

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

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Vandenberg flips the switch on new solar array system



Representatives from the Air Force Civil Engineer Center, the office of the Secretary of the Air Force, Vandenberg Air Force Base, California, Defense Logistics Agency Energy, and SunPower tour a 28 Megawatt photovoltaic solar array during a dedication at Vandenberg, April 10, 2018. (U.S. Air Force photo by J. Brian Garmon)

By J. Brian Garmon
AFIMSC Public Affairs

TYNDALL AIR FORCE BASE, Fla. — Earlier this month, the Air Force took another step toward its goal of increasing facility use of clean energy by 25 percent by fiscal

2025 at a solar array dedication event at Vandenberg Air Force Base, California.

Representatives from the Air Force Civil Engineer Center, Vandenberg, Defense Logistics Agency Energy, and SunPower marked the commencement of operations for this 28-megawatt solar photovoltaic array at the event. The array consists of

nearly 65,000 solar panels and covers 129 acres of land formerly used for on-base housing. It represents the largest such project in the Air Force, where all generated power is consumed by the base. The power generated by the system will meet

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Vandenberg

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approximately 35 percent of the base's annual energy needs and will offset carbon dioxide emissions equivalent to that of 8,600 cars annually.

"The Air Force is committed to incorporating modern, clean energy technology, like solar, to provide diverse energy sources for our warfighter," said Dan Soto, AFCEC rates and renewables division chief. "With support on this project from solar technology innovator SunPower, we're improving energy resiliency, optimizing demand, and assuring supply at Vandenberg over the long term."

Mark Correll, deputy assistant secretary of the Air Force for environment, safety, and infrastructure, spoke at the dedication on what this project and projects like it represent for the Air Force.

"From an Air Force perspective on energy, we are looking at three things," said Correll. "First and foremost is resiliency. If we were to be separated from the power grid in some way, shape or form; how would we be able to recover from that to continue our mission? Power systems like this provide that kind of resilience. The second thing we care about is cost. We have changed our focus a little bit. It's not all about saving money, it's all about resiliency, but at the same time we can't just pay whatever it takes to make that happen. Then the third thing from an Air Force perspective is that we are interested in clean power with a focus on renewable energy."

This project was made possible through a power purchase agreement between the Air Force and SunPower. These agreements allow federal agencies, to host a solar power system without any upfront costs to the taxpayer or the burden of managing such a system over time. The base will purchase electricity under a 25-year term from SunPower at a competitive, fixed rate, and the Force retains all associated environmental credits.

"Access to reliable, resilient electricity to meet operational needs is a priority for the U.S. Air Force, and this solar project enables us to increase our own energy security at Vandenberg with competitively priced solar energy from SunPower," said Ken Domako, chief of portfolio optimization at Vandenberg.



Speakers from the office of the Secretary of the Air Force, Vandenberg Air Force Base, California, Defense Logistics Agency Energy, and SunPower prepare to flip a ceremonial switch at the dedication for the 28 Megawatt photovoltaic solar array located at Vandenberg, April 10, 2018. (U.S. Air Force photo by J. Brian Garmon)



Resource efficiency manager, Joint Base Langley-Eustis, Virginia

Kevin Rasmussen is the resource efficiency manager for Langley at Joint Base Langley-Eustis, Virginia. He has a Bachelor's degree in Civil Engineering from Iowa State and a Master of Science in Engineering Management and Composite Materials from Washington State. Before joining the team at JBLE, Rasmussen held several diverse roles with the Air Force around the country, including assistant professor of civil engineering at the U.S. Air Force Academy and as a contracted energy engineer supporting the Office of the Deputy Assistant Secretary of the Air Force for Installations, where he supported development of the new Air Force Energy Flight Plan. Something many may not know is that he also had a lengthy flying career in the Air Force prior to working in CE, serving as a weapon system officer in the F-111F Aardvark. While an exchange officer with the British RAF Aerosystems Center, he also flew in several British fighters, E-3C AWACs, and even the legacy British Nimrod submarine hunter.

What motivates you about working with Air Force Energy?

Air Force energy security IS national security. Years of overseas deployments where the grid isn't always reliable combined with an awareness of present day threats, both natural and man-made, to the U.S. commercial electric grid, have me fascinated and excited to be involved with the transformation and modernization of our power supply.

What is the most interesting part of your role?

Working with all the talented people across the Air Force, the Department of Defense, the Department of Energy, and our industry partners to transform and modernize our electrical infrastructure. Also, having the pleasure of working with current and former NCOs devoted to operating and maintaining our aging infrastructure. Seeing how much they are able to accomplish is a truly eye-opening experience.

Tell us about the relationship you've built with AFCEC's Energy Directorate.

They do a superb job of providing our base team the information and subject matter expert support needed to help develop our base energy programs. The interactions, ranging from the energy manager course taught at AFIT, attending Energy Exchange, and assistance in project development have been outstanding.

What is your favorite energy-saving tip for Airmen?

It's as simple as turning off the lights and keeping the temperature set at a seasonally appropriate level.



A letter from Mark Correll, SAF/IEE

To the Air Force Energy Community,

Improving our resiliency in the face of a potential loss of our energy and water supplies continues to be a focal point across the Air Force. As we shift our thinking away from single point solutions with fixed time horizons to more dynamic solutions for variable time lines, we are committed to incorporating holistic resiliency measures into our planning efforts to help reduce an installations' vulnerability.

In support of our effort to improve resiliency, SAF/IEE is currently organizing Mission Thread Workshops at various installations across the enterprise to decompose select missions and their components. This effort is one part of a paradigm shift in how we fund energy and water projects, from one that weighs cost savings heavily to one that takes in to account energy and water resilience attributes when valuing and ranking potential projects across the enterprise for development.

The Air Force has identified resilience attributes of robustness, redundancy, resourcefulness, responsiveness, and recoverability. My charge to you is to keep these attributes in mind when utilizing the innovative approaches we have for improving our energy resiliency; being able to recognize where these attributes are present or lacking in any given mission can help drive a more effective prioritized resourcing strategy. This includes leveraging technical resources, such as Air Force Research Lab and Department of Energy Labs to plan, model, and validate resiliency projects, when possible, and infrastructure investment tools, such as Power Purchase Agreements, Energy Resilience & Conservation Investment Programs, Environmental Security Technology Certification Programs.

From there, an action plan can be built for investment in solutions that are cost-effective and more resilient using the best investment source, whether that be direct Air Force funding or third-party financing options. As we work through this process, I will continue to provide communication and guidance on how these attributes will help us meet our goal of improving resiliency and enabling the long-term energy vision of enhancing mission assurance through energy assurance.

April also means we are less than 5 months away from Energy Exchange 2018. Preliminary agenda, tracks, and other details, including hotel information can be found at www.2018energyexchange.com. Start working with your leadership now so that you can attend this important education and training event and earn any required Continuing Education Credits.

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 April!

Mark Correll



Air Force holds mission thread workshops

Melissa Tiedeman
SAF/IEE Public Affairs

Recognizing the vital role energy plays in enabling Airmen to fly, fight and win, the Air Force is pursuing multiple pathways to achieve its vision of enhancing mission assurance through energy assurance. In support of this vision, the Office of the Deputy Assistant Secretary of the Air Force for Environment, Safety, and Infrastructure is engaging mission owners and supporting entities by hosting Mission Thread Workshops. These workshops help gain a better understanding of selected missions, their components, enabling sub components, and the vulnerabilities to energy disruption.

The two most recent MTWs were held at Creech Air Force Base, Nevada, and Tinker Air Force Base, Oklahoma. The Creech MTW scenario focused on remotely piloted aircraft, while the Tinker MTW examined the components of the KC-135 Stratotanker programmed depot maintenance mission and its critical dependencies. During the workshops, participants from the installations came together to discuss the specific steps necessary to carry out their missions and the assets and resources necessary, including energy, from both on- and off-base organizations across nation-wide geographic locations. By deconstructing selected capabilities into their components to better understand the system functions, architecture and vulnerabilities, the Air Force will gain a better understanding of

Air Force missions and the role energy assurance plays in mission assurance.

“By conducting these workshops with the mission owners, the Air Force can identify key interdependencies so we can better prioritize actions, evaluate business cases for resiliency measures, and improve our ability to advocate for resources for the

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Sheet metal mechanics with the 76th Aircraft Maintenance Group working on the KC-135 PDM line perform a double belly skin removal. The most recent MTW scenario focused on the OK-ALC PDM mission. (U.S. Air Force photo by Kelly White)



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

Mission thread workshops *continued from pg. 5*

most critical nodes," said Mr. Mark Correll, Deputy Assistant Secretary for Installation, Safety and Environment.

"The workshop was an insightful exercise in tracing the mission capabilities and capacities for the KC-135 PDM here at the Oklahoma City Air Logistics Center and highlighting the critical supply chain considerations," said Douglas Tucker, Director of Installation Energy Policy and Programs. "I look forward to more engagement with key stakeholders to further mission assurance for Air Force depot capabilities."

The technical, research, data collection, analysis, and systems engineering resources from this and other Air Force efforts will help inform risk-based mission assurance decision-making that incorporates energy

Online

For more information on how the Air Force is improving resiliency, visit the Assistant Secretary of the Air Force for Installations, Environment and Energy's website at: www.safe.hq.af.mil/Programs/Energy/ and follow @AirForceEnergy on Facebook and @AFEnergy on Twitter.

resilience. This approach will drive mission assurance through energy assurance as a foundational approach for the Air Force.



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