

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

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A product of the Air Force Civil Engineer Center

August / September 2018



## Protect the power to enhance readiness and resilience

**By Melissa Tiedeman**  
SAF/IEE Public Affairs

October is Energy Action Month and to Air Force Energy it represents an opportunity to highlight the mission critical importance of energy and water resources and to encourage the smart energy and water use and management for our installations, ground vehicles, and aircraft.

The Air Force theme, "Protect the Power," calls on Airmen and the larger Air Force community to practice smarter, more efficient energy and water consumption behaviors to enhance readiness and resilience.

"Resilient bases require a reliable, uninterrupted supply of energy to assure mission success for our wings," said Assistant Secretary of the Air Force for Installations, Environment and Energy, John Henderson. "Energy Action Month is a time for us to focus on our responsibility to make the most effective use of our energy and water resources to support our warfighting mission and to enhance readiness."

"Reducing demand increases resilience and increased resilience leads to enhanced lethality," added Deputy Assistant Secretary of the Air Force for Environment, Safety and Infrastructure Mark Correll. "Airmen and their families can contribute by using energy and water resources efficiently."

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2018  
**ENERGY  
ACTION  
MONTH**

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Professionals from the Department of Defense and industry gathered in Cleveland, Ohio, Aug. 20-24, 2018, where topics such as energy resilience took center stage. (U.S. Air Force photo by J. Brian Garmon)

# Energy resilience takes center stage at annual event



Col. Tim Dodge, deputy director, AFCEC, addresses Air Force attendees at Energy Exchange's Air Force Day. (U.S. Air Force photo by J. Brian Garmon)

**By Brian Garmon**  
AFIMSC Public Affairs

TYNDALL AIR FORCE BASE, Fla. — More than 3,500 professionals from the energy industry, including over 150 Air Force attendees, gathered in Cleveland, Ohio, Aug. 20-24 for the U.S. Department of Energy Federal Energy Management Program's 2018 Energy Exchange.

This year's event focused on energy resilience, and also addressed topics such as cybersecurity, emerging energy technologies, policy direction, third-party financing options for projects and best practices from industry and the Department of Defense.

This three-day industry event, supplemented by an additional day-and-a-half of Air Force specific content, featured senior leaders from Air Force Energy, the Office of Energy Assurance and the Air Force Civil Engineer Center's Energy

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# Energy

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Directorate. Air Force attendees participated in question and answer sessions with Assistant Secretary of the Air Force for Installations, Environment and Energy John Henderson, Deputy Assistant Secretary of the Air Force for Environment, Safety and Infrastructure Mark Correll, Acting AFCEC Energy Director Lt Col David Jokinen, and OEA Executive Director Bob Hughes.

Each leader gave their unique perspective on the state of Air Force energy and answered questions from attendees.

During an Air Force session, Henderson emphasized the importance of the role of Energy Managers in supporting critical Air Force missions.


"I would challenge you to look forward and ask where is the next failure that we're going to have inside your portfolio that's going to impact the mission," said Henderson. "It's an important strategic question, especially in regard to the critical missions going on at each of our bases."

Air Force attendees were given the

opportunity to provide feedback via survey, and results for this year's event have been positive.

"This event helped put the proper emphasis on energy resilience and what it ultimately means for our Warfighters," said Jokinen. "Meeting our Air Force team at this event gives me incredible confidence that we can and will meet the challenges

ahead in developing and implementing our energy resilience plans. My challenge to the bases is to take the time and have mission owners and mission support personnel sit down and discuss mission processes which will identify your mission resilience gaps & requirements."

The 2019 Energy Exchange will be held in Denver, Colorado. 



John Henderson, Assistant Secretary of the Air Force for Installations, Environment and Energy, participates in a question and answer session. (U.S. Air Force photo by J. Brian Garmon)



Energy Exchange provides a forum for representatives of different agencies and industry to discuss the state of issues pertinent to Air Force Energy. (U.S. Air Force photo by J. Brian Garmon)



# Otis Microgrid ribbon-cutting marks a new era in energy resiliency and grid security

**By Timothy Sandland**  
102nd Intelligence  
Wing Public Affairs

OTIS AIR NATIONAL GUARD BASE, Mass. — After three years of planning and construction, a ribbon-cutting ceremony took place on Aug 29 that marked the Department of Defense's first wind-powered microgrid, signifying the system's readiness to support the 24/7 Intelligence, Surveillance and Reconnaissance mission of the 102nd Intelligence Wing.

The Otis Microgrid, a DoD-funded research project, provides for an energy capability almost exclusively based on renewable energy while ensuring a high-level of grid security. In addition to providing energy resiliency for the wing's ISR mission, it increases value to the Air Force and

National Guard as well as state and Federal government through revenue and research opportunities for the energy industry.

The Cape Cod unit performs intelligence processing, exploitation and dissemination by analyzing and interpreting information from manned and unmanned reconnaissance aircraft as well as signals within the cyberspace domain; transforming this material into decision quality intelligence. This information is distributed rapidly across the globe for use in the planning and execution of operations.

Of the microgrid's contributions to the unit, Assistant Secretary of the Air Force for Installations, Environment and Energy, and the event's key note speaker, John W. Henderson, said, "In the case of the 102nd Intelligence Wing — their mission relies on

*The 102nd Intelligence Wing hosted civilian and military leaders for the unveiling of the Otis Microgrid, a DoD funded energy project that will provide for an energy capability almost exclusively based on renewable energy while ensuring a high-level of grid security. (U.S. Air Force Photo by Timothy Sandland)*

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# Otis Microgrid

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steady, clean power, so they can run their servers; so they can do their analysis; so they can see their ISR feeds as they come in; and any blip is a disruption to their mission and potentially disrupts the missions of the people they support in the different theaters they work in."

Col. Virginia Doonan, 102nd Intelligence Wing Commander, spoke of the mission and the important role the microgrid will serve in support of it. "The wing performs vital operations to the U.S. military and intelligence community wherever and whenever needed."

She added, "The Otis Microgrid provides energy security and resilience for these two critical missions all while ensuring a cyber-secure connection to commercial utilities which protects our infrastructure from cyber vulnerabilities."

As the very first operational wind-powered microgrid in the DoD and the first to support an entire DoD installation, the financial benefits are estimated to be approximately six-hundred thousand dollars per year through projected demand response revenues, capacity tag management and frequency regulation.

Col. Doonan explained, "These significant cost savings further ensures our long term viability and continued presence in Massachusetts by being a lean operating wing and good stewards of the U.S. taxpayer."

She continued, "The Otis Microgrid would not be possible without the help of many people, organizations and significant collaboration in financial contributions, intellectual capital and sweat equity in the process. This microgrid was a true collaborative process where multiple stakeholders came together to realize

**"The Otis Microgrid provides energy security and resilience for these two critical missions all while ensuring a cyber-secure connection to commercial utilities which protects our infrastructure from cyber vulnerabilities."**

**— Col. Virginia Doonan, 102nd Intelligence Wing Commander**

the completion of this project allowing an opportunity to test new technologies and ensure that this type of cost savings and energy resilience is easily duplicated through the DoD and the country."

In order for projects of this scope to be successful, the efforts of many need to focus on a singular goal. In the case of the Otis Microgrid, the team was diverse and worked together to see the project through. Maj. Shawn Doyle, Base Civil Engineer and manager of the project said "I sat down and thought, 'well, how many people have been involved in this project?' – I quickly got up to numbers of over 300, across 30 organizations in the private and public sector and covering three countries."

The project saw an incredible amount of work completed on the base such as the installation of over three miles of overhead 3-phase cable, 165 new utility poles and over 4 miles of fiber-optic communications cable.


Matthew A. Beaton, Secretary of the Executive Office of Energy and Environmental Affairs for the Commonwealth of Massachusetts said, "This project, for us in the Commonwealth of Massachusetts, is something that fits in perfectly with so many of the initiatives that Governor Baker has put forward over the last few years — certainly around his executive order on climate change

— making the Commonwealth more adaptive and more resilient to the effects of climate change with a strong focus on energy resiliency"

In addition to the real benefits seen here on Cape Cod, it gives the DoD and the Commonwealth a solid test bed to better understand energy resilience and security, through technical and economic studies.

Secretary Beaton went on to say, "Where better to focus those efforts than at one of the most critical assets the Commonwealth has in this military installation." He added, "This project is not only going to serve a tremendous purpose, but is also going to be a model project for us, not only here in the Commonwealth, but in the nation, to follow and learn so many lessons from."

Echoing Secretary Beaton's sentiment, Secretary Henderson said, "This microgrid at Otis is a model for the rest of our bases to look at to find an alternate energy source to build resiliency and to assure the mission."

Secretary Henderson went on to say, "I'm impressed by the leadership here, to have the vision to do something like this in the first place; I'm impressed by the incredible teamwork, led by Major Doyle – and the number of teams and people that had to come together to get this done." 

## Protect the Power


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"Being smart about the way we consume aviation fuel is not just about saving money - it's about increasing our combat capability, enabling more training, and decreasing maintenance hours," said Roberto Guerrero, Deputy Assistant Secretary of the Air Force for Operational

Energy. "There are limitless ways to optimize the Air Force, whether it's uncovering inefficiencies through fuel data collection and analysis, introducing new technology, or becoming a more energy focused culture through Airmen education and training."

Whether you implement an aviation fuel efficiency project or implement an energy project at your installation, every effort taken by our dedicated Air Force

community contributes to protecting our energy and water resources and helps us to increase resilience and readiness. No matter the size, every Airman can take action to "Protect the Power."

For more information and downloadable materials for Energy Action Month, visit: [www.safie.hq.af.mil/EnergyActionMonth](http://www.safie.hq.af.mil/EnergyActionMonth) and follow Air Force Energy on Facebook [@AirForceEnergy](https://www.facebook.com/AirForceEnergy) and Twitter [@AFEnergy](https://twitter.com/AFEnergy). 



Acting Director, Energy Directorate, Air Force Civil Engineer Center, Tyndall Air Force Base, Florida

Lt. Col. David Jokinen is the acting director of the Energy Directorate, Air Force Civil Engineer Center, Tyndall Air Force Base, Florida. He has served in the Air Force since receiving his commission from the Air Force Academy in 1999 with a Bachelor of Science in Environmental Engineering. After graduation, he obtained a Master of Science in Engineering and Environmental Management from the Air Force Institute of Technology. During his 19 years, Jokinen has had four base and three headquarters assignments, and deployed five times. He was the Energy Program Element Monitor at Headquarters Air Force, and was the 14th Civil Engineer Squadron commander at Columbus AFB, Mississippi before joining AFCEC. Jokinen and his family enjoy the beach life and experiencing the outdoors, though Florida doesn't have many opportunities for his favorite outdoor hobby, cross country skiing.

As the acting director, Jokinen ensures communication flow between AFCEC Energy, bases, HAF, SAF and OEA. He also helps to set objectives and priorities for the energy program, provides installations assistance to execute energy projects that enhance mission resiliency, and is a voice to new ideas from the field.

#### **What motivates you about working with Air Force Energy?**

My motto has always been to "Make it Better" so in my new role I have the opportunity to lead a great team to help make missions across the Air Force more resilient in the energy arena.

#### **What is the most interesting part of your role?**

The people I get to interact with, both here and at the bases, and the experiences they bring to the team.

I enjoyed meeting many of the installation energy managers at Energy Exchange in Cleveland. I was able to learn some of their ideas, challenges, and what they are doing to become more resilient. Our team will use this information to evaluate what we can do to improve the energy resources available to our warfighters.

#### **What is your favorite energy-saving tip for Airmen?**

Airmen day-to-day should understand how their work process uses energy, then be innovative to reduce the energy input or the amount of time it takes to complete the process and verify if they have a back-up energy source for critical functions. Don't forget to look at the output or waste stream to see if you can capture and reuse that energy. ♻️





# Air Force recognized with FEMP FEDS spotlight

**By Melissa Tiedeman**  
SAF/IEE Public Affairs

CLEVELAND, OH — Three members of the Air Force's Mission Thread Analysis (MTA) team were recognized for their work in support of the Air Force's Mission Assurance through Energy Assurance initiative with a Department of Energy's Federal Energy Management Program (FEMP) FEDS Spotlight on August 22 at Energy Exchange 2018. The FEDS Spotlight recognizes individuals who have gone above and beyond day-to-day responsibilities to help achieve mission success.

The three winners — Col Aaron Altwies, Joint Base McGuire-Dix-Lakehurst, New Jersey, Mr. Kenneth McKuen, Tinker Air

Force Base, Oklahoma, and Lt Col Eric Zarybnisky, Vandenberg Air Force Base, California — were honored for their support and participation in MTA workshops held at their installations over the last year.

FEMP's Acting Director, Leslie Nicholls, presented each winner with certificates of achievement and the Assistant Secretary of the Air Force for Installations, Environment and Energy, John Henderson, presented each winner with coins.

"These award winners are leading by example to drive innovation at our bases in order to enable the overall readiness and resiliency of our team," said Mr. Henderson. "We are grateful for the

*(From left) Lucian Niemeyer, Assistant Secretary of Defense for Energy, Installations, and Environment, John Henderson, Assistant Secretary of the Air Force, Installations, Environment and Energy, Spotlight Award winners Kenneth McKuen and Col. Aaron Altwies, Joint Base McGuire-Dix-Lakehurst, New Jersey, Leslie Nicholls, FEMP Director (Acting) and Kathleen Hogan, Deputy Assistant Secretary for Energy Efficiency, Office of Energy Efficiency and Renewable energy. (U.S. Department of Energy photo by Eric Hanson)*

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## FEMP FEDS

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amazing efforts by our Airmen, Air Force civilians and community partners which continue to ensure the success of our Air Force and Nation."

"These individuals were absolutely instrumental in assisting the Headquarters MTA team in facilitating workshops at their installations," said Mark Correll, Deputy Assistant Secretary of the Air Force for Environment, Safety and Infrastructure. "Their tireless efforts and continued support of this effort, in addition to their foundational duties, ensured workshop success."

The MTA process begins with an in-person workshop to facilitate a collaborative mission-owner discussion of a mission thread with a strategic look at mission operations and dependencies,

including those with other government agencies and industry partners. The workshop is coupled with a quantitative analysis based system modeling and risk assessment to better understand where enabling systems may introduce vulnerabilities to mission operations.

Leveraging this work by the MTA team, the Office of the Assistant Secretary of the Air Force for Installations, Environment and Energy plans to continue these efforts with the end goal of driving informed investment priorities that improve energy and water resilience to directly support the warfighter.

For more information on how the Air Force is improving resilience, visit the Assistant Secretary of the Air Force for Installations, Environment and Energy's website at: [www.safie.hq.af.mil/InstallationEnergy](http://www.safie.hq.af.mil/InstallationEnergy) and follow [@AirForceEnergy](https://www.facebook.com/AirForceEnergy) on Facebook and [@AFEnergy](https://twitter.com/AFEnergy) on Twitter. 

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