

"Leading the Way in Delivering Air Force Installation Energy Assurance"

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AFCEC and OEA reach new milestone in partnership

By Brian Garmon
AFIMSC Public Affairs

The Air Force Civil Engineer Center and the Office of Energy Assurance recently attended a historic energy savings performance contract preliminary assessment kick-off at Joint Base Langley-Eustis, Virginia.

An ESPC is a partnership between federal agencies and energy service companies that provides energy savings, resiliency, and facility improvements with no up-front capital costs to

the government. This ESPC represents the first collaborative project between AFCEC and OEA to reach the acquisition stage and is also the first to include NASA as a stakeholder.

"The partnership between AFCEC and OEA represents the future, utilizing energy savings projects to provide energy assurance and resiliency for the Air Force," said Les Martin, chief of AFCEC's Program Development division. "Combining expertise in the process will continue to set these projects up for success."

OEA was established in February 2016 by the Secretary of the Air Force and Chief of Staff of the U.S. Air Force and serves as, "a storefront for strategic energy resilience, achieving mission assurance through energy assurance."

"Our particular ESPC is unique. We are not only a Joint Base, but also are partners with the NASA Langley Research Center," said Dan Porter, base energy manager at Joint Base Langley-Eustis. "There are issues and challenges that have not yet been encountered on

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ESPC Program Manager Mike Ringenberg, center, fields questions from stakeholders at Joint Base Langley-Eustis, Virginia, regarding their upcoming project, Feb. 28, 2018. (U.S. Air Force photo by J. Brian Garmon)

other ESPCs. AFCEC and OEA aren't just outside agencies who are just checking off a list then leaving us on our own. We feel as though we are all in this together and have shared interest in making this project successful for JBLE Langley, Eustis, and NASA."

Porter was then asked what benefits the partnership between OEA and AFCEC brought to JBLE.

"Working with AFCEC and OEA on this and other projects feels like being in the right place at the right time," said Porter. "OEA came to JBLE, observed and listened to us and our mission partners, then formulated courses of action tailored to our needs. When determining what avenue to pursue, AFCEC provided recommendations that helped us in our decision-making process. Once we decided to pursue an ESPC, AFCEC did

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Stakeholders from AFCEC, NASA, OEA, and Joint Base Langley-Eustis, Virginia, discuss details of their upcoming energy savings performance contract. (U.S. Air Force photo by J. Brian Garmon)

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the heavy lifting. After all, they had the experience of executing these contracts and knew what was needed to achieve our goals.”

In addition to the installation stakeholders, Energy Systems Group, the energy services provider selected to perform the ESPC, was in attendance to ask and answer questions related to the project.

“The Air Force Civil Engineer Center and Office of Energy Assurance have worked closely together to drive this innovative approach, and ESG is honored to support the critical missions at Joint Base Langley-Eustis and NASA Langley,” said Steve Spanbauer, senior vice president of Energy Systems Group. “ESG will work closely with JBLE and NASA to develop and implement resilient solutions, including projects to reduce energy consumption, generate power, and upgrade energy infrastructure,” added Spanbauer. “Further, the goal of these projects is to pay for the upgrades with savings generated as a result of these solutions, which is good for the Air Force, NASA, U.S. business, and the U.S. taxpayer.”

Installations interested in pursuing energy cost-saving projects are encouraged to reach out to AFCEC through the Reachback Center at (888) 232-3721 or at AFCEC.RBC@us.af.mil.

“We have an entire team of engineers dedicated to supporting these projects,”

added Martin. “Whether your installations are looking for guidance on the best path to pursue, technical expertise, or an experienced facilitator to help your installation through the process, we are eager to help.”

“Working with AFCEC and OEA on this and other projects feels like being in the right place at the right time”

-Dan Porter, Base Energy Manager

Resource Efficiency Manager Kevin Rasmussen, left, discusses potential site options for elements of their energy savings performance contract with ESPC Program Manager Mike Ringenberg, center, and Project Manager Jacob Lacourse, right, February 28, 2018. (U.S. Air Force Photo by J. Brian Garmon)

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Director's Corner - Robert Gill

Energy Teammates,

The AF facility energy world has had many changes in the last year. I'd like to take the time and give you the state of our AF facility energy program, highlight some successes and provide a peek where the AFCEC/CN team is going. We are extremely proud of what we have accomplished over the past year and in the current state of our directorate.

Recently, when asked what it is that we do, we came up with the following slogan. "We are the team that assures the mission goes on when the lights go off." To make this into a reality, our team actively works every avenue available today while seeking new, innovative paths that will take Air Force Energy into tomorrow. Last fiscal year, our Program Development Division awarded one energy savings performance contract worth \$7.7 million. This project will meet infrastructure upgrade needs and provide guaranteed savings at no upfront cost to the taxpayer. We are currently working over 30 additional opportunities covering nearly 158 million square feet, or more than 11,500 buildings.

In fiscal year 2017, the NRG facilities sustainment, restoration, and modernization program doubled its executed requirements from the previous year, and fiscal year 2018's program is double that of 2017. The diverse projects include items such as boiler repairs, HVAC and controls repairs, chiller repairs and lighting replacements. The growth in this program is directly related to your efforts in programming initiatives to conserve energy and executing those projects.

Additionally, the energy resilience & conservation investment program identified approximately \$50 million in opportunities last year, the largest in Air Force history. Projects included micro-grids, ground source heat pumps, and natural gas conversion projects at six Air Force bases around the world.

In order to help warfighters better prepare for and recover from utility outages, the Energy Rates and Renewables Division is developing a sample master scenario event list for a long-term regional electrical grid outage that should be exercised in one or more of the installation's quarterly exercises.

In addition, we are providing our warfighters with diverse power sources. At Vandenberg Air Force Base, Calif., a 28.2 megawatt photovoltaic array is fully operational, providing approximately 35 percent of the base's annual electricity usage, and more impressively, handling as much as 90 percent of the load during certain parts of the day.

Mission energy assurance can take many forms and each can have their twists and turns. The Measurements and Analysis Division is launching installation energy plan development this year by developing a standard statement of work and executing several task orders

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Air Force ERCIP Manager AFCEC, Tyndall AFB, Florida

Robbie Marcucci is the Air Force energy resilience and conservation investment program manager at the Air Force Civil Engineer Center, Tyndall Air Force Base, Florida. He has a bachelor's degree in Electrical Engineering from Embry-Riddle Aeronautical University and a Master of Military Operational Art and Science from Air University. He served on active duty for 14 years in locations around the world from Thule Air Base, Greenland, where he was Base Civil Engineer, to Barksdale Air Force Base, Louisiana, where he spent time in a number of roles with Air Force Global Strike Command. Marcucci is also a Certified Energy Manager and enjoys supporting fellow veterans with his family at the local VFW in his free time.

Please describe your role at AFCEC.

As the Air Force ERCIP Manager, I manage a subset of the AF's MILCON program that utilizes roughly \$30M to \$40M annually to fund installation energy projects to achieve the AF's strategic energy goals: (1) Improve Resiliency, (2) Optimize Demand, and (3) Assure Supply. I support the Air Force's Office of Energy Assurance and the Air Staff in development of strategy, doctrine, policy and directive guidance for the Air Force's Facility Energy Program, as it pertains to the ERCIP Program, and am responsible for providing non-directive guidance, oversight, execution, and engagement for the program across the enterprise. Most importantly, though, it is my job to provide CE leaders at all levels top cover to execute their programs in support of their specific mission requirements. It is my job to increase their combat lethality by engaging with agencies and offices outside of their authority that negatively impact their ability to execute the mission.

What motivates you about working with Air Force Energy?

We are entering a new phase in the Air Force Energy program, one that looks beyond conservation to achieve an end-state mission capability.

It's exciting working with mission owners to ensure their critical missions have the energy they need, when they need it, whether that is accomplished by reducing load and/or increasing recovery timeliness. The focus is shifting to ensuring end-state combat lethality that assures our nation's citizens and allies that we will have the energy where we need it, when we need it, to deter any adversary in any threat environment.

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By Melissa Tiedeman
SAF/IEE Public Affairs

Recently, more than 50 Air Force vehicle maintainers and fleet managers attended FedFleet 2018 in Washington, DC from January 29-February 1. Joining over a thousand attendees from the civilian and defense community, the vehicle maintainers and fleet managers participated in four days of fleet focused training.

This year's event included a two day pre-event Air Force only training session. During this special session, hosted by the Vehicle Management Career Field Manager, CMSgt Joseph Frongillo, Air Force attendees shared best practices and insights among peers and heard from a wide range of Airmen and civilian presenters on topics ranging from changes to schoolhouse vehicle management curriculum, Air Force Instruction and annual inventory updates to briefings on E-tools implementation and item unique identification (IUID) clean-up efforts underway.

As part of this session, attendees heard a brief from Major Jake Bowen, representing the Office of the Deputy Assistant Secretary of the Air Force Environment, Safety and Infrastructure Energy Program, on non-tactical vehicle energy and the role vehicle maintainer's play in achieving the Air Force's energy

goals to improve resilience, optimize demand, and assure supply.

"Energy has a lot in common with ground vehicles," said CMStg Frongillo to kick off the energy session. "Both are critical to the United States Air Force and without them, running efficiently supporting the flight line and other installation requirements, completing missions would be next to impossible."

"The Air Force has placed a priority on improving energy resilience," continued CMSgt Frongillo. "And because of training opportunities like this, our Airmen will be at the forefront and will possess the knowledge they need to be the best at it." "It is an exciting time to be involved in ground mobility," said Major Bowen. "The innovations we are seeing from the vehicle maintainer community will help reduce fuel consumption and drive greater use of next generation vehicles, equipment and capabilities in the future."

Major Bowen further explained that one can look to historical examples to illuminate what will likely happen in the future. He highlighted the Navy's transition from wind to steam power. Even though steam ships had greater capabilities with superior speed and endurance, wholesale adoption of this technology took several decades because it necessitated building infrastructure like coaling stations to support new energy requirements.

Industry and regulators are driving innovation in vehicle technology at a breakneck speed to a point that it is projected that more technologies will be introduced in the next 10 years than the previous 100 years. Leading the list of technologies are cleaner, more powerful engines, autonomous vehicles, alternative fueled vehicles, as well as the concept of car ownership. Harnessing these advancements in the Air Force will require engagement from several stakeholders outside of the vehicle community like civil engineers to build and maintain new infrastructure as well as cyber operators that ensure connections are secured.

Besides great educational training sessions, Air Force attendees also had the opportunity to tour to a dedicated FedFleet tradeshow, in addition to the Washington Auto Show exhibits, where they could directly interact with innovative vehicle technologies and services that are currently on the market.

The opportunity highlighted that innovation in ground mobility is coming quickly and the Air Force needs to prepare today to support the vehicle fleet of the future.

A letter from Mark Correll, SAF/IEE

Recognizing that we exist in a constantly changing threat environment, this year we are placing a renewed emphasis on water resilience. Threats to water availability range from aging water infrastructure, vulnerable utilities, or malicious attacks to water scarcity due to changes in precipitation patterns, water quality issues, or encroachment. However, water is often managed as a commodity rather than as an asset and water infrastructure investment has lagged.

In response, SAF/IEE is developing a water resource management program that moves away from managing water based primarily on conservation and condition assessments toward a risk-based approach, which more directly supports mission assurance. This shift will be in concert with an increased focus on the Air Force's installation development and activity management planning processes, and will help provide greater transparency at the enterprise-level to strategically direct infrastructure investments based on mission requirements.

In the coming months, the water program will roll out in phases. Activities will include enterprise-level threat reviews, regional analyses on water stress and installation-level water needs assessments as well as increased engagement with external stakeholders such as water utilities and regional water management agencies. Base civil engineers who are responsible for water infrastructure are encouraged to become acquainted with the OSD's Water Needs Assessment Tool, a free resource that military installations can use to more directly estimate the water they need to support their mission rather than just reflecting their metered usage. This in turn will drive dialogue between mission owners, installation planners, and water suppliers in anticipation of a self-assessment and data collection phase of program development. Sophisticated water stress forecasting models from the public and private sectors will provide the technical basis for the analysis.

Success will depend on stakeholders at a variety of levels performing critical self-assessment, on more robust information sharing across the enterprise, and on tighter coordination between headquarters, AFCEC, and the installations. These efforts will enable mission owners to better understand their water risks and base their plans to mitigate them on sound data and analysis. Ultimately, building resilience will ensure that neither short nor long term water disruptions will adversely impact the Air Force's ability to successfully complete its mission.



I am also happy to share that OSD recently released guidance on attending Energy Exchange 2018. If you have not done so already, I strongly encourage you to start working with your leadership so that you can attend. Registration is now open and tracks, preliminary agenda and other details, including hotel information, can be found at www.2018energyexchange.com.

Stay up to date on all things Air Force Energy with the Energy Program online, on Facebook @AirForceEnergy and on Twitter @AFEnergy.

Thank you for all the work you do and have a productive March!

Mark Correll

AFCEC Energy Deputy Director awarded AFIMSC FGO of year

By J. Brian Garmon
AFIMSC Public Affairs

Recently, Maj. Josh Aldred, deputy director of the Air Force Civil Engineer Center Energy Directorate, Tyndall Air Force Base, Florida, was awarded Field Grade Officer of the Year for the Air Force Installation and Mission Support Center.

Aldred led a 28-person integrated process team that aligned with Department of Defense's mission assurance goals; optimized a 105-person energy staff with a \$1 billion portfolio; executed six energy-savings contracts resulting in \$160 million



in facility upgrades and posturing \$720 million in third-party investment through 2019; and validated 21 energy construction and 70 energy repair projects, resulting in \$140 million in direct investment and \$170 million in energy savings.

He also re-tooled a five-year, \$45 million labor contract by creating stress tests to identify mission critical energy projects.

The team at Energy Express would like to congratulate Maj. Aldred on his award and thank both him and his team for their hard work in supporting our warfighters.

Gill *continued from pg. 4*

to jump start the enterprise-wide effort. These plans will provide mission priority for their areas of responsibility. Projects and initiatives will be identified and guidance provided to get the enhancements into the integrated priority list. We'll also follow-up with recommended exercise injects to evaluate resiliency and provide information for further improvements.

Our metering team is deep into the fiscal year 2018 list of bases. Expect them to ask for your critical facilities and key infrastructure nodes necessary to sustain your critical missions. This is an expansion from previous scopes, and necessary to ensure we're not only covering our large consumers but critical missions. Please start programming your own base level meter install projects. Our staff is always here to give you a hand and ensure a good install as well as long term support. Our building life cost cycle and savings-to-investment ratio methodologies are easily replicated from base to base. An effective metering program is critical as we continue to automate our data calls and systems to save our limited resources.

Each day, when our team at AFCEC comes to work, we focus on providing world-class support and service to each of you in order to enable your teams to provide the best support possible to our warfighters.

Thank you and we look forward to what 2018 will bring.

Robert Gill



Helpful Things To Know From the Utility Rate Management Team

By Nancy Coleal
Chief, Utility Rate Management Team

The URMT is providing more direct support to Utility Engineers since the loss of MAJCOM Energy Engineers. URMT routinely assists Active Duty, larger Reserve, and Air National Guard bases on a case-by-case basis, if potential dollar savings justify support. Often, matters can be handled with a phone call or email, so don't hesitate to contact the URMT with questions through the Reachback Center at AFCEC.RBC@us.af.mil.

Helpful things to know:

Governing guidance:

AFPAM 32-10144, Implementing Utilities at U.S. Air Force Installations, dated March 2016, was created from the previous guidance in AFI 32-1061 Providing Utilities to USAF Installations, to describe how Utility Engineers provide notifications of rate increases (Chapter 10). The Utility Litigation Team (ULT) can intervene when a regulated utility has not yet received approval of a rate increase by their state utility commission, and URMT can assist in reviewing and validating a non-regulated utility rate increase.

Validating your bill:

You cannot validate your bill without having a copy of your utility contract to compare rates, fees, and terms. They will be described in your contract. If there is no contract, the utility will have their rates posted online, such as for water companies or small electric co-ops. I cannot stress the importance of the Utility Engineer having a relationship with their utility company account representative AND a copy of all utility contracts and bills. Your contracting officer is required to keep the official copy, but the Utility Engineer needs a copy to be able to accurately validate the bill.

How/When to report rate increases:

If you have a rate increase with a regulated electric utility prior to the state utility commission approving the rate, ULT can intervene (they share responsibilities in the CONUS with Army, Navy, and DOE taking leads in certain states). If you have a rate increase with an non-regulated utility, please send that information to URMT with a copy of the contract, two months of bills, and your estimate of the dollar impact to the base. The Air Force definition of non-regulated utilities includes electric co-ops, munis and most water utilities that serve Air Force Bases. A City Council, City Commission, Board of Directors or some other non-independent third party, does not require the same standards for vetting and validating rates as a state utility commission.

URMT Tips

Using a GSA area-wide contract:

GSA simplifies the effort for the contracting officer by providing the utility company tariff combined with the appropriate FAR clauses. The only paperwork required is Exhibit A to be filled out by base CE describing the rate class and type of service the base will receive, and signatures by CONS and the utility company. CONS may also choose to do a J&A. Without a signed Exhibit A, you do not have a contract.

CON-IT Migration:

URMT has received calls from base CONS or CE notifying us they are terminating utility contracts because they are non-compliant with CON-IT. Canceling a utility contract is not an option, and is not required or recommended by any agency. CONS offices contacted by URMT, reported they are NOT migrating legacy utility contracts because of incompatibility with CON-IT, and are keeping the contract in its original format.

Marcucci Profile *continued from pg. 5*

What is the most interesting part of your role?

I'm able to work with large projects that have the ability to be real game-changers for installations and mission owners. I get to be on the cutting edge of energy resiliency by integrating new and emerging tech where the rubber meets the road. Most importantly, I get to help shape the future landscape that will define what "Resilient and Right-Sized Installations" are.

Tell me a little about the relationships you've developed with the installations you work with.

My job is to support MAJCOM mission requirements by supporting their installations tasked to carry out those missions. Senior decision makers are looking for ways to increase their combat lethality by ensuring energy availability to their critical missions. It's easy to give 110% all day, every day when installations take full ownership of their energy requirements. The bases I work with know that I am animated, fiery, and sometimes bombastic, but they always know that it's because I'm passionate about supporting them by providing top cover and clearing out roadblocks. All I ask is for is full, open, and honest accountability. They know that I'll go to the ends of the Earth for them as long as they have well and faithfully exercised their authorities to the maximum extent allowable.

What is your favorite energy-saving tip for Airmen?

Work Smart AND Hard. Efficiency is an ethos, effectiveness is an objective. Combat Lethality is what needs to be done, while efficiency is how we get there. It's not enough to do things smarter and more efficiently if you don't work hard enough for them to make a difference, move the needle and keep the mission moving forward.

CE DASH

<https://cs2.eis.af.mil/sites/10159/>

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