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

ENERGY express

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Spring 2022

WR-ALC, 78th CEG: Working together for energy-efficient solutions

By Joseph Mather
Robins Public Affairs

ROBINS AIR FORCE BASE, Ga. — Keeping the lights on at Robins Air Force Base, Georgia, requires a lot of energy.

The 78th Civil Engineering Group and the 402nd Maintenance Support Group Energy Assurance Office with the Warner Robins Air Logistics Complex are working together to ensure base energy needs are met and managed properly.

Robins AFB has established a local Energy Program Management Office with the help of the Air Force Civil Engineer Center at Tyndall Air Force Base, Florida, and the Air Force Installation and Mission Support Center's Detachment 6 at Wright-Patterson Air Force Base, Ohio, with representatives from both the 402 MXSG Energy Assurance and the 78th CEG Energy Office.

"The PMO is working on more than 30 projects in various stages of implementation," said Scott Sheffield, Energy Program Management Office chief. "Some of the projects have finished construction and are now in the performance phase."

The base has received $44 million in Utility Energy Service Contracts that have been implemented to upgrade compressed air plants, chilled water plants and hot water boilers, replace HVAC systems and upgrade lighting for production processes.

"The outstanding support we continue to receive from the AFCEC's Energy Directorate and Office of Energy Assurance and AFIMSC's Det. 6 has been critical to our success, and we appreciate their eagerness to provide support above and beyond whenever necessary."

Continued on page 4

In this issue:

Energy Directorate hosts virtual Energy Savings Performance Contract workshop

By Emily Mifsud
AFIMSC Public Affairs

TYNDALL AIR FORCE BASE, Fla. — The Air Force Civil Engineer Center's Energy Directorate, along with the Department of Energy's Federal Energy Management Program, recently hosted an Energy Savings Performance Contract virtual workshop for Air Force stakeholders.

The four-day comprehensive workshop provided specialized training for the Air Force ESPC program to demonstrate how to utilize the contracts and implement energy conservation measures to improve energy resilience across Air Force installations.

"The ESPC program has a lot of variability and flexibility," said Mark Dent, ESPC project manager. "Providing regular training allows for dissemination of guidance and policy changes to the greater Air Force Civil Engineer enterprise."

The 25 workshop attendees included installation stakeholders, AFCEC and Defense Logistics Agency-Energy personnel. The workshop provided a unique opportunity to collaborate with AFCEC's ESPC experts, allowing them to share their knowledge and best practices in the development and execution of successful ESPC projects.

Additionally, federal project executives from DOE's FEMP and national laboratory, plus AFCEC's federal contracting officer experts, presented real-life examples of Air Force ESPC projects, starting with project development through implementation, with a special focus on resiliency requirements and agency needs for measurement and verification.

"The Air Force utilizes third party finance tools to meet energy and mission requirements," said Jacob LaCourse, ESPC/UESC quality control program manager. "Our goal is to provide base level engineers with an understanding of what ESPCs can provide along with their limitations, so installations can develop an overall energy strategy with ESPCs being one of the tools available to them."

To learn more about ESPC training opportunities, contact Mike Ringenberg, ESPC/UESC SME and program manager, at michael.ringenberg.1@us.af.mil.

E|e Profile

Tenisha 'Marie' Finley

Meet Marie Finley, Resilience Requirements Division Chief for the Air Force Office of Energy Assurance

Please tell us about your experience/background.
I recently retired from the U.S. Navy after serving over 20 years. My last assignment was with the Joint Manpower Division serving as a management analyst at the Pentagon, working with all service branches, as well as the combatant commands. The experience I've gained working as an analyst and program manager helped me qualify for my current position.

Describe your role at AFCEC.
I've been working with OEA for the last eight months as the Resilience Requirements Division Chief. I am responsible for overseeing Installation Energy Plans, which includes (but not limited to) scheduling, holding kick-off meetings and physically visiting installations as the federal lead for sites falling under my assigned major commands. Additionally, I oversee the Task Management Tool, ensuring all assigned tasks are responded to within a timely manner.

What is the best thing about your job?
The people and the environment. Working with my colleagues feels like a second family.

Tell us about the hobbies you enjoy in your down time.
I enjoy working out with my significant other each morning and taking a staycation once each quarter. I also enjoy adventures, such as zip lining during my recent trip to Springfield, Virginia!

As a child, what job did you want to have when you grew up & why?
I wanted a family to call my own. I wanted this because I didn't have it, and I ended up staying with several different people until I decided to join the U.S. Navy as a teenager.

What do you see as the biggest energy challenge?
Getting rid of petroleum fuel and converting to electric.

Tell us about the relationships you've developed with AFCEC's Energy Directorate.
I recently went to an on-site IEP visit with Mr. Dan Soto, AFCEC Energy Director, and I was able to learn a lot from his vast knowledge of Air Force Energy, and it was also nice to have an in-person conversation. He also introduced me to other people within the AFCEC network. It was a great experience!

What is your favorite energy-saving tip for Airmen?
Turning off the lights when not in use; take shorter showers; invest in an electric vehicle.

Robins AFB PMO Team from left: Duke Thigpen, Stewart Crow, Brent HIll, Lisa Earls, Scott Sheffield, Damon West and Lindsey Robertson.

ENERGY-EFFICIENT SOLUTIONS

Continued from cover page

Duke Thigpen, 78th CEG Energy Management chief, said the energy office reviews all potential projects at Robins to ensure energy requirements are being met. "The 78th CEG Energy Office works to identify, develop and execute energy related projects," he said. "Whether the goal is to increase capacity, maintain performance, create redundancy or lower consumption, our office strives to pursue these projects for the greater good of Robins."

A $30 million Energy Savings Performance Contract was recently implemented for facility upgrades across the base, said Thigpen.

"We upgraded lighting in more than 300 facilities with the most modern, energy-efficient LED lights," he said. "We also added facility automated systems to increase the efficiency of HVAC systems and made several upgrades to the central heating and cooling plants to improve their efficiency and reliability."

Damon West, Air Logistics Complex energy chief, said the projects cover a wide range of areas and are important because they will directly or indirectly reduce energy consumption at Robins.

"The projects will also make the energy sources and the energy demands/points-of-use throughout the base more reliable, allowing all missions to continue without virtually any disruption," he said.

Thigpen said, Robins is receiving even more upgrades across the base, including Supervisory Control and Data Acquisition system upgrades, through OEA's Resilient Energy Savings Resource Vault program.

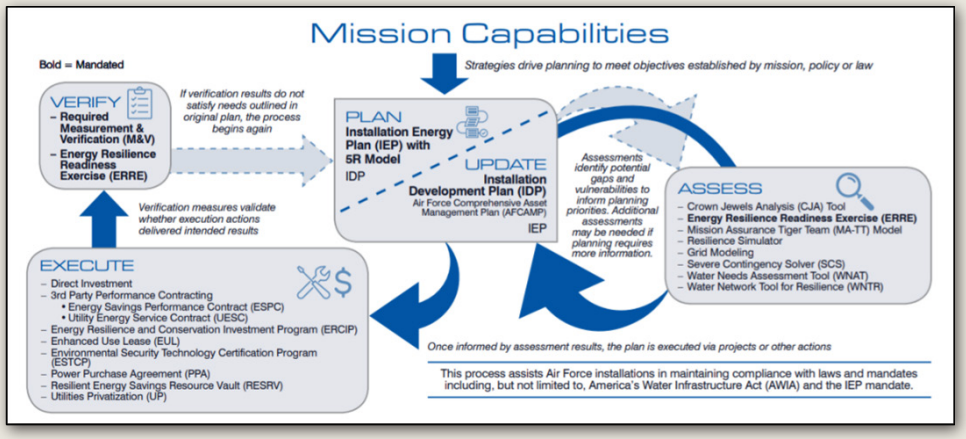
"We are also the recipient of an Air Force Research Laboratory Flight Line Electrification Study that will replace diesel powered vehicles with clean sustainable electric equipment, and are leading not only the Air Force, but all services in this endeavor," said Thigpen.

> ***"There are endless impacts when it comes to energy and the overall mission at Robins. Long term sustainability means finding solutions to outdated technology, lowering energy consumption, increasing redundancy and resiliency and planning for the future of the base."***
>
> ***Duke Thigpen***
> ***78th CEG energy management chief***

"There are endless impacts when it comes to energy and the overall mission at Robins, and we appreciate the support we've received to secure funding for these projects," he added. "Long term sustainability means finding solutions to outdated technology, lowering energy consumption, increasing redundancy and resiliency and planning for the future of the base."

Air Force renewable energy: a holisitic and systematic approach

By Christian Rasmussen
AFCEC/CNR



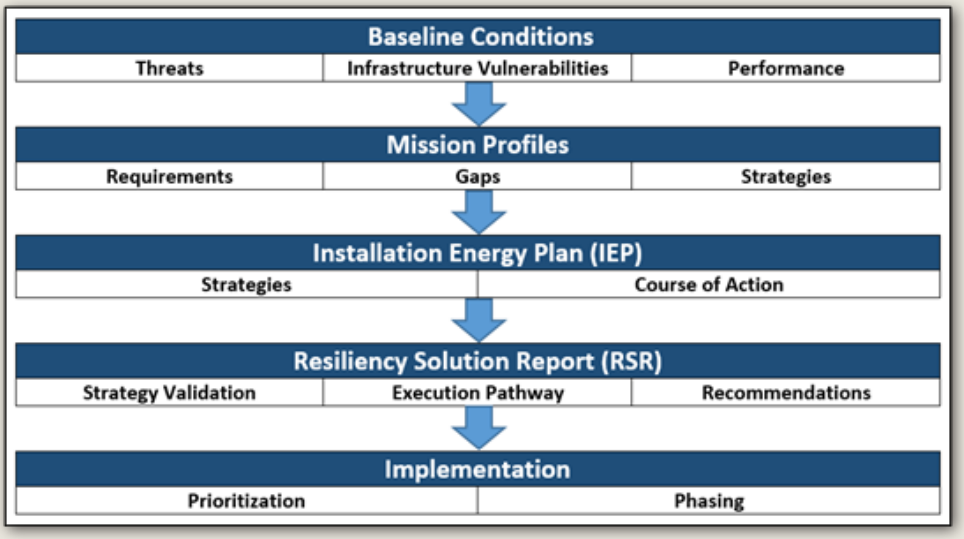
With the growing demand of renewable energy within the Department of Defense, the Air Force continues leading these efforts and remains committed to promoting mission assurance through energy assurance, as defined in the Air Force Installation Energy Strategic Plan.

Recent updates in legislation and energy policy requirements are driving change to how the Air Force approaches and defines strategy, requirements and objectives, with emphasis and priority on enhancing overall mission and installation resiliency. By taking a holistic vision of energy strategy, the Air Force can explore and invest in energy opportunities and provide sufficient energy to maintain and sustain critical mission assets. As such, the Air Force continues to diversify its energy portfolio and align energy strategy in support of the goals and objectives outlined in EO 13834, Efficient Federal Operations, to "enhance the resilience of federal infrastructure and operations and enable more effective accomplishment of its mission."

As emphasis on successful resiliency and energy dependence continues to rise, mission owners and installations are looking at innovative approaches and technologies to meet these objectives and requirements. This includes improving both energy security and mission effectiveness, not only to assure adequate energy supply but to reduce overall demand and improve resiliency in the event of an energy disruption. Implementing a comprehensive holistic energy strategy through renewable energy projects creates a significant impact on energy resilience resulting in increased efficiencies and lower energy costs.

The Air Force has adopted a four-step holistic process to accurately explore, prioritize, invest and implement renewable energy strategies and opportunities vital to addressing vulnerabilities while meeting the ever-changing requirements.

The process begins with installation and mission owners understanding mission capabilities, risks, vulnerabilities and overall energy and uptime requirements. They should apply a systematic assessment framework to define metrics for measuring mission performance and specify desired or targeted performance requirements for every mission. However, this approach is not always simple or straightforward, especially when mission efforts involve multiple installations or organizations, making it vital to understand overall objectives and efforts to ensure effective planning.



The next step is to complete and update assessments. DoDI 4170.11 requires alignment of energy requirements to critical mission operations on military installations. The Mission Thread Analysis and Crown Jewel Analysis assessments are useful tools to lay the groundwork for building effective planning and investment strategies. The assessments identify potential gaps and vulnerabilities which aid in establishing mission priorities, dependencies and impacts to provide an understanding of capabilities and requirements and define metrics that can enhance installation resilience.

After assessments are complete, installations and mission owners can reach out to the Office of Energy Assurance for project guidance, support and planning. OEA facilitates and integrates energy assurance efforts for all Air Force energy resilience initiatives by conducting holistic, data-driven analyses

to identify energy infrastructure improvement opportunities that meet mission requirements. OEA also develops Installation Energy Plans, a major component of an installation's development plan. IEPs integrate higher level strategic guidance, serving as a roadmap and prioritized action plan enabling installations to work constructively towards mitigating gaps and vulnerabilities and increasing energy resilience. Overall, IEPs provide strategy and a course of action using baseline conditions and mission profiles to create a structured framework for energy resilience projects and programs, resulting in enhanced energy resiliency and security.

Once an IEP is finalized, OEA develops a Resilience Solution Report which provides strategy validation, recommendations and acquisition pathway options for COAs that are financially feasible, executable and address explicit energy system requirements and capabilities. Additionally, RSRs include execution risks and resiliency benefits, identify key stakeholders, technical aspects and justification for project execution.

Recommended projects receive extensive vetting before going back to the installation or the Air Force Civil Engineer Center for execution and implementation. Key stakeholders work closely in planning and execution to ensure effective communication and coordination.

Financing for energy projects is available in three forms: public-private partnerships, public-public partnerships and Air Force direct investment. Each execution pathway adheres to specific governing and implementation processes, gathered through CE Playbooks. CE Playbooks, available on the CE Portal, provide "how-to" guidance, execution requirements and standardized project procedures.

After projects are funded, executed and implemented, the Air Force evaluates energy related project performance and resilience posture. Measurement and Verification, mandated by the Office of the Secretary of Defense, identifies and verifies the energy cost savings. M&V activities include site surveys, energy measurements, data analyses and more. In the event a project doesn't deliver anticipated resilience improvements, the lessons learned are used for future planning to address resilience shortcomings.

The Air Force continues to embrace, diversify and incorporate renewable energy and resilient technologies into its portfolio to maintain vigilant strategies that mitigate gaps and vulnerabilities and improve resiliency, optimize demand and assure supply. Energy managers should champion and continue to engage installation leadership to advocate and generate buy-in for resilient, renewable energy technologies at their installation.

For more information on improving your installation's energy requirements, contact AFCEC's Energy Directorate through the Reachback Center (DSN: 523-6995, COMM: 850-283-6995, afcec.rbc@us.af.mil).

Kunsan AB receives ESPC contract modification award

By Emily Mifsud
AFIMSC Public Affairs

Kunsan Air Base, South Korea, is receiving additional energy efficiency infrastructure improvements through an Energy Savings Performance Contract modification awarded by the Defense Logistics Agency-Energy.

The $10.7 million task order to Honeywell International, Inc. is a collaborative effort between DLA-Energy, Kunsan AB and the Air Force Civil Engineer Center and supports Kunsan's energy needs.

In addition to the existing contract, valued at $115.7 million, the modification adds heating improvement upgrades to 26 more facilities.

The project modification includes an additional replacement of 96 oil-fired boilers with efficient natural gas-fired condensing boilers, encompassong a total of 334 boiler upgrades for the overall project. It also provides upgraded gas lines, meters and regulators. The improvements will significantly reduce fuel-oil consumption equivalent to 18.2 tons of reduced carbon emissions annually.

UNITED STATES AIR FORCE ENERGY SAVINGS PERFORMANCE CONTRACT

LOCATION	AWARD VALUE	MMBtu'S SAVED	AWARDED TO
KUNSAN AB	$115.7 MILLION	79.7 THOUSAND	HONEYWELL INTERNATIONAL, INC.

PROJECT HIGHLIGHTS

- HEATING IMPROVEMENT UPGRADES IN 52 FACILITIES
- REPLACES 334 OIL-FIRED BOILERS WITH NATURAL GAS-FIRED BOILERS
- UPGRADED GAS LINES, METERS AND REGULATORS
- 18.2 TONS OF REDUCED CARBON EMISSIONS ANNUALLY
- 67,000+ LIGHTING FIXTURE REPLACEMENTS IN 309 BUILDINGS
- WATER/SEWER CONSERVATION UPGRADES SAVING 13.4k/Gals

If you would like to nominate someone to be profiled in an upcoming issue, please contact us at AFIMSC.PA.Workflow@us.af.mil.

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