base, North Dakota. (U.S. Air Force photo/Airman 1st Class Justin T. Armstrong)

Meet the speakers

Subject matter experts at the Air Force Civil Engineer Center will be present at the 2016 Energy Exchange to share their knowledge. Below is a brief introduction for each speaker with some insight into what they will be discussing with Defense Department and commercial attendees.



Leslie Martin

Speaking on: Energy saving performance contracts

Martin is the Air Force energy savings performance contract and utility energy service contracts program manager in the Energy Directorate at the Air Force Civil Engineer Center, Tyndall Air Force Base, Florida.

He graduated from Mississippi State University with a Bachelor of Science in industrial engineering. He also has a Master of Science in engineering management from the Air Force Institute of Technology.

Martin is a retired Air Force colonel who began his military career in 1983. His active duty assignments have included a variety of engineering positions at installation level to include squadron commander and mission support group commander.

He also served in Headquarters Air Mobility Command at Scott AFB, Illinois, and was the director, Engineering Support Directorate and chief, Operations and Program Support Division, Headquarters Air Force Civil Engineer Support Agency, now AFCEC, at Tyndall. He retired from active duty in 2011.

Michael Ringenberg

Speaking on: Utility energy service contracts

Ringenberg is the lead engineer for energy service performance contract and utility energy service contract program and the measurement and verification specialist for third-party financing projects at the Air Force Civil Engineer Center at Tyndall Air Force Base, Florida.

Ringenberg is a graduate of Auburn University with a Bachelor of Science in mechanical engineering, and is a member of the American Society of Heating, Refrigerating and Air-Conditioning Engineers, the Association of Energy Engineers and is registered as a certified energy manager.

In past assignments, he has served as the energy program manager for U.S. Army Garrison at Fort Wainwright, Alaska, was the Air Force advanced meter reading system program manager, and has over 10 years' experience working in multiple programs within AFCEC's Energy Directorate at Tyndall AFB.



Meet the speakers



Daniel Soto

Speaking on: Energy data management

Soto is currently the energy analysis division chief for the Air Force Civil Engineer Center at Tyndall Air Force Base, Florida.

He graduated from the University of Alabama with a Bachelor of Science in civil engineering and received his commission from the Reserve Officer Training Corps in 1989. He holds a Master of Military Operational Art and Science from Air Command and Staff College.

Soto was an environmental engineer at the Air Force Center for Engineering and the Environment at Brooks AFB, Texas, now AFCEC, and Headquarters Air Education and Training Command, or HQ AETC, at Joint Base San Antonio-Randolph AFB, Texas.

Recent assignments include, asset management division chief at HQ AETC and chief, utilities privatization at the Air Force Civil Engineer Support Agency at Tyndall, now AFCEC.

After nearly four years of active duty, Soto spent more than nine years in various Air Force Reserve civil engineering assignments, attaining the rank of major before separating. He is past president of the Panama City Society of American Military Engineers Post and is a registered professional engineer in Texas.

Richard Weston

Speaking on: Implementation of utility privatization contracts

Weston is a general engineer and the National Guard Bureau liaison officer to the Air Force Civil Engineer Center, Tyndall Air Force Base, Florida. He also is responsible for the Air Force utility privatization program which seeks to improve and recapitalize Air Force utility systems through privatization where economical. He is also the National Guard Bureau member of the civil engineer civilian Functional Advisory Council.

Weston was commissioned in the Navy in 1979 as a surface warfare officer as a graduate of the University of Minnesota Navy reserve officer training corps, earning a degree in computer engineering. He served several tours on destroyers, frigates and destroyer squadron staffs. He taught weapons systems engineering at the Naval Academy before transitioning to the Naval Reserves. He commanded three reserve units in the Naval Research Reserve Program and retired in 2009 at the rank of captain. A member of the Air Force Civil Service since 1994, Weston has worked environmental, civil engineering and programming programs and served as the Deputy NGB/A7 for the National Guard Bureau Installation and Mission Support Directorate before his current assignment.



FY18 ECIP proposals due Sept. 1

By John Byrnes
AFCEC ECIP Program Manager

The energy conservation investment program, or ECIP, is a unique subset of the defense-wide military construction, or MILCON, program specifically to fund projects that save energy or water, produce energy or reduce the Defense Department's energy costs. The program supports construction of new, high-efficiency energy systems and the improvement and modernization of existing ones.

MILCON money is good for five years and can fund new construction. Because it is not Air Force money, it does not subtract from any of our programs.

The ECIP program is managed by the Office of the Secretary of Defense, or OSD. Projects are submitted by all Department of Defense agencies to OSD for a competitive selection. The selection is based mainly on economics with consideration for documented base energy plans and potential impacts the project will have. Other considerations are how the project integrates multiple energy savings, or renewable energy technologies to realize synergistic benefits. And projects that implement a technology validated in a demonstration program or an innovative technology that represents potentially significant improvement are good candidates.

We have received approximately \$40

million per year for the last three years due to excellent projects submitted by our installations. Selected projects were for energy conservation, water conservation and renewable energy. Now we are moving to a more comprehensive approach with the emphasis on mission assurance through energy assurance. Energy resilience should be a consideration in every project. Energy conservation and efficiency measures are still fundamental to the program; we must ensure the measures improve reliability and resilience.

The call for fiscal 2018 ECIP projects will be due for submission to AFCEC/CN by Sept. 1. We look forward to some great Air Force projects!



Workers stand before an electrical substation at Clear Air Force Station, Alaska. The substation, which was funded by the energy conservation investment program, replaced a coal power plant and connected Clear to the local electric grid. The savings from this project are estimated to save more than \$1.9 million dollars a year. (U.S. Army Corps of Engineers photo)



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