

# United States Air Force

---



Presentation

Before the Senate Committee on Armed Services, Subcommittee on Readiness and Management Support

## ***Military Construction, Environmental, Energy and BRAC***

Witness Statement of  
Ms. Miranda A. A. Ballentine,  
Assistant Secretary of the Air Force  
(Installations, Environment, and Energy)

March 11, 2015

March 11, 2015



# BIOGRAPHY



## UNITED STATES AIR FORCE

### MIRANDA A. A. BALLENTINE

Miranda A.A. Ballentine is the Assistant Secretary of the Air Force for Installations, Environment, and Energy, Headquarters U.S. Air Force, the Pentagon, Washington, D.C. Ms. Ballentine is responsible for the oversight, formulation, review and execution of plans, policies, programs and budgets for installations, energy, environment, safety and occupational health.

Prior to assuming her current position, Ms. Ballentine served as the Director of Sustainability for Global Renewable Energy and Sustainable Facilities at Walmart Stores, Inc. In this role, she developed and executed global strategies to reduce operating expenses in over 10,000 facilities in over 25 countries. Through acceleration of renewable energy, energy efficiency, and sustainability, Ms. Ballentine identified over \$1 billion in potential annual expense reductions and 9 million metric ton of potential avoided greenhouse gas emissions.

Prior to joining Walmart, Ms. Ballentine was Vice President for Investor Analysis and Chief Operating Officer at David Gardiner & Associates, where she informed multi-million dollar investment decisions by analyzing companies' off-balance sheet risks and opportunities, including climate and energy programs, environmental management, labor relations, diversity, and corporate governance.



Ms. Ballentine previously served as the chair of the World Economic Forum's Global Growth Action Alliance's Renewable Energy Working Group, as well as a number of non-profit boards, including the Sustainability Consortium's External Relations Committee; the NetImpact Corporate Advisory Council; and the George Washington University's Institute for Sustainability Research, Education, and Policy Advisory Board.

In 2013, Ms. Ballentine was selected by the World Economic Forum for membership in its Forum of Young Global Leaders. Ms. Ballentine also serves as a guest lecturer at a number of national business schools, including Duke University, University of North Carolina, and George Washington University.

March 11, 2015

**EDUCATION**

1996 Bachelor of Science Degree in Psychology, Colorado State University, Magna cum Laude

2004 Master of Business Administration in Environmental Management and Policy and International Business,  
George Washington University

**CAREER CHRONOLOGY**

1. 2001 – 2004, Operations Director, Solar Electric Light Fund, Washington, D.C.

2. 2003 – 2008, Vice President of Investor Analysis and Chief Operation Officer, David Gardiner & Associates, LLC,  
Washington, DC.

3. 2008 – 2014, Director of Sustainability for Renewable Energy and Sustainable Buildings, Walmart, Washington,  
D.C.

4. 2014 – present, Assistant Secretary of the Air Force for Installations, Environment, and Energy

(Current as of October 2014)

March 11, 2015

## **Introduction**

The Air Force's fiscal year 2016 (FY16) President's Budget (PB) sets us on the path to fully meet the Quadrennial Defense Review through strategy-based long-term resourcing decisions. This budget submission is rooted in necessity and is based upon our long-term strategy and vision to provide ready installations, resilient environmental infrastructure, and reliable energy, directly supporting the Secretary and Chief of Staff of the Air Force's three priorities of balancing today's readiness with tomorrow's modernization, taking care of our people, and making every dollar count to help ensure we can maintain and field a credible and affordable future force.

The Air Force's FY16 PB sets us on a path to provide the Air Force America deserves. However, even at the FY16 PB level, the Air Force remains stressed to meet the defense strategy. If sequestration funding levels return in FY16, the Air Force will not be able to meet the defense strategy, nor sustain its asymmetric advantage over potential peer competitors. Additionally, these levels will cause continued degradation of infrastructure and installation support. The AF would expect a reduction in Military Construction funding resulting in reduced support to COCOMs, reduced funding to upgrade the nuclear enterprise and support new weapons systems beddown, and elimination of permanent party dormitories from the FY16 budget request. Additionally, the AF would expect similar reductions in FY16 facility sustainment, restoration and modernization funding, forcing AF priority on day to day facility maintenance at the expense of much needed facility repairs.

Our unequalled security, economic, and political advantages, depends on investment in an Air Force that is able to easily succeed against any competitor, in any environment. In order to ensure a trained and ready force, along with the facilities and support to maintain the capabilities required to engage in a full range of contingencies and threats, at home and abroad, the Air Force needs to make

March 11, 2015

smart investments in its installations through military construction (MILCON) and facility sustainment, and maintain strong environmental and energy focused programs.

### **Installations**

Ready installations are an integral part of ensuring a ready Air Force. The Air Force views its installations as foundational platforms comprised of both built and natural infrastructure which: (1) serve as the backbone for Air Force enduring core missions - it delivers air, space and cyberspace capabilities from our installations; (2) send a strategic message to both allies and adversaries - they signal commitment to our friends, and intent to our foes; (3) foster partnership-building by stationing our Airmen side-by-side with our Coalition partners; and (4) enable worldwide accessibility when our international partners need our assistance, and when necessary to repel aggression. Taken together, these strategic imperatives require us to provide efficiently operated, sustainable installations to enable the Air Force to support the Quadrennial Defense Review.

In its Fiscal Year 2015 President's Budget request, the Air Force attempted to strike the delicate balance between a ready force for today with a modern force for tomorrow while also recovering from the impacts of sequestration and adjusting to budget reductions. To help achieve that balance, the Air Force elected to accept risk in installation support, MILCON, and facilities sustainment in FY15. However, in its FY16 request, the Air Force begins to ameliorate the impacts of that risk by increasing funding for installations in all three of the areas noted above.

In total, the Air Force's FY16 PB request is \$1.9 billion more than our Fiscal Year 2015 President's Budget request and contains \$4.8 billion for MILCON, facility sustainment, restoration and modernization, as well as another \$331 million for Military Family Housing operations and maintenance and \$160.5 million for Military Family Housing Construction. For sustainment, it requests \$2.4 billion;

March 11, 2015

for restoration and modernization, \$850 million; and for military construction, it requests \$1.59<sup>1</sup> billion. At these levels, the Air Force funds Facilities Sustainment to 80 percent of the OSD modeled requirement. The increase in MILCON begins to revitalize infrastructure recapitalization while maintaining support to Combatant Commander (COCOM) requirements, weapon system beddowns, the nuclear enterprise, and provides equitable distribution of \$ 203.7 million to the Reserve components.

### **Readiness**

The Air Force FY16 PB request seeks to balance readiness for today's fights, while also modernizing our infrastructure for the future. The Air Force's FY16 budget proposes investments in infrastructure to support the Quadrennial Defense Review and Combatant Commanders' stated readiness needs in the following areas: nuclear defense operations (NDO); space; cyberspace; intelligence, surveillance and reconnaissance (ISR); and the Asia-Pacific theater.

Our FY16 PB supports Nuclear Enterprise priorities and includes three projects, totaling \$144 million. With this budget submission, the Air Force intends to provide a new state-of-the-art Weapon Storage Facility at FE Warren AFB which consolidates 22 aging facilities (some of which have been in service since the 1960s), achieving a 19 percent reduction in facility footprint while addressing security and operational inefficiencies through recapitalization. The 2016 program also includes investment to revitalize the Malmstrom AFB, Montana, Tactical Response Force Alert Facilities as well as the Whiteman AFB, Missouri, Consolidated Stealth Operations and Nuclear Alert Facility. Together, these projects will consolidate scattered installation functions, provide adequately sized and configured operating platforms, as well as reduce critical response times to generate alert sorties.

As previously mentioned, "Making every dollar count" is one of the Secretary and Chief of Staff of the Air Force's priorities. Consistent with this, the Air Force focused on FY16 space, cyberspace, and

---

<sup>1</sup> \$1.59B is the Total Force funding request including Active, Guard and Reserve

March 11, 2015

ISR investments. These target areas account for two space, two cyber, and four ISR projects in the proposed FY16 PB, totaling \$172 million. The Air Force continues its multi-year efforts to construct the U.S. Cyber Command Joint Operations Center at Fort Meade, Maryland; strengthen its space posture through information and communication facilities; and enhance ISR readiness with remotely piloted aircraft facilities, intelligence targeting facilities, as well as digital ground stations.

Consistent with Quadrennial Defense Review, the Asia-Pacific Theater remains a focus area for the Air Force where it will make an \$85 million investment in FY16 to ensure our ability to project power into areas which may challenge our access and freedom to operate, and continue efforts to enhance resiliency. Guam remains one of the most vital and accessible locations in the western Pacific. For the past nine years, Joint Region Marianas-Andersen AFB has accommodated a continuous presence of our Nation's premier air assets, and will continue to serve as the strategic and operational center for military operations in support of a potential spectrum of crises in the Pacific.

To further support Pacific Command's strategy, the Air Force is committed to hardening critical structures, mitigating asset vulnerabilities, increasing redundancy, fielding improved airfield damage repair kits and upgrading degraded infrastructure as part of the Asia-Pacific Resiliency program. In 2016, the Air Force plans to construct a hardened Wing Installation Control Center to sustain Guam's remote operations, ensure resiliency with the Dispersed Maintenance Spares and Storage Facility, and continue our efforts to upgrade Guam's South Ramp Utilities, supporting a Continuous Bomber Presence, Tanker Task Force, Theater Security Packages, and Global Hawk beddown. The Air Force also wraps up its development of the Pacific Regional Training Center (PRTC) by constructing a permanent road to support facilities located at Northwest Field. This Regional Training Center will enable mandatory contingency training and enhance the operational capability to establish, operate, sustain, and recover a

March 11, 2015

'bare base' at forward-deployed locations, and foster opportunities for partnership building in this vitally important area of the world.

This year's Presidential Budget request also includes \$252 million for additional COCOM requirements extending beyond NDO, space, cyberspace, ISR, and the Asia-Pacific theater. The Air Force continues with phase two of the U.S. European Command Joint Intelligence Analysis Center Consolidation at RAF Croughton, United Kingdom while supporting six other COCOMs. Our total FY16 COCOM support makes up 21% of the Air Force's MILCON program.

### **Modernization**

Additionally, the FY16 PB request includes infrastructure investments to support the Air Force's modernization programs, including the beddown of the F-35A, KC-46A, and the Presidential Aircraft Recapitalization efforts. The Air Force's ability to fully operationalize these new aircraft depends not just on acquisition of the planes themselves, but also on the construction of the planes' accompanying hangars, training facilities, airfields and fuel infrastructures funded within this FY16 budget.

This year's President's Budget request includes \$54.5 million for the beddown of the KC-46A at four locations. This consists of \$10.4 million at Altus AFB, Oklahoma, the Formal Training Unit (FTU); \$4.3 million at McConnell AFB, Kansas, the first Main Operating Base (MOB 1); \$2.8 million at Pease International Tradeport Air National Guard Base (ANGB), New Hampshire, the second Main Operating Base (MOB 2); and \$37 million at Tinker AFB, Oklahoma, for KC-46A depot maintenance.

This request also includes \$198.3 million for the beddown of the F-35A at five locations, consisting of \$69 million at Nellis AFB, Nevada; \$56.7 million at Luke AFB, Arizona; \$26.9 million at Hill AFB, Utah; \$37 million at Eielson AFB, Alaska; and \$8.7 million at Eglin AFB, Florida.

In preparation for the Presidential Aircraft Recapitalization acquisition, the Air Force's 2016 budget request also accounts for the planning and design requirements essential to this future



March 11, 2015

beddown. In total, our FY16 modernization program is a balanced approach ensuring critical infrastructure requirements meet mission needs and operational timelines.

## **People**

During periods of fiscal turmoil, we must never lose sight of our Airmen and their families. Airmen are the source of Air Force airpower. Regardless of the location, the mission, or the weapon system, our Airmen provide the knowledge, skill, and determination to fly, fight and win. There is no better way for us to demonstrate our commitment to service members and their families than by providing quality housing on our installations. We are proud to report that as of September 2013, the Air Force has privatized its military family housing (MFH) at each of its stateside installations, including Alaska and Hawaii. To date, the Air Force has awarded 32 projects at 63 bases for 53,240 end-state homes.

The Air Force continues to manage approximately 18,000 government-owned family housing units at overseas installations. Our \$331 million FY16 Military Family Housing Operations and Maintenance (O&M) sustainment funds request allows us to sustain adequate units, and our \$152 million FY16 request for MFH MILCON funds allows us to upgrade and modernize older homes to meet the housing requirements of our Airmen, their families and the Joint service members the Air Force supports overseas.

Similarly, our focused investment strategy for dormitories enables the Air Force to remain on track to meet the DoD goal of 90 percent adequate permanent party dorm rooms for unaccompanied Airmen by 2017. The Fiscal Year 2016 President's Budget MILCON request includes four dormitories at Offutt AFB, Nebraska; Ellsworth AFB, South Dakota; Altus AFB, Oklahoma; and Joint Base San Antonio, Texas. With your support, we will continue to ensure wise and strategic investment in these quality of life areas to provide modern housing and dormitory communities. More importantly, your continued

March 11, 2015

support will take care of our most valued asset, our Airmen and their families.

### **European Infrastructure Consolidation (EIC)**

The United States remains committed to NATO and our presence in Europe. The Air Force has invested heavily in its European infrastructure in the last several years in order to ensure it is ready and able to defend U.S. interests and meet its commitment to our Allies now and in the future. At the same time, in the context of a challenging fiscal environment, the Department of Defense recently sought greater infrastructure efficiencies in Europe and to ensure it was focusing resources where they can have the greatest effect.

Two years ago, the Secretary of Defense directed a European Infrastructure capacity analysis to provide the basis for reducing long-term expenses through footprint consolidations, while retaining current and projected force structure. Under OSD direction, the Air Force used previously established Base Realignment and Closure (BRAC) processes to analyze the infrastructure capacity of 128 total sites, including six Main Operating Bases and six Forward Operating Sites in Europe.

In January 2015, the Secretary of the Defense approved the results of the European Infrastructure Consolidation (EIC) process. This process produced eight consolidation opportunities. These opportunities will eliminate excess infrastructure capacity, consolidate missions, and produce savings without reducing force structure. In the United Kingdom, the Air Force will divest of RAF Mildenhall, and will consolidate intelligence and support activities from RAF Alconbury and RAF Molesworth to RAF Croughton. The Air Force also reaffirmed previous decisions to streamline operations at Moron Air Base, Spain, and Lajes Field, Portugal, and returned four small unused facilities back to their respective host nations.

The Air Force European Infrastructure Consolidation opportunities will require approximately \$1.1 billion (FY16 – FY21) to implement, but will enable the Air Force to save \$315 million a year, while

March 11, 2015

still maintaining our readiness and responsiveness capabilities in Europe. Most of the implementation costs will be funded through previously programmed European Infrastructure Consolidation funding.

The EIC ensures Air Force installations in Europe are right-sized and in the right location. Our capability in Europe, along with our ability to meet commitments to Allies and partners, is not diminished by these actions. The Air Force is maintaining sufficient infrastructure in Europe to support six Combatant Commands, the North Atlantic Treaty Organization, and U.S. strategic allies through permanently stationed forces, additional rotational forces, and contingency requirements. The EIC adjustments will allow the Air Force to address emerging concerns in Europe and elsewhere, by focusing resources on critical operational support infrastructure.

We have consulted closely with our allies on our specific plans and the broader security picture. These consolidations, force realignments, and new deployments were validated through the EIC and other processes and approved by the Secretary of Defense, in full coordination with the U.S. State Department, and after discussions with the host nations.

### **Closures and Realignments**

Building on the success of the European Infrastructure Consolidation process, the Air Force strongly supports DoD's requests for an FY17 BRAC round in the United States.

In FY15 budget discussions, Congress requested that the Services update their analyses of CONUS infrastructure capacity based upon current infrastructure data and current force structure projections.

The Air Force has completed a high-level capacity analysis, comparing current infrastructure capacity to projected force structure and mission requirements. The results of the analysis indicate the Air Force has

March 11, 2015

approximately 30 percent excess infrastructure capacity.<sup>2</sup> This excess capacity results from decreases in Air Force personnel and force structure outpacing reductions in infrastructure. Since our last round of BRAC in 2005, the Air Force has 50,000 fewer personnel and 500 fewer aircraft in its planned force structure.

Since the last congressionally directed round of BRAC in 2005, the Air Force has worked diligently to identify new opportunities and initiatives to enable it to maximize the impact of every dollar. We have demolished excess infrastructure, recapitalized our family housing through privatization, unlocked the fiscal potential of under-utilized resources through leasing and partnerships, and reduced our energy costs. All of which have paid dividends. But these efforts are not enough to allow us to continue to fund infrastructure we do not need and pale in comparison to the savings that can be achieved with BRAC authorities.

Despite our best efforts and innovative programs, the Air Force continues to spend money maintaining excess infrastructure that would be better spent recapitalizing and sustaining our weapons systems, training to improve readiness, and investing in the quality of life needs of its Airmen. The Air Force continues to face hard choices between modernization and operational combat capability, and sustaining installation platforms used to conduct its missions. The Air Force recognizes that it achieve its greatest savings when fully divested of unneeded infrastructure, and therefore it strongly supports DoD's requests for another round of BRAC; specifically an efficiency BRAC focused on reducing the Air Force's 30 percent excess infrastructure capacity and ultimately reducing the demand on resources.

### **Environmental**

Within its environmental programs, the Air Force continues to prioritize resources to, 1) ensure a resilient environmental infrastructure to support its mission and its communities; 2) comply with legal obligations; and 3) continuously improve. The FY16 PB seeks a total of \$862 million for environmental

---

<sup>2</sup> The 30 percent excess infrastructure capacity estimate was calculated using the same approved methodology that has been employed to measure excess infrastructure prior to previous rounds of BRAC.

March 11, 2015

programs. This is \$57 million less than last year due to sustained progress in cleaning up contaminated sites and efficiencies gained through centralized program management. By centrally managing its environmental programs the Air Force can continue to strive for compliance with all applicable laws, while applying every precious dollar to its highest priorities first, increasing flexibility to select standardized solutions, when appropriate, to complex environmental issues. Further, its environmental programs are designed to provide environmental stewardship to ensure the availability of air, land and water necessary to provide ready installations and ensure military readiness.

### **Environmental Restoration**

The Air Force FY16 PB request seeks \$425 million in Environmental Restoration funding for cleanup of both current installations and those closed during previous BRAC rounds. The Air Force established its restoration program in 1984 to clean-up former hazardous waste disposal sites on these installations. The Air Force's focus has been on completing investigations and getting remedial actions in place, to reduce unacceptable risk to human health and the environment in a prioritized manner consistent with environmental law. Ultimately, the Air Force seeks to make real property available for mission use at its non-BRAC installations, or for transfer and reuse at its BRAC installations. We believe this balanced approach continues to simultaneously serve our mission needs, our statutory requirements, and our stakeholders' interests.

With more than 8,100 restoration sites at its non-BRAC installations, and more than 5,200 sites at our BRAC installations, the Air Force has made progress over time in managing this complex program area. In addition to regulatory and mission requirements, the DoD has committed to restoration program execution goals to help ensure an acceptable pace is maintained in program execution. While Air Force BRAC restoration sites are on-track to meet the next DoD milestone to have response complete at 90% of the Installation Restoration Program (IRP) sites by the end of FY18, its non-BRAC

March 11, 2015

restoration sites are currently projected to fall 5% short of this goal, but are expected to meet DoD milestones by FY20.

Since recognizing in early 2011 the need to improve its process in order to close the gap toward meeting this goal, the Air Force has implemented policy and formulated a contracting strategy specifically to improve its performance. Since a large component of its cleanup program relies on expertise acquired under contracts, this policy emphasized performance-based contracts that reward increased use of innovative technologies and cleanup strategies that consider the total life cycle cost of getting remedies in place and sites cleaned up. At Kirtland AFB, New Mexico, utilizing performance base contracting, we are continuing our efforts to remediate the clean-up of the fuel spill at the bulk fuels facility. Although this effort will encompass several years, we developed our clean-up strategy in concert with state and local officials, and are already seeing positive results.

The Air Force's policy and performance-based contracting strategy, aligned with federal environmental laws and regulation has generated substantial improvements, but work still remains in order to meet DoD goals for non-BRAC installation cleanup. With this approach, the Air Force is finding better solutions and cleaning up sites faster with lower projected lifecycle costs. The Air Force expects performance and progress to accelerate over the next year, while continuing to meet federal, state and other stakeholder requirements.

### **Environmental Quality**

The Air Force's FY16 PB request seeks \$437 million in Environmental Quality funding for environmental compliance, environmental conservation, pollution prevention, and environmental technology investments. With this request, the Air Force provides a resilient environmental infrastructure and continues to strive for in compliance with environmental laws in order to remain good stewards of the environment. The Air Force has instituted a standardized and centralized

March 11, 2015

requirements development process that prioritizes its environmental quality program in a manner that minimizes risk to Airmen, the mission and the natural infrastructure. This balanced approach ensures the Air Force has ready installations with the continued availability of land, air, and water resources at its installations and ranges so it can train and operate today and into the future.

The environmental compliance program focuses on regulatory compliance for our air, water, and land assets. Examples of compliance efforts include: more detailed air quality assessments when analyzing environmental impacts from Air Force activities; protecting its groundwater by improving management of its underground and aboveground storage tanks; and minimizing waste through source reduction. At overseas installations, the Air Force takes prompt action to remediate environmental contamination when there are substantial impacts to human health, or when such remediation is mandatory arising from a binding international agreement to which the United States is a party.

The Air Force remains committed to a robust environmental conservation program in Fiscal Year 2016. Prior appropriations allowed the Air Force to invest in conservation activities on its training ranges, providing direct support to mission readiness. The conservation program in Fiscal Year 2016 builds on the efforts of past years to continue habitat and species management for 115 threatened and endangered species across 45 Air Force installations. This year's budget request also provides for continued cooperation with other agencies, like the U.S. Fish and Wildlife Service, to provide effective natural resources management and to manage risk from wildland fires through coordinated planning and incident response and the application of prescribed fire techniques. The Air Force has also published formal guidance to the field on improving and sustaining tribal relations which supports the unique trust relationship the U.S. government has with tribes and emphasizes aspects of the Air Force's mission that may affect tribes.

March 11, 2015

The Air Force remains committed as good environmental stewards complying with legal requirements, reducing risk to our natural infrastructure, and honing its environmental management practices to ensure the sustainable management of the resources it needs to fly, fight, and win now and into the future.

### **Energy Security**

Reliable energy is a common thread that runs through each of the five core missions of the Air Force and serves as a cornerstone to ensure the Air Force can provide the Nation with *Global Vigilance*, *Global Reach*, and *Global Power*. To meet its energy needs, the Air Force is leveraging sound business practices and making prudent investments in energy conservation and alternative sources of energy to enable its warfighters and improve energy surety. These investments are crucial to ensure the Air Force has the energy where and when it is needed to conduct the military missions that protect core national interests.

Energy security means, “having assured access to reliable supplies of energy and the ability to protect and deliver sufficient energy to meet mission essential requirements.” And to enhance energy’s contribution to mission assurance, the Air Force is focused on four priorities:

- 1) Improve resiliency to ensure the Air Force has the ability to recover from energy interruptions and sustain the mission,
- 2) Reduce demand through operational and logistical efficiencies and new technologies, without losing mission capabilities,
- 3) Assure supply by diversifying the types of energy and securing the quantities necessary to perform its missions, and
- 4) Foster an energy aware culture by increasing the Airmen’s understanding of energy and its impact to the mission.



March 11, 2015

There are risks from depending solely upon traditional energy supplies, as global access and costs are impacted by demand growth, natural disasters, accidents, terrorism, and political instability. In addition to fossil petroleum fuels, Air Force installations are heavily dependent on the commercial grid. These dependencies expose core mission support functions to external threats and can jeopardize effectiveness. To address those dependencies, the Air Force is mitigating risks by identifying alternate sources of energy where appropriate, building in redundancies where direct mission support requires it, and identifying where and for how long it needs to ensure it has the ability to operate. This requires an energy security posture that is robust, resilient, and ready. In short, energy security enables the warfighters, expands operational effectiveness, and enhances national security.

*Budget Impact*

The Air Force is the largest single consumer of energy in the federal government. As energy costs increase and budgets decrease, energy places greater pressure on the Air Force budget. In Fiscal Year 2014, the Air Force spent almost \$9 billion on fuel and electricity, with over 85 percent of those costs dedicated to aviation fuel. That \$9 billion represented over 8 percent of the total Air Force budget, and it could have been an even larger amount. As a result of the energy efficiencies the Air Force has put in place in its aviation and facilities programs, the Air Force avoided over \$2.5 billion in energy costs last year.

As part of its institutional effort to utilize energy to sustain an assured energy advantage, the Air Force is requesting over \$416 million for targeted operational energy initiatives in Fiscal Year 2016. This includes \$26 million for energy improvements to the legacy fleet and \$212 million for materiel acquisition and energy research, development, test and evaluation (RDT&E) opportunities. The Air Force does not specifically budget for facility energy projects; it funds facility energy projects using facility sustainment, restoration, and modernization funding based on Air Force priorities.

March 11, 2015

The Air Force recognizes the value of the financial resources made available for investments. To ensure it is making the best use of taxpayer dollars, the Air Force corporate structure requires strong evaluations based on sound business case analyses, with a particular focus on return on investment and payback period. Every action taken by the Air Force to improve its energy security and efficiency is well researched and executed to provide the greatest impacts in support of the Air Force mission.

*Energy Resiliency and Continuity*

The first priority is mission success, and this includes what is best from an energy perspective to make sure we have energy when and where we need it to achieve the Air Force mission. Energy security is key to mission assurance. In order to reach and maintain energy security the Air Force must be energy resilient, and the Air Force has taken the first step by analyzing the energy requirements of its weapon systems and identifying the risks related to energy use. Resiliency occurs by expanding energy supply through improved efficiencies and reduced demand, diversifying the energy sources the Air Force can use, and mitigating energy security risks from disruptions. As the Air Force looks to improve efficiency, it understands that every megawatt of power it avoids using on its bases is one megawatt that it does not need to replace in a disruption.

Energy security is more than “efficiency;” it translates to productivity and mission effectiveness. Using energy as a strategic advantage allows the Air Force to fly farther, stay on station longer, transport more cargo, and accomplish its mission more effectively. The Air Force is continually looking to increase mission effectiveness through increased productivity and efficiency.

*Efficiency and Demand Reduction*

The Air Force is focused on reducing its energy footprint across all operations. Since 2003, the Air Force has reduced both its total facility energy and its facility energy intensity – the amount of energy used per square foot in a facility – by over 22 percent. At this time, the Air Force is on track to

March 11, 2015

reduce its facility energy intensity by 37.5 percent by 2020 from 2003 baseline data, meeting the goals outlined by Congress and the President.

While the Air Force has made considerable progress to reduce its energy consumption and increase its energy diversity, there is still more to do. The Air Force is pursuing Energy Savings Performance Contracts (ESPC) and Utility Energy Service Contracts (UESC) to fund energy conservation projects. Since FY12, the Air Force has awarded approximately \$107 million in ESPCs and UESCs. In 2015 the Air Force expects to award up to \$232 million in such contracts.

The Air Force's aviation fleet is composed of nearly 5,000 aircraft that consume over two billion gallons of jet fuel every year. At 85 percent, aviation fuel represents the largest share of the Air Force's energy bill. To address this, the Air Force has a goal to improve the aviation energy efficiency, which it defines as productivity per gallon, of its fleet by 10 percent by 2020. The Air Force faces a challenge, as many of the material solutions require significant upfront investments with long-term paybacks. However, making flying operations more productive is not just about material solutions, but also implementing changes is how the Air Force flies. For example, last year, the 97<sup>th</sup> Air Mobility Wing at Altus Air Force Base, Oklahoma, instituted five scheduling and airspace utilization initiatives that contributed to increased training efficiency. These changes produced \$64 million in savings and a 5 percent reduction in Average Mission Duration, without reducing the number of missions flown or student training accomplished time. These innovations, improvements, and plans happen because the Air Force is fostering an energy-aware culture within the Air Force that empowers Airmen to take a smart approach to energy to better complete their mission.

#### *Assurance of Supply*

The Air Force is looking to improve its energy security and diversify its energy supply through the increased use of renewable energy. In Fiscal Year 2014, almost six percent of the electrical energy

March 11, 2015

used by the Air Force was produced from renewable sources, and the amount of renewable energy used by the Air Force continues to increase every year. Moving forward, the Air Force's goal is to develop 1,000 megawatts of renewable energy capacity on its installations by 2025 by capitalizing on underutilized land to develop those projects. By the end of Fiscal Year 2014, the Air Force had 287 renewable energy projects on 97 sites, either installed, in operation, or under construction across a wide variety of renewable energy sources, including wind, solar, geothermal, and waste-to-energy projects. These projects, which are typically owned and operated by private industry, have increased energy production on Air Force installations by over 50 percent from 2013 to 2014.

This year, the Air Force is planning projects that are expected to provide over 73 megawatts of capacity, with another 100 megawatts planned for Fiscal Year 2016. A prime example is the development and construction of the Air Force's largest solar project, a 19.0 megawatt (MW) array at Nellis AFB, NV. Combined with the existing 14.2 MW solar photovoltaic (PV) array, renewable energy will account for 38 percent of energy usage at Nellis. This comes only a short time after the Air Force unveiled a 16.4 MW solar PV array at Davis-Monthan AFB, AZ. The Davis-Monthan array, which was developed through a public private partnership, will provide approximately 35 percent of the base's electricity requirements and is expected to reduce base utility costs by about \$500,000 annually.

The Air Force is also committed to diversifying the types of energy and securing the quantities necessary to perform its missions, both for near-term benefits and long-term energy security. The ability to use alternative fuels in its aircraft provides the Air Force with both increased flexibility and capability concerning the types of fuels available for use. The entire Air Force fleet has been certified to use two alternative aviation fuel blends – one of these is generated from traditional sources of energy and one generated from biobased materials. The Air Force chose these fuels based on an evaluation of

March 11, 2015

market conditions and discussions with commercial partners. Should another alternative fuel process become viable in the future, the Air Force will evaluate how to proceed at that time.

### **Conclusion**

The Air Force made hard strategic choices during formulation of this budget request. The Air Force attempted to strike the delicate balance between a ready force for today with a modern force for tomorrow while also recovering from the impacts of sequestration and adjusting to budget reductions. Our FY16 PB request begins the recovery of installation and infrastructure investments necessary to meet the defense strategy. The return of sequestration level funding will halt this recovery. We also must continue the dialogue on right-sizing our installations footprint for a smaller, more capable force that sets the proper course for enabling the Defense Strategy while addressing our most pressing national security issue - our fiscal environment.

In spite of fiscal challenges, we remain committed to our Service members and their families. The privatization of housing at our stateside installations and continued investment in Government Housing at overseas locations provide our families with modern homes that improve their quality of life now and into the future. We also maintain our responsibility to provide dormitory campuses that support the needs of our unaccompanied Service members.

Finally, we continue to carefully scrutinize every dollar we spend. Our commitment to continued efficiencies, a properly sized force structure, and right-sized installations will enable us to ensure maximum returns on the Nation's investment in her Airmen, who provide our trademark, highly valued airpower capabilities for the Joint team.