

*"Make energy a consideration in all we do"*

# ENERGY | express

A product of the Air Force Civil Engineer Center

January 2015



## Air Force's largest solar array celebrates 1<sup>st</sup> anniversary

By Kevin Elliott  
AFCEC Public Affairs



December marked the one-year anniversary of the Air Force's largest operational solar array, located at Davis-Monthan Air Force Base, Arizona.

The 16.4-megawatt solar farm, built under a 25-year power purchase agreement, was a joint effort between Davis-Monthan, the Air Force Civil Engineer Center, SunEdison, LLC and Tucson Electric Power.

The array is exceeding expectations. "We expected the array to provide 35 percent of our total power needs," said Lt. Col. Brian Stumpe, 355th Civil Engineer Squadron commander. "However, our calculations show it is providing well over 40 percent of our total need, and over 100 percent of our daytime energy usage. This amounts to a \$500,000 per year

savings for Davis-Monthan and the Air Force."

In its first 10 months, the array produced 33,083,404 kWh of electricity, enough to power over 3,600 homes. The base, before constructing the array, paid 8.6 cents per kilowatt-hour for electricity. Under the power purchase agreement, the rate for the power supplied from the solar array is 4.5 cents per kWh, with an annual increase of 1.5 percent.

"We are very pleased with the performance of the Davis-Monthan  
*continued on pg. 2*

*Photo: Solar panels collect sunlight at Davis-Monthan Air Force Base, Arizona. The D-M solar array project is placed on 170 acres of underutilized land, making this the largest of its kind on any U.S. Department of Defense installation. (U.S. Air Force photo/1st Lt. Sarah Ruckriegle/Released)*

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*D-M ARRAY cont.*

array,” said Frederick Cade, renewable energy program manager at AFCEC. “Projects like this go a long way toward meeting Air Force energy goals, and can serve as a model for other installations.”

Renewable energy projects like the D-M array are part of the Air Force’s overall strategy to provide energy resiliency, reliability and security, as well as cost savings. Power systems located on secure installations deliver necessary predictability, and dollar savings free up resources that can be reallocated to other mission priorities.

“For a minimal investment in manpower, projects like this provide substantial savings,” Stumpe said. “Since we don’t own the project, our civil engineers are freed up to focus on the core mission of operating and sustaining the air base and generating air power.”

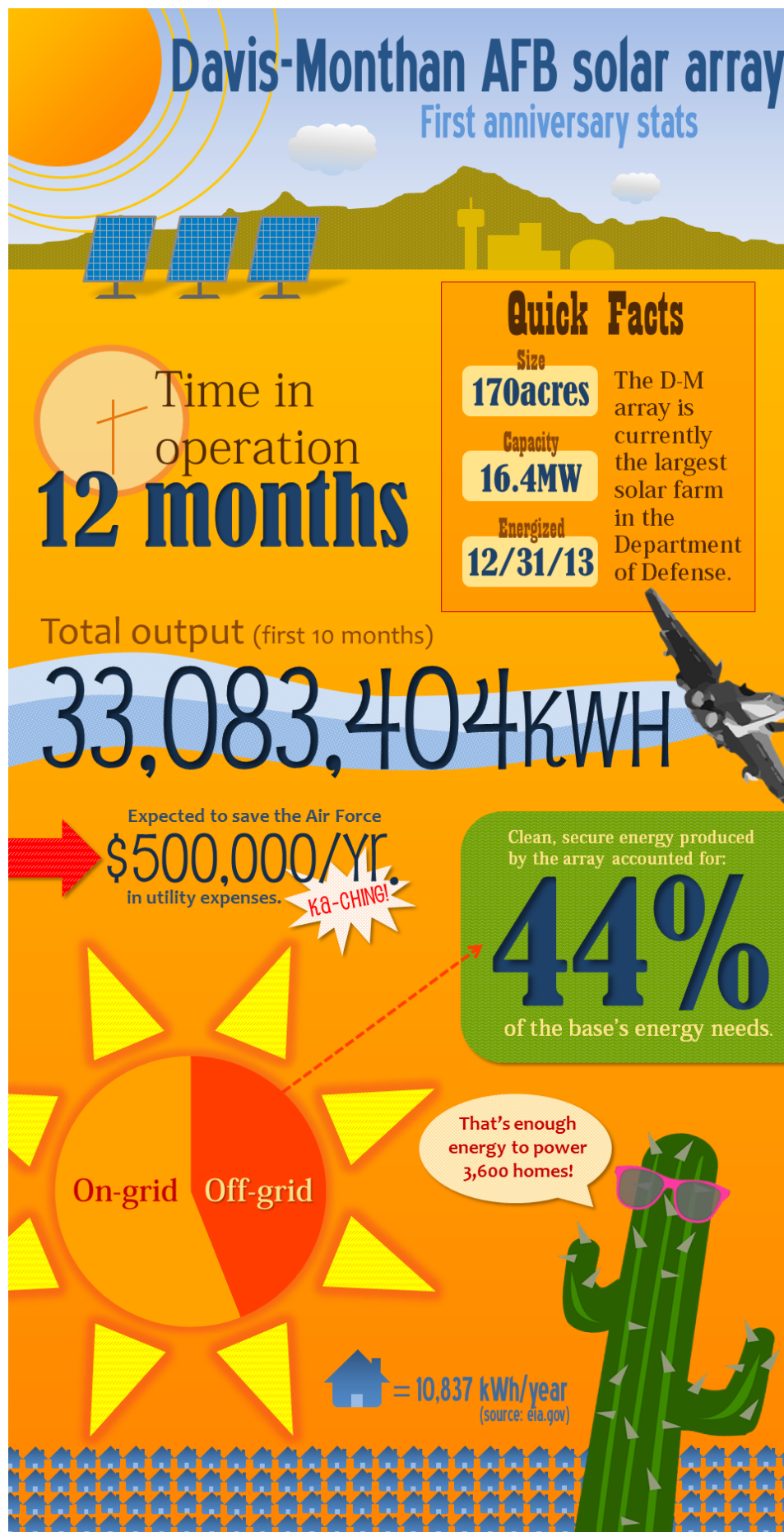
The D-M array also benefits the base’s local utility, Tucson Electric Power, said Timothy Davis, senior director of customer solutions and business development at TEP.

“The Arizona Corporation Commission has implemented the Renewable Energy Standard that requires utilities to increase their production of renewable energy,” Davis said. “TEP had a goal of four percent. The Davis-Monthan array has helped us exceed that goal.”

TEP is so pleased with the project that it has awarded Davis-Monthan with its annual BrightEE Award, for successful energy efficiency programs in the Tucson area.

The Air Force continues to expand its renewable energy program. Currently, two solar arrays are in the works—a 19-megawatt expansion of an existing 14.7-megawatt array under construction at Nellis AFB, Nevada, and a 20-megawatt solar farm in the proposal phase at Vandenberg AFB, California. Each are larger than the D-M array.

“The Air Force has a goal that every base will implement some sort of renewable energy generation,” Stumpe said. “This array has exceeded our goal by 36 percent, which contributes to overall Air Force energy savings. We’re proud of our work here.”







# DLA Energy, Air Force complete fuel conversion ahead of schedule

*Reprinted with permission by DLA Energy*

By Susan Lowe  
DLA Public Affairs

Defense Logistics Agency Energy, in partnership with the Air Force Petroleum Agency, completed an initiative to convert all Air Force bases from a military specification jet fuel, or JP8, to a commercial standard jet fuel, known as Jet A with additives, Oct. 29 at Wright-Patterson Air Force Base, Ohio.

The conversion from JP8 to Jet A with additives, which began with demonstrations at four Air Force bases in November 2009, was completed ahead of the scheduled 2017 date.

"One of the keys to making the conversion a success was marketing our efforts to industry to drum up as much interest as possible in supplying commercial Jet A," said Kevin Ahern, DLA Energy Bulk Petroleum Products director. "We knew that we had a much wider pool of suppliers in the commercial jet [fuel] market than we had in the military specification fuel market."

Identifying those suppliers and guiding them through the government

procurement process was critical to the success of the initiative, he added.

The fuel conversion provides energy security and creates operational flexibility for the Department of Defense, as well as other things.

"We also were able to establish Basic Ordering Agreements for commercial jet fuel both domestically and overseas," Ahern said. "BOAs streamline the procurement process and allow us to quickly purchase additional commercial Jet A requirements that are not covered under long-term contracts."

This conversion is good news for the customers and industry, Ahern said.

"Refining JP8 and moving it through the supply chain requires segregated storage, which is a contributing factor to why some suppliers opt out of getting into the military specification fuel market," he said. "Since the conversion to Jet A with additives, we have seen an increase in competition, which should continue to drive down prices."

Using commercial infrastructure combined with the potential inventory savings from shortened procurement lead times should mean continued positive results for both DoD and industry, Ahern added.

Air Force Col. Carmen Goyette, commander of the Air Force Petroleum Agency, which is collocated with DLA Energy at Fort Belvoir, Virginia, echoed Ahern's remarks.

"The major benefit of switching to a commercial grade of jet fuel is gaining access to a larger pool of suppliers," she said. "The production of military specification fuel only amounted to seven percent of the 23.3 billion gallons of fuel produced in the U.S. annually, which severely limits competition."

Competitive sourcing coupled with the removal of segregation and transportation restrictions will not

*continued on pg. 4*

*Photo: Two T-38 twin-engine, high-altitude, supersonic jet trainers used by Air Education and Training Command.  
(U.S. Air Force photo/Released)*

## Utilities rate negotiations save Air Force millions

By Kevin Elliott  
AFCEC Public Affairs

With a \$9 billion annual energy bill, the Air Force is always striving to reduce energy costs. Recently, the Air Force Utility Law Field Support Center, located at the Air Force Civil Engineer Center, did just that.

When Nellis and Creech Air Force Bases in Nevada and Hill Air Force Base, Utah, received notice earlier this year that their energy rates would increase, the ULFSC stepped in. The ULFSC, a support center at the Air Force Legal Operations Agency comprised of attorneys and paralegals specializing in utility rate litigation, entered into talks with the bases' utilities providers and other parties to challenge the proposed rate increases.

The result was settlements at Nellis, Creech and Hill that, together, will garner millions of dollars in energy cost avoidance for the Air Force over the next three years—money that can now be allocated elsewhere to meet other Air Force priorities.

"Energy security, cost and environmental impact are at the forefront for the proper utilization of limited Air Force and (Department of Defense) resources," said Capt. Drew Jernigan, utility litigation attorney. "Every utility bill that is lowered and cost avoided means commanders and leaders have more money to accomplish the mission."

Both Nellis and Creech are customers of Nevada Energy, the state utilities company. On May 2, 2014, Nevada Energy filed a general rate case with the Nevada Commission requesting a rate increase that would have caused the two bases to pay significantly more for 2014 through 2016.

The ULFSC entered into negotiations with Nevada Energy and other

parties to the rate increase in early August 2014 and, by the end of September, a settlement was reached. The majority of interested parties agreed that the previous electric rates would be retained—essentially a zero dollar rate increase for the Air Force. The agreement was accepted by the Nevada Commission in October.

In the Utah case, Rocky Mountain Power filed a rate case with the Utah Commission Jan. 3, 2014, requesting a rate increase that would have caused Hill to pay millions of dollars more for 2014 through 2016. The ULFSC entered into negotiations with RMP at the end of May 2014, which resulted in a settlement agreement. The settlement avoided more than \$1 million of the proposed increase for Hill. It was accepted by the Utah Commission on Aug. 29, 2014.

"The successful litigation and settlement of these complex cases are a

true team effort," said Lt. Col. John Degnan, chief of the ULFSC. "By leveraging our ULFSC attorney and paralegal assets with the AFCEC Legal Office and the AFCEC Energy Directorate, and

our collaboration with commission staffs and industry, the ULFSC team has built enduring relationships and fairly achieved utility rate reductions for our bases and Federal Executive Agency partners."

The ULFSC represents all federal agencies in its jurisdiction before state public service commissions, and negotiates utilities rate cases, ensuring federal agencies don't pay more than is fair for utilities.

The utilities rates negotiated in these latest cases will remain in place until the next rate case, which is expected in 2017.

"Settlements like these are highly productive and beneficial to the litigation process," Degnan said. "They allow a 'win-win' for the parties involved by avoiding litigation expenses, engaging in fair compromise and building better community relationships."

*"Settlements like these are highly productive and beneficial to the litigation process."*

*- Lt. Col. John Degnan*

### FUEL CONVERSION cont.

only secure a better price for jet fuel, but it goes a long way toward ensuring the service's requirements are met, she added.

Goyette said one of the reasons for the success of the conversion was having a single point of contact at DLA Energy to work with and resolve issues.

"DLA Energy's fuel professionals are unique in that they not only have visibility of the entire supply chain from the refinery to the customer, but they also see everything behind the scenes," she said. "DLA Energy leaders had the vision to assign a program manager with oversight of the myriad moving pieces that needed to align for this program to be a success."

DLA Energy personnel manage all the processes from initial acquisition to the final sale to service customers – including the transportation and quality assurance pieces.

Goyette attributed the accelerated completion date of the conversion to the professionalism and communication from all parties.

"Dealing positively with the necessary change management also ensured success," she added.

DLA Energy led working groups to coordinate this complex, comprehensive effort, and lots of open dialogue and hard work went into making this a successful venture, she said. Senior leaders supported the working groups, providing vision and making the tough decisions required to keep the program moving forward.

"Overall, the conversion acceleration was just a byproduct of the amazing group of logistics professionals' work ethic and cohesiveness," she said.

The conversion delivers a 2-cent per gallon initial cost savings.

Two cents a gallon will yield a significant savings as the DOD spent \$6.95 billion on JP8 in 2013. The Air Force purchases more than one billion gallons of fuel annually within the continental U.S., therefore the transition will save the Air Force an estimated \$25.5 million in annual fuel costs, according to a recent Air Force article.



## 2014 FEMP award winners recognized, AF leads the way

By Kevin Elliott  
AFCEC Public Affairs

The U.S. Department of Energy recognized 25 federal agencies as 2014 Federal Energy and Water Management Program Award winners at a ceremony Dec. 9, in Washington, D.C.

The FEMP awards recognize the outstanding efforts of federal agencies to improve the nation's energy, water, aviation and vehicle fleet efficiency. Each winner demonstrated innovative strategies and technologies to significantly reduce fuel, energy or water consumption, increase efficiency and strengthen national security, according to the Department of Energy website.

Through their efforts, leaders serving in the U.S. Air Force, Army, Marine Corps and Navy; the Departments of Energy, Health and Human Services, Homeland Security, Interior, Transportation and Veterans

Affairs; the General Services Administration; and the Tennessee Valley Authority saved 4.2 trillion British Thermal Units, or BTUs, of energy, nearly 1.3 billion gallons of water and more than \$115.8 million during fiscal 2013. These energy savings alone are equivalent to removing 56,800 cars from the road or eliminating the average energy use of more than 47,000 households annually. This was a banner year for the Air Force. It won its most FEMP awards ever—eight of the 25 projects or programs selected for consideration. In total, 10 government agencies won awards, including the Navy with four and the Army with one.

"The Air Force is doing great things to save energy, water and money," said AFCEC Director Joe Sciabica. "Work by Airmen, civilians and contractors over the past two decades has created a cost avoidance of \$626 million—money that can be better spent executing the Air Force mission."

The Air Force Civil Engineer Center received 29 nomination packages from across the Air Force and narrowed them to 15, the maximum accepted by DOE. Winners were announced earlier this year.

All federal agencies have been mandated by Congress to reduce their energy intensity by 30 percent by 2015.

To read more about each Air Force FEMP winner, click the button below.

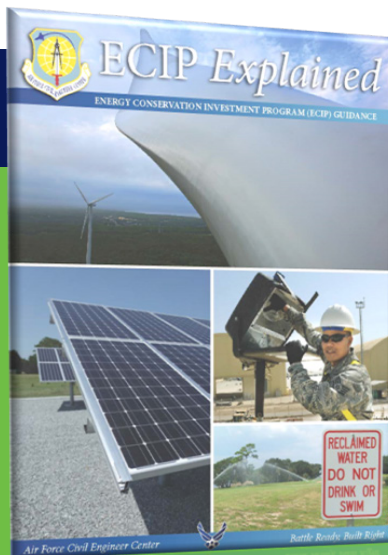
[Read about AF FEMP winners](#)

## POWER Engineering®

A feature article by AFCEC director Joe Sciabica was recently published in Power Engineering magazine. With a monthly print circulation of more than 72,000, Power Engineering is a leading voice in the power generation industry.

Mr. Sciabica's article, "Battle Ready, Built Right: Air Force Seeks Partnerships to Develop Reliable and Sustainable Energy Sources," details how AFCEC leverages public/private partnerships to accomplish successful renewable energy projects across the Air Force. Check it out!

[Click here to read the article!](#)



## Have ECIP questions?

We can help! Learn the basics of the Energy Conservation Investment Program, and how to seek funding for your conservation project.

This 10-page booklet includes:

- Project selection criteria
- Sample forms
- Contact information
- And more!

[Click here to download ECIP Explained](#)



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

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