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

ENERGY express

A product of the Air Force Civil Engineer Center

January/February 2019

Japan's Misawa AB Gets First Energy Savings Performance Contract

Gen. CQ Brown, Jr., Pacific Air Forces commander, and Chief Master Sgt. Anthony Johnson, PACAF command chief, listen as the 35th Maintenance Squadron jet engine intermediate maintenance section chief explains the important role the centralized engine repair facility plays in the 35th Maintenance Group's mission during their tour of the installation at Misawa Air Base, Japan, Oct. 25, 2018. (U.S. Air Force photo by Tech. Sgt. Benjamin W. Stratton)

By Elizabeth Stoeckmann
Defense Logistics Agency Public Affairs

Defense Logistics Agency Energy awarded Misawa Air Base's first Energy Savings Performance Contract on 20 December 2018.

The ESPC provides for $243million in main base and military family housing infrastructure improvements, which will produce an estimated annual energy savings of 258,697 MBTUs, with no up-front capital costs to the government. The primary elements of the ESPC are electrical power generation and steam production, with additional energy savings resulting from additional water/energy conservation measures. The power generation will be provided by two cogeneration plants with a generation capacity of 6.2 megawatts (combined), in addition to a 6.0 MW solar photovoltaic farm. The two

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In this issue:

A letter from Mark Correll, SAF/IEE

To the Air Force Energy Community,

Earlier this year, the President's National Security Strategy and Secretary of Defense's National Defense Strategy were released. Both strategies establish clear intentions to drive resources to programs and missions to improve the resilience, readiness, agility, and lethality of our warfighters.

I take two things from these intentions. The first is that these intentions shouldn't be new to very many of you. The Air Force recognizes the importance of resilience and energy assurance to mission success and has been prioritizing resilience improving measures for several years. The second involves an opportunity to improve and revise the way installation and infrastructure projects are proposed and funded. By doing so, we will be able to better target strategic investments for energy resilience.

As we develop new Energy Resilience and Conservation Investment Program (ERCIP) proposals, I want each of you to think about potential projects through this resilience-focused lens. Recognizing that historically ERCIP has enabled installations to secure funding for military construction designed to increase energy efficiency with projects that meet a certain minimum savings-to-investment ratio, future ERCIP projects will be strongly encouraged to focus on enhancing the ability of an installation to provide power and/or water to critical missions. This means each and every project that you identify, propose, and pursue, should prioritize improving an installation's energy resilience.

Each proposed ERCIP project will be evaluated based on how it will improve mission assurance through five key resilience attributes (the "Five Rs"): robustness, redundancy, resourcefulness, responsiveness, and recovery. Guidance on how to properly identify applicable ERCIP candidate projects and how to plan projects to revolve around the elements of resilience that provide the desired qualities of the Five R attributes aligned with mission requirements will be released soon.

We're working with OSD on guidance for future ERCIP projects, as well as how the Air Force will implement the direction. I encourage you all to reach out to my staff with any questions you may have on the ERCIP process. As we move forward, ERCIP projects will be collected through the Air Force Energy Storefront located at the following link: https://portal.afcec.hedc.af.mil/Storefront/SitePages/Home.aspx.

Keep up the great work,
Mark Correll
Deputy Assistant Secretary of the Air Force for
Environment, Safety and Infrastructure

YEAR IN REVIEW: 2018 SAF/IEE Energy

Now that 2018 has come to a close, it is time to look back at some of Office of the Deputy Assistant Secretary of the Air Force for Environment, Safety and Infrastructure's (SAF/IEE) Installation Energy Program's accomplishments from the past year.

"We are exceptionally grateful for the hard work and dedication demonstrated by the entire Air Force energy team whose daily efforts ensure resilient, reliable and ready energy supplies continue to power our installations and warfighting capabilities," said Assistant Secretary of the Air Force for Installations, Environment and Energy, John Henderson. "Each day, the Air Force is improving its energy resilience, meeting the challenge of updating its energy infrastructure, and investing in workforce training."

Highlights from the SAF/IEE Energy achievements in 2018:

Energy-as-a-Service Efforts: Achieved significant milestones within the SAF/IEE Energy-as-a-Service (EaaS) initiative. Through the EaaS initiative, the Air force is looking to enter into a long-term arrangement with a single industry partner to provide an installation's fence-to-fence electric power requirements that covers the full energy delivery chain from commodity to distribution to end use. In late 2018, the Defense Logistics Agency, with SAF/IEE, published a sole source justification and approval (J&A) to work with Western Farmers Electric Cooperative (WFEC) at Altus Air Force Base (AFB) in Oklahoma; the Request for Proposal was sent to WFEC and the Air Force is currently awaiting the response. Altus AFB is one of two selected pilot site locations; Hanscom AFB in Massachusetts is the second pilot location.

Improved Resilience: Continued progress on improving Air Force energy resilience in 2018. Efforts and projects included: ten third party financing contract awards with a combined value of over $358 million, which will support energy resilience, facility enhancements, and will reduce power consumption by nearly 984 billion British thermal units annually; a 28 megawatt solar photovoltaic array at Vandenberg AFB; and the DoD's first wind-powered microgrid capable of powering the 24/7 Intelligence, Surveillance and Reconnaissance mission of the 102nd Intelligence Wing located at Otis Air National Guard Base.

Mission Thread Analysis: In 2018 SAF/IEE further developed and tested its mission thread analysis process. As part of this process, the Air Force engaged a range of key stakeholders, including organizations outside the Pentagon and beyond the installation fence line – because in an interconnected, energy-driven environment, mission assurance through energy assurance requires a collaborative effort. In conjunction with work started in FY17, the SAF/IEE Energy team was able to engage nearly 50 stakeholder organizations over four mission thread workshops held at Vandenberg AFB, Joint Base McGuire-Dix-Lakehurst, Tinker AFB and Hill AFB; this effort augmented that being done by the Mission Assurance Tiger Team effort, of which SAF/IEE is a co-chair.

More Training Opportunities: The Air Force energy community increased their participation in education and training opportunities, which will help the Air Force in meeting their energy goals. At Energy Exchange 2018, nearly 200 Air Force participants shared their knowledge and energy best practices and participated in sessions related to resilience, energy technologies, cyber, policy and financing.

Water Resources Management: In 2018, SAF/IEE created a water resources management program. As one of their first efforts, the team worked with 15 Air Force installations to complete the Office of the Deputy Under Secretary of Defense for Energy, Installations & Environment's Water Needs Assessment Tool (WNAT). The tool is part of a broader Air Force effort to gain an enterprise view of water needs and potential scarcity with the end goal of improving resilience and reducing water-related risk to mission. The pilot will raise the profile of water management and provide more actionable data on installations' water requirements that can feed into future planning efforts.

Make sure to visit Air Force Energy at www.safie.hq.af.mil/InstallationEnergy and follow @AirForceEnergy on Facebook and @AFEnergy on Twitter to make 2019 a more resilient one!

E|e Profile Mr. Brian O'Leary

Brian O'Leary is the Energy Manager for the 21st Space Wing at Peterson Air Force Base, Colorado. He has a Bachelor's degree in Physics from California State University in Chico and a MBA in Defense Logistics from the Naval Postgraduate School in Monterey, California. Prior to becoming an Energy Manager with the Air Force in 2013, he spent 20 years as a Marine Corps Combat Engineer Officer, where his experience included everything from direct infantry support to base facilities operations.

O'Leary's work with the 21st SW also includes their geographically separated units at Clear Air Force Station, Alaska, Cavalier Air Force Station, North Dakota, Cape Cod Air Force Station, Massachusetts, and Thule Air Force Station, Greenland.

What motivates you about working with Air Force Energy?
During my previous career, we used our CONUS bases and stations as sanctuaries to train and prepare for overseas deployments. 21st Space Wing is different, in that we engage our nation's adversaries from our bases every day. Mission assurance through energy assurance is paramount.

What is the most interesting part of your role?
I find there is always more to learn. Whether it's improving building envelopes to conserve heat in arctic climates or developing projects to optimize air management in server rooms, I am continually learning and working on new things.

Tell us about the relationship you've built with AFCEC's Energy Directorate.
I am in regular contact with the Energy Directorate staff on a range of subjects. From AMRS implementation to utility rate negotiations, they are always ready to assist me.
Even after Hurricane Michael practically destroyed Tyndall AFB, the energy directorate made great efforts to quickly resume its support mission.

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cogeneration assets will also provide the majority of the distributed steam load for facility heating. A 500 kilowatt (kW) black start generator, will be installed to bring the cogeneration assets back online during a power grid failure.

This project will reduce Misawa's energy consumption by 20 percent across 679 buildings, along with providing 70 percent of peak demand and as much as 60 percent of annual electrical load during normal operations. Misawa AB is the 5th largest AF installation in energy cost and the 12th largest for energy consumption. In addition to the electrical efficiencies, the project provides redundancy by installation of a natural gas distribution network, converting some boilers to dual fuel while also supplying the cogeneration assets. Additionally, the existing central steam plants will remain operational to provide redundancy to Base heating operations.

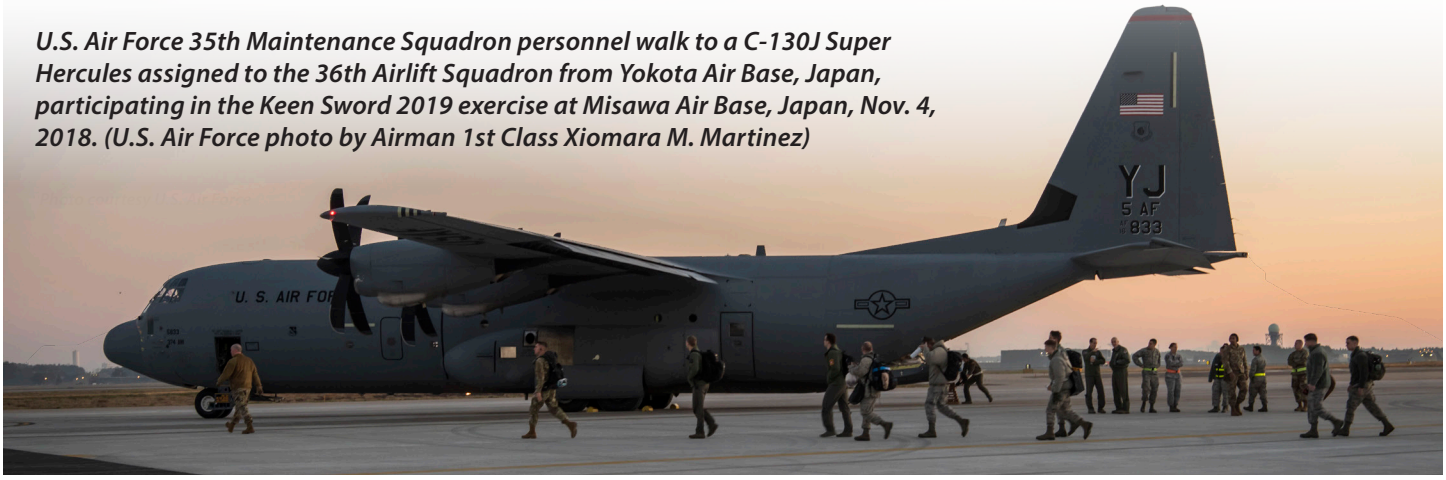
"These projections are significant for what the ESPC can achieve for the Air Force and Misawa Air Base," per Jacob Vigil the DLA Energy Contracting Officer "Especially given the base was negatively affected by the 2011 tsunami that caused widespread natural disaster and significant loss of life in the surrounding communities. Their electrical power was rationed for nearly 90 days, causing concerns over mission readiness." The cogeneration systems will work in conjunction with the microgrid/smartgrid solution to provide continuous-duty, critical power to assist in a power crisis event.

"The higher utility costs overseas and the centralized steam distribution made Misawa AB an excellent candidate for an ESPC," said Michael Ringenberg, Air Force ESPC Program Manager.

This project is a joint effort among Misawa AB, AFCEC, DLA Energy, and Trane, an energy service company. "There were a lot of moving parts, negotiations, resolutions of technical and complex issues and high level briefs for a project of this size," Vigil said. DLA Energy will retain contract administration responsibilities and conduct performance oversight for the Misawa AB ESPC for the next 20 years. DLA Energy will also manage and participate in the implementation phase (construction) of the scope of work that will occur over the next 40 months.

"This project provides reliable energy generation and supports both the Air Force and the Department of Defense's strategy for greater energy security and resiliency at fixed installations," said DLA Energy Installation Energy Director Pam Griffith.

DLA Energy Installation Energy is one of the DoD's prime contracting agents for meeting established energy efficiency and renewable energy goals. Installation Energy has awarded ESPCs for the DoD making it possible for them to meet the specified energy reduction goals.



U.S. Air Force 35th Maintenance Squadron personnel walk to a C-130J Super Hercules assigned to the 36th Airlift Squadron from Yokota Air Base, Japan, participating in the Keen Sword 2019 exercise at Misawa Air Base, Japan, Nov. 4, 2018. (U.S. Air Force photo by Airman 1st Class Xiomara M. Martinez)

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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Energy Express is a publication of the Air Force Civil Engineer Center, Detachment 1, Tyndall AFB, Florida.

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