



APRIL 12, 2016

# MILITARY CONSTRUCTION, ENVIRONMENTAL, ENERGY, AND BASE CLOSURE PROGRAMS

UNITED STATES SENATE COMMITTEE ON ARMED SERVICES

SUBCOMMITTEE ON READINESS AND MANAGEMENT SUPPORT

ONE HUNDRED FOURTEENTH CONGRESS, SECOND SESSION

---

## HEARING CONTENTS:

### *WITNESS STATEMENTS*

**Mr. Peter J. Potochney** [\[view pdf\]](#)

Performing the Duties of Assistant Secretary of Defense for Energy, Installations and Environment

**Honorable Katherine G. Hammack** [\[view pdf\]](#)

Assistant Secretary of The Army for Installations, Energy and Environment

**Honorable Dennis V. McGinn** [\[view pdf\]](#)

Assistant Secretary of The Navy for Energy, Installations and Environment

**Honorable Miranda A.A. Ballentine** [\[view pdf\]](#)

Assistant Secretary of The Air Force for Installations, Environment and Energy

*AVAILABLE WEBCAST(S)\*:*

[\[Watch Full Hearing\]](#)

*COMPILED FROM:*

- <http://www.armed-services.senate.gov/hearings/16-04-12-military-construction-environmental-energy-and-base-closure-programs>

*\* Please note: Any external links included in this compilation were functional at its creation but are not maintained thereafter.*

**HOLD UNTIL RELEASED**

**BY THE COMMITTEE**

**Statement of**

**Mr. Pete Potochney**

**Performing the Duties of Assistant Secretary Of Defense**

**(Energy, Installations, and Environment)**

**Before the Senate Armed Services Committee**

**Subcommittee on Readiness and Management Support**

**FY 2017 Department of Defense Budget Request**

**And Future Years Defense Program for**

**Energy, Installations, and Environment**

**April 12, 2016**

## **Introduction**

Chairman Ayotte, Ranking Member Kaine and distinguished members of the subcommittee: Thank you for the opportunity to present the President's Fiscal Year (FY) 2017 budget request for the Department of Defense programs supporting energy, installations, and the environment.

In my testimony, I will focus first on the budget request. As you will note, the Administration's budget includes \$7.4 billion for Military Construction (including family housing), and \$10.2 billion for Facility Sustainment and Recapitalization. These are both decreases from last year, as the Bipartisan Budget Act of 2015 caps overall defense spending. Although this request allows a reduction in facilities risk due to a slight increase in Sustainment funding by the Services, the Department is still accepting risk in facilities. As this Subcommittee well knows, facilities degrade more slowly than readiness, and in a constrained budget environment, it is responsible to take risk in facilities first.

My testimony will also address the environmental budget. This budget has been relatively stable, and we continue to show progress in both our compliance program, where we've seen a decrease in environmental violations, and in cleanup, where 84% of our 39,000 sites have reached Response Complete. We remain on track to meet our goals of 90% Response Complete in 2018, and 95% in 2021.

As you know, Operational Energy Plans and Programs merged with Installations and Environment office in 2015 to form the Office of Assistant Secretary of Defense for Energy, Installations and Environment (EI&E). EI&E now oversees all energy that is required for training, moving and sustaining military forces and weapons platforms for military operations, as well as energy used on military installations. While the budget request for Military Construction and Environmental Remediation programs includes specific line items, the Department's programs for Operational Energy and Installation Energy are subsumed into other accounts. With that in mind, I will summarize the newly released 2016 *Operational Energy Strategy* and address the budgets for the Department's operational and installation energy portfolio.

In addition to budget, I will also highlight a handful of top priority issues – namely, the Administration's request for BRAC authority, European consolidation efforts, European Reassurance Initiative, the status of the movement of Marines from Okinawa to Guam, an overview of our energy programs, and climate change.

## **Fiscal Year 2017 Budget Request – Military Construction and Family Housing**

The President's FY 2017 budget requests \$7.4 billion for the Military Construction (MilCon) Appropriation—a decrease of approximately \$1.0 billion from the FY 2016 budget request (see Table 1 below). This decrease is directly attributable to the resourcing constraints established by the Bipartisan Budget Agreement and the Department's need to fund higher priority readiness and weapon's modernization program. The request does recognize the Department's need to

invest in facilities that address critical mission requirements and life, health, and safety concerns, while acknowledging the constrained fiscal environment. In addition to new construction needed to bed-down forces returning from overseas bases, this funding will be used to restore and modernize enduring facilities, acquire new facilities where needed, and eliminate those that are excess or obsolete. The FY 2017 MilCon request includes projects that directly support operations and training, maintenance and production, and projects to take care of our people and their families, such as medical treatment facilities, unaccompanied personnel housing, and schools.

As shown by the decrease in this year’s budget request, the DoD Components continue to take risk in the MilCon program in order to lessen risk in other operational and training budgets. While the Department’s FY 2017 budget request funds critical projects that sustain our warfighting and readiness postures, taking continued risk across our facilities inventory will degrade our facilities and result in the need for significant investment for facility repair and replacement in the future. Our limited MilCon budget for FY 2017 leaves limited room for projects that would improve aging workplaces, and therefore, could adversely impact routine operations and the quality of life for our personnel.

**Table 1. MilCon Appropriation Request, FY 2016 versus FY 2017**

Account Category	FY 2016 Request (\$ Millions)	FY 2017 Request (\$ Millions)	Change from FY 2016	
			Funding (\$ Millions)	Percent
Military Construction	6,653	5,741	(912)	(14%)
Base Realignment and Closure	251	205	(46)	(18%)
Family Housing	1,413	1,320	(93)	(7%)
Chemical Demilitarization	0	0	0	0%
NATO Security Investment Program	120	178	58	48%
<b>TOTAL</b>	<b>8,437</b>	<b>7,444</b>	<b>(993)</b>	<b>(12%)</b>

### **Military Construction**

The FY 2017 military construction request of \$6.1 billion addresses routine requirements for construction at enduring installations stateside and overseas, and for specific programs such as Base Realignment and Closure and the NATO Security Investment Program. This is a 13 percent decrease from our FY 2016 request, and this level of funding remains significantly less than historic trends prior to the Budget Control Act. In addition, we are targeting MilCon funds to three key areas.

First and foremost, our MilCon request supports the Department’s operational missions. MilCon is key to supporting forward deployed missions as well as implementing initiatives such as the Asia-Pacific rebalance, European Infrastructure Consolidation, European Reassurance Initiative,

and cyber mission effectiveness. Our FY 2017 budget request includes \$473 million for 13 F-35A/B/C maintenance, production, training, and support projects to accommodate initial F-35 deliveries; \$194 million to support 8 fuel infrastructure projects; \$62.2 million for a power upgrades utility project in support of the U.S. Marines relocation to Guam; \$260 million for recapitalization of National Security Agency facilities; and \$53.1 million for the third phase of a Joint Intelligence Analysis Complex Consolidation at Royal Air Force Croughton, United Kingdom. The budget request also includes \$470 million to address new capabilities/mission, force structure growth, and antiquated infrastructure for Special Operations Forces; \$176 million for 3 Missile Defense Agency projects, including \$156 million for Phase 1 of the Long Range Discrimination Radar System Complex in Alaska; a \$76 million investment to recapitalize facilities at three Naval Shipyards; and \$124 million for 4 unmanned aerial vehicle operational facilities.

Second, our FY 2017 military construction budget request continues the Department's 10 year plan (which started in FY 2011) to replace and recapitalize more than half of the DoDEA schools. Funding in FY 2017 includes \$246 million to address four schools in poor condition at Dover, Delaware; Kaiserslautern, Germany; Kadena AB, Japan; and RAF Croughton, United Kingdom.

Third, the FY 2017 budget request includes \$304 million for medical facility recapitalization. This includes \$50 million for the first increment of a \$510 million project for the Walter Reed Medical Center Addition/Alteration; \$58.1 million for increment six (of a \$982 million seven increment project) for the Medical Center Replacement at Rhine Ordnance Barracks in Germany; and \$195.9 million for five other smaller medical/dental facilities. All the projects are crucial for our continued delivery of quality health care that our service members and their families deserve whether stationed stateside or during overseas deployments.

### **Overseas Contingency Operations**

The FY 2017 Overseas Contingency Operations budget request includes \$47.9 million for projects supporting the mission in East Africa (Djibouti). The request also includes \$113.6 million in European Reassurance Initiative military construction funding for military construction activities for the Active components of all Military Services, and Defense-Wide Activities supporting military operations in Europe in direct support of NATO, Operation Freedom's Sentinel, and Operation Inherent Resolve. Funds provided would bolster security of U.S. NATO Allies and partner states in Europe and deter aggressive actors in the region by enhancing prepositioning and weapons storage capabilities, improving airfield and support infrastructure, providing 5th generation warfighting capability, and building partnership capacity.

### **Family and Unaccompanied Housing**

A fundamental priority of the Department is to support military personnel and their families to improve their quality of life by ensuring access to suitable, affordable housing. Service members are engaged in the front lines of protecting our national security and they deserve the best

possible living and working conditions. Sustaining the quality of life of our people is crucial to recruitment, retention, readiness and morale.

Our FY 2017 budget request includes \$1.3 billion to fund construction, operation, and maintenance of government-owned and leased family housing worldwide as well as to provide housing referral services to assist military members in renting or buying private sector housing, and oversight of privatized family housing (see Table 2 below). Included in this request is \$356 million for construction and improvements; \$232 million for operations (including housing referral services); \$229 million for maintenance; \$154 million for utilities; and \$349 million for leasing and privatized housing oversight.

This funding request supports over 38,000 government-owned family housing units, almost all of which are on enduring bases in foreign countries now that the Department has privatized the vast majority of our family housing in the United States (over 206,000 units). The Department is also leasing more than 9,000 family housing units where government-owned or privatized housing is not feasible. Our request also includes \$3.3 million to support administration of the Military Housing Privatization Initiative (MHPI) Program as prescribed by the Federal Credit Reform Act of 1990, to ensure the project owners continue to fund future capital repairs and replacements as necessary to provide quality housing for military families and to ensure that these projects remain viable for their 40-50 year lifespan.

In FY 2015, the Department notified Congress of DoD’s intent to transfer \$96 million of Navy family housing construction funds into the Department’s Family Housing Improvement Fund (FHIF) to execute Hawaii Phase 6 to support Marine Corps housing requirements in Hawaii. Execution of Hawaii Phase 6 brings the Department’s total privatized family housing inventory to nearly 202,000 homes.

**Table 2. Family Housing Budget Request, FY 2016 versus FY 2017**

Account Category	FY 2016 Request (\$ Millions)	FY 2017 Request (\$ Millions)	Change from FY 2016	
			Funding (\$ Millions)	Percent
Family Housing Construction/Improvements	277	356	79	29%
Family Housing Operations & Maintenance	1,136	961	(175)	(15%)
Family Housing Improvement Fund*	0	3	3	100%
<b>TOTAL</b>	<b>1,413</b>	<b>1,320</b>	<b>93</b>	<b>(7%)</b>

\*We made no FY 2016 request for funds to oversee privatized housing because we had sufficient FY 2015 cost savings to cover our FY 2016 expenses.

The Department also continues to encourage the modernization of Unaccompanied Personnel Housing (UPH) to improve privacy and provide greater amenities. In recent years, we have

heavily invested in UPH to support initiatives such as BRAC, global restationing, force structure modernization, and the Navy’s Homeport Ashore initiative. However, this constrained budget request only includes five UPH projects totaling \$161 million, all of which are for transient personnel or trainees such as a \$67 million Recruit Dormitory at Joint Base San Antonio, Texas.

### **Facilities Sustainment and Recapitalization**

In addition to new construction, the Department invests significant funds in maintenance and repair of our existing facilities. Sustainment represents the Department’s single most important investment in the condition of its facilities. It includes regularly scheduled maintenance and repair or replacement of facility components—the periodic, predictable investments that should be made across the service life of a facility to slow its deterioration, optimize the Department’s investment, and save resources over the long term. Proper sustainment slows deterioration, maintains safety, preserves performance over the life of a facility, and helps improve the productivity and quality of life of our personnel.

**Table 3. Sustainment and Recapitalization Budget Request, FY 2016 versus FY 2017**

<b>Account Category</b>	<b>FY 2016 Request (\$ Millions)</b>	<b>FY 2017 Request (\$ Millions)</b>	<b>Change from FY 2016</b>	
			<b>Funding (\$ Millions)</b>	<b>Percent</b>
Sustainment (O&M)	8,022	7,450	(572)	(7%)
Recapitalization (O&M)	2,563	2,088	(475)	(19%)
<b>TOTAL</b>	<b>10,585</b>	<b>9,538</b>	<b>(1,047)</b>	<b>(10%)</b>

The accounts that fund these activities have taken significant cuts in recent years. For FY 2017, the Department’s budget request includes \$7.4 billion for sustainment and \$2.1 billion for recapitalization (see Table 3 above) in Operations & Maintenance funding only. The combined level of sustainment and recapitalization funding (\$9.5 billion) is a 10 percent decrease from the FY 2016 President’s Budget (PB) request (\$10.6 billion), and reflects an acceptance of significant risk in DoD facilities. In fact, the request supports average DoD-wide sustainment funding level that equates to 74% of the FSM requirement as compared to the Department’s goal to fund sustainment at 90% of modeled requirements.

Recent and ongoing budget constraints have limited investment in facilities sustainment and recapitalization to the point that 11.7 percent of the Department’s facility inventory is in “poor” condition (Facility Condition Index (FCI) between 60 and 79 percent) and another 14.8 percent is in “failing” condition (FCI below 60 percent) based on recent facility condition assessment data. Compared to last year (see Table 4), the Department is seeing more poor facilities moving into failing conditions. Until the out-year sequestration challenges are overcome, the Department will continue to take risk in funding to sustain and recapitalize existing facilities. This will ultimately result in DoD facing larger bills in the out-years to restore or replace facilities that deteriorate prematurely.

**Table 4. – Comparison of FY 2014 and FY 2015 Facility Condition Indices**

	End of FY 2014 FCI (%)		End of FY 2015 FCI (%)	
	Poor (60-79 %)	Failing (<60%)	Poor (60-79 %)	Failing (<60%)
Army	31.3	10.2	12.8	26.1
Navy	17.4	6.4	15.8	6.4
Air Force	2.6	4.1	5.7	3.9
Washington Headquarters Service	2.2	4.7	2.1	5.8
<b>TOTAL</b>	<b>19.7</b>	<b>7.4</b>	<b>11.7</b>	<b>14.8</b>

**Fiscal Year 2017 Budget Request – Environmental Programs**

The Department has long made it a priority to protect the environment on our installations, not only to preserve irreplaceable resources for future generations, but to ensure that we have the land, water and airspace we need to sustain military readiness. To achieve this objective, the Department has made a commitment to continuous improvement, pursuit of greater efficiency and adoption of new technology. In the President’s FY 2017 budget, we are requesting \$3.4 billion, a slight decrease from FY 2016, to continue the legacy of excellence in our environmental programs.

The table below outlines the entirety of the DoD’s environmental program, but I would like to highlight a few key elements where we are demonstrating significant progress – specifically, our environmental restoration program, our efforts to leverage technology to reduce the cost of cleanup, and the Readiness and Environmental Protection Integration (REPI) program.

**Table 5: Environmental Program Budget Request, FY 2017 versus FY 2016**

Program	FY 2016 Request (\$Millions)	FY 2017 Request (\$Millions)	Change from FY 2016	
			Funding (\$Millions)	Percent
Environmental Restoration	1,107	1,030	-77	-7%
Environmental Compliance	1,389	1,493	103	7%
Environmental Conservation	389	420	31	8%
Pollution Prevention	101	84	-17	-17%

Environmental Technology	200	186	-14	-7%
BRAC Environmental	217	181	-36	-17%
<b>TOTAL</b>	<b>3,405</b>	<b>3,395</b>	<b>-10</b>	<b>-0.3%</b>

### Environmental Restoration

We are requesting \$1.2 billion to continue cleanup efforts at remaining Installation Restoration Program (IRP – focused on cleanup of hazardous substances, pollutants, and contaminants) and Military Munitions Response Program (MMRP – focused on the removal of unexploded ordnance and discarded munitions) sites. This includes \$1.0 billion for "Environmental Restoration," which encompasses active installations and Formerly Used Defense Sites (FUDS) locations and \$181 million for "BRAC Environmental." The amount of BRAC Environmental funds requested will be augmented by \$108 million of land sale revenue and prior year, unobligated funds, bringing the total amount of BRAC Environmental funding planned for obligation in FY 2017 to \$289 million. These investments help to ensure DoD continues to make property at BRAC locations safe and environmentally suitable for transfer. We remain engaged with the Military Departments to ensure they are executing plans to spend remaining unobligated balances in the BRAC account.

**Table 6: Progress Toward Cleanup Goals**

Goal: Achieve Response Complete at 90% and 95% of Active and BRAC IRP and MMRP sites, and FUDS IRP sites, by FY2018 and FY2021, respectively			
	Status as of the end of FY 2015	Projected Status at the end of FY 2018	Projected Status at the end of FY 2021
Army	90%	94%	97%
Navy	80%	86%	92%
Air Force	80%	89%	94%
DLA	86%	97%	97%
FUDS	80%	89%	94%
<b>Total</b>	<b>84%</b>	<b>91%</b>	<b>95%</b>

We are cleaning up sites on our active installations in parallel with those on bases closed in previous BRAC rounds – cleanup is not something that DoD pursues only when a base is closed. In fact, the significant progress we have made over the last 20 years cleaning up contaminated sites on active DoD installations is expected to reduce the residual environmental liability in the disposition of our property made excess through the BRAC process or other efforts.

By the end of 2015, the Department, in cooperation with state agencies and the Environmental Protection Agency, completed cleanup activities at 84 percent of Active and BRAC IRP and

MMRP sites, and FUDS IRP sites, and is now monitoring the results. During FY 2015 alone, the Department completed cleanup at over 870 sites. Of the roughly 39,500 restoration sites, almost 31,500 are now in monitoring status or cleanup completed. We are currently on track to meet our program goals – anticipating complete cleanup at 95 percent of Active and BRAC IRP and MMRP sites, and FUDS IRP sites, by the end of 2021.

Our focus remains on continuous improvement in the restoration program: minimizing overhead; adopting new technologies to reduce cost and accelerate cleanup; refining and standardizing our cost estimating; and improving our relationships with State regulators through increased dialogue. All of these initiatives help ensure that we make the best use of our available resources to complete cleanup.

### **Environmental Technology**

A key part of DoD's approach to meeting its environmental obligations and improving its performance is its pursuit of advances in science and technology. The Department has a long record of success when it comes to developing innovative environmental technologies and getting them transferred out of the laboratory and into actual use on our remediation sites, installations, ranges, depots and other industrial facilities. These same technologies are also now widely used at non-Defense sites helping the nation as a whole.

While the FY 2017 budget request for Environmental Technology overall is \$191 million, our core efforts are conducted and coordinated through two key programs - the Strategic Environmental Research and Development Program (SERDP - focused on basic research) and the Environmental Security Technology Certification Program (ESTCP - which validates more mature technologies to transition them to widespread use). The FY 2017 budget request includes \$65 million for SERDP and \$32 million for ESTCP for environmental technology demonstrations, with an additional \$20 million requested specifically for energy technology demonstrations.

These programs have already achieved demonstrable results and have the potential to reduce the environmental liability and costs of the Department - developing new ways of treating groundwater contamination, reducing the life-cycle costs of multiple weapons systems, and improving natural resource management.

As an example, this past year SERDP-sponsored project to conduct basic research that is will develop an environmentally benign Chemical Agent Resistant Coating (CARC), which is critical technology for the protection of military assets. Current CARC coatings contribute approximately 2.3 million pounds of volatile organic compounds (VOCs) and hazardous air pollutants (HAPs) to the environment each year. The new novel powder CARC is absent of solvent, emits nearly zero VOCs, can be recycled, and is compatible with existing CARC systems. In addition, testing to date proves that the exterior durability of this coating is superior to any liquid CARC system, supporting DoD's initiative for corrosion prevention and mitigation. Coating products are currently in transition to Original Equipment Manufacturers, Depots, and the Defense Logistics Agency (DLA).

Looking ahead, our environmental technology investments are focused on the Department's evolving requirements. In the area of Environmental Restoration, we are launching a new three-year initiative to support sustainable range management by researching the environmental impacts of new munitions compounds and we will continue our investments in technologies to address the challenges of contaminated groundwater sites where no good technical solutions are currently available. We are working to understand the behavior of contaminants in fractured bedrock and large dilute plumes, which represent a large fraction of these sites, and to develop treatment and management strategies. We will continue our efforts to develop the science and tools needed to meet the Department's obligations to assess and adapt to climate change. Finally, to transition the important work of improving the sustainability of our industrial operations and reducing life-cycle costs by eliminating toxic and hazardous materials from our production and maintenance processes we are initiating a program to demonstrate that our most hazardous chemicals can be eliminated from a maintenance production line.

### **Environmental Conservation and Compatible Development**

To maintain access to the land, water and airspace needed to support our mission needs, the Department continues to successfully manage the natural resources entrusted to us – including protecting the many threatened and endangered species found on our lands. DoD manages approximately 25 million acres containing many high-quality and unique habitats that provide food and shelter for nearly 520 species-at-risk and over 400 that are federally listed as threatened or endangered species. That is 9 times more species per acre than the Bureau of Land Management, 6 times more per acre than the United States Fish and Wildlife Service (USFWS), 4.5 times more per acre than the Forest Service, and 3.5 times more per acre than the National Park Service. A surprising number of rare species are found only on military lands – including more than 15 listed species and at least 75 species-at-risk.

The FY 2017 budget request for Conservation is \$420 million. The Department invests these funds to manage its imperiled species as well as all of its natural resources in an effort to sustain the high quality lands our service personnel need for testing, training and operational activities, and to maximize the flexibility our servicemen and women need to effectively use those lands. Species endangerment and habitat degradation can and does have direct mission-restriction impacts. That is one reason we work hard to *prevent* species from becoming listed and, if they do become listed, to manage these species and their habitat in ways that sustain the resource and enable our ability to test and train. All of our plans now adequately address these species, and we have successfully and consistently avoided critical habitat designations because our plans adequately address management concerns for species that exist on our lands. Getting ahead of any future listings has been a prime, natural resource objective for the last several years and will remain so in the future.

### *Readiness and Environmental Protection Integration (REPI) Program*

To help ensure DoD sustains its national defense mission and protects species under duress, the Department has developed a strategy that supports conservation beyond installation boundaries. Under this strategy DoD engages with other governmental and non-governmental partners, as well as private landowners, to develop initiatives and agreements for protecting species for the purposes of precluding or mitigating regulatory restrictions on training, testing, and operations on DoD lands. Expanding the scale and options for protecting species on non-DoD land benefits conservation objectives while helping sustain access to, and operational use, of DoD live training and test domains.

This strategic focus is a key element of the Readiness and Environmental Protection Integration (REPI) Program. Under REPI, the Department partners with conservation organizations and state and local governments to preserve buffer land and sensitive habitat near installations and ranges. Preserving these areas allows the Department to avoid more costly alternatives such as workarounds, restricted or unrealistic training approaches, or investments to replace existing test and training capability. Simultaneously, these efforts ease the on-installation species management burden and reduce the possibility of restricted activities, ultimately providing more flexibility for commanders to execute their missions.

Included within the \$420 million for Conservation, \$60 million is directed to the REPI Program. The REPI Program is a cost-effective tool to protect the nation's existing training, testing, and operational capabilities at a time of decreasing resources. In the last 13 years, REPI partnerships have protected more than 437,000 acres of land around 86 installations in 29 states. In addition to the tangible benefits to training, testing, and operations, these efforts have resulted in significant contributions to biodiversity and recovery actions supporting threatened, endangered and candidate species.

The REPI Program supports the warfighter and protects the taxpayer because it multiplies the Department's investments through unique cost-sharing agreements. Even in these difficult economic times, REPI is able to directly leverage the Department's investments at least one-to-one with those of our partners, effectively securing critical buffers around our installations for half-price.

In addition, DoD, along with the Departments of the Interior and Agriculture, continues to advance the Sentinel Landscapes Partnership to protect large landscapes where conservation, working lands, and national defense interests converge — places defined as Sentinel Landscapes. Established in 2013, the Sentinel Landscapes Partnership further strengthens interagency coordination and provides taxpayers with the greatest leverage of their funds by aligning federal programs to advance the mutually-beneficial goals of each agency.

Thus far, three Sentinel Landscapes have been identified around Joint Base Lewis-McChord, Washington; Fort Huachuca, Arizona; and Naval Air Station (NAS) Patuxent River and the Atlantic Test Ranges, Maryland. The pilot Sentinel Landscape project at JBLM influenced the USFWS decision to avoid listing a butterfly species in Washington, Oregon, and California. The USFWS cited the “high level of protection against further losses of habitat or populations” from investments made by Joint Base Lewis-McChord's REPI partnership, actions that allow significant maneuver areas to remain available and unconstrained for active and intense military

use at JBLM. At Fort Huachuca, NAS Patuxent River and the Atlantic Test Ranges, DoD is working with USFWS, the Natural Resources Conservation Service, the U.S. Forest Service, and a variety of state and private conservation organizations to protect important swaths of special use airspace used for aircraft testing and training, while also benefiting ecologically sensitive watersheds and the installations, wildlife, and working lands dependent on those resources.

## **Fiscal Year 2017 Budget Request – Energy Programs**

Unlike the Department’s Military Construction and Environmental Remediation programs, where the budget request includes specific line items, our energy programs are subsumed into other accounts. The following sections describe the Energy portion of the budget request. Further discussion of energy follows in the highlighted issues section.

### **Operational Energy**

In FY 2017, the Department’s budget request includes an estimated \$9.8 billion for 93.3 million barrels of fuel. In order to increase warfighting capability and reduce operational risk, the Department’s FY 2017 budget request also includes \$2.5 billion for adaptations and improvements in our use of operational energy. Operational energy is the energy used to power aircraft, ships, combat vehicles, and mobile power generation at contingency bases. While there is no explicit budget request for Operational Energy, these investments across multiple accounts and appropriations are intended specifically to improve military capability.

Within this overall request, the Department is requesting \$37.3M in RDT&E funding to support the Operational Energy Capabilities Improvement Fund (OECIF). OECIF provides funding to DoD research programs that improve operational energy performance organized around a specific annual theme or focus area, as well as sustain funding to those programs already underway. The FY 2017 President’s Budget will provide funding for new programs, as well as support those programs established in FY14-FY16.

Finally, the Department is requesting \$5.4 million in FY17 to fund the operations of OASD(EI&E) and oversee operational energy activities. Each year, EI&E certifies that the President’s Budget is adequate for carrying out the Department’s *Operational Energy Strategy*. The full certification report, which will be provided to Congress in the near future, will provide a more comprehensive assessment of the alignment of operational energy initiatives with the goals of the recently released 2016 *Operational Energy Strategy*.

### *2016 Operational Energy Strategy*

Reflecting lessons learned, strategic guidance, and the evolving operational environment, the 2016 *Operational Energy Strategy* is designed to improve our ability to deliver the operational energy needed to deploy and sustain forces in an operational environment characterized by peer competitors, asymmetric insurgents, and unforgiving geography. The strategy identifies the following three objectives:

- Increase Future Warfighting Capability. Foremost, the strategy focuses on increasing warfighter capability through energy-informed force development. In addition to energy Key Performance Perimeters (eKPP) informed by energy supportability analyses that improve the combat effectiveness and supportability of major acquisition programs, the Department will continue to invest in energy innovation that improves the long-term capability of the Department, such as increasing the unrefueled range or endurance of platforms. With this knowledge of inherent energy constraints and risks, the Military Departments will be better able to make energy-informed decisions related to force development and future capabilities.
- Identify and Reduce Logistics and Operational Risks. To effectively reduce logistics risks, the Department will address energy risks in near-term operation plans as well as more exploratory, longer-term concepts of operation. Initiatives that fall into this category seek to mitigate warfighting gaps found in Integrated Priority Lists, OPLANs, and wargames. The Department's focus on risk will ensure future forces are better aligned to mitigate potential threats to operations.
- Enhance Mission Effectiveness of the Current Force. Finally, the strategy will improve the effectiveness of U.S. forces operating around the globe today. To do so, the Department will emphasize improved energy use in operations and training, and enhanced education of operators, logisticians, and system developers. These initiatives may include material and non-material enhancements to day to day operations, as well as adaptations in training, exercises, and professional military education.

In coordination with the Combatant Commands, Military Departments, Joint Staff, and Defense Agencies, my office is overseeing the execution of fifteen targets arrayed across the three objectives. For instance, we are supporting Joint Staff oversight of the energy KPP, facilitating operational energy advisors at the Combatant Commands, and assessing the role of operational energy in war games and operation plan reviews. In addition to the Defense Operational Energy Board, we will use existing requirements, acquisition, programming, and budgeting processes to review Department progress against these targets.

### **Installation Energy**

As with Operational Energy, there is no explicit request in the overall budget for Facilities Energy – utilities expenditures are included in the Base Operations O&M request. Facilities Energy remains our single largest base operating cost and in FY15, we spent \$3.9 billion to heat, cool, and provide electricity to our buildings. To reduce this cost the Department is pursuing energy efficiencies through building improvements, new construction, and third party investments.

The Department's FY 2017 budget request includes approximately \$618 million for investments in conservation and energy efficiency, most of which will be directed to existing buildings. The majority (\$468 million) is in the Military Components' operations and maintenance accounts, to be used for sustainment and recapitalization projects. Such projects typically involve retrofits to incorporate improved lighting, high-efficiency HVAC systems, double-pane windows, energy

management control systems, and new roofs. The remainder (\$150 million) is for the Energy Conservation Investment Program (ECIP), a Military Construction account used to implement energy efficiency, water conservation, and renewable energy projects. Each individual ECIP project has a positive payback (i.e. Savings to Investment Ratio (SIR) > 1.0) and the overall program has a combined SIR greater than 2.0. This means for every dollar we invest in ECIP, we generate more than two dollars in savings.

The Military Component investments include activities that would be considered regular maintenance and budgeted within the O&M accounts for Facilities Sustainment, Restoration, and Maintenance activities. The risk that has been accepted in those accounts will not only result in fewer energy projects, but failing to perform proper maintenance on our buildings will without question have a negative impact on our energy usage. In plain terms, upgrades to air conditioning systems will not reduce energy usage as projected if the roof is leaking or the windows are broken.

In addition to retrofitting existing buildings, we continue to drive efficiency in our new construction. Our new buildings must be constructed using the high-performance sustainable buildings standards issued by my office 2 years ago which include greater energy efficiency requirements.

Additionally, the Department is taking advantage of third-party financing through Energy Savings Performance Contracts (ESPCs) and Utility Energy Service Contracts (UESCs), to implement energy efficiency improvements in our existing buildings. Under these contracts private energy firms or utility companies make energy upgrades to our buildings and are paid back over time using utility bill savings.

#### *Facilities Energy Management*

With respect to facilities energy management the Department has made great progress towards improving the energy efficiency of its installations. Since FY09, the Department reduced the energy consumed on our military bases by 10%, avoiding over \$1.2 billion in operating costs.

In addition to using appropriated funding for energy conservation and efficiency initiatives, the Department is continuing to take advantage of third-party financing tools through energy performance based contracts (ESPCs and UESCs) to implement energy efficiency improvements in our existing buildings. While such performance-based contracts have long been part of the Department's energy strategy, the Services have significantly increased the use of ESPCs and UESCs in response to the President's Performance Contracting Challenge (PPCC) originally issued in December 2011 and extended in May 2014. The PPCC challenged federal agencies to award \$4 billion in energy performance based contracts by the end December 2016. The DoD's commitment to the challenge is just over \$2 billion in contracts. To date the Department has awarded \$1.3 billion in ESPCs and UESCs.

Regarding renewable energy, the Department has a goal to deploy 3 gigawatts of renewable energy by FY 2025. Most renewable energy projects we pursue are financed by private developers. DoD's authorities for renewable energy - particularly the ability to sign power purchase agreements of up to 30 years - provide incentives for private firms to fund the projects

themselves, and can also provide a strong business case that they are able to offer DoD lower energy rates than are being paid currently. The DoD does not make any capital investment in these renewable energy projects. When feasible, renewable energy projects are being built with micro-grid-ready applications that can enable the provision of continuous power in the event of a disruption.

As of the end of FY15 the Department has 702 megawatts in renewable energy projects in operation. The Services also have more than 550 megawatts of projects under construction including a 15 MW Solar PV/ 50 MW wind "hybrid" project at Ft Hood, TX and an off-site 210 MW solar PV facility that will supply power to 14 Department of Navy installations in California. Further, there is another 1.3 gigawatts of renewable energy projects in various stages of development; putting the Department well on track towards meeting its 3 gigawatt goal.

### **Highlighted Issues**

#### **Merger of the Energy, Installations, and Environment Organizations**

As you know, the FY 2015 National Defense Authorization Act directed the merger of the Assistant Secretary of Defense for Operational Energy Plans and Programs and the Deputy Under Secretary of Defense for Installations and Environment to create the Assistant Secretary of Defense for Energy, Installations and Environment. The ASD (EI&E) is now the principle advisor to the Secretary of Defense for Acquisition, Technology, and Logistics on matters relating to energy, installations, and environment and the principal advisor to the Secretary of Defense and the Deputy Secretary of Defense regarding operational energy plans and programs.

The Department is currently developing the required report on the status of the merger, and will provide that to the Congress later this year. I can tell you that through the merger operational energy functions have benefited from additional resources and collaboration with complementary functions related to installation energy, facilities investment and management, and basing.

#### **Base Realignment and Closure**

Given the need to find efficiencies and reexamine how our infrastructure is configured, the Administration is requesting the authority from Congress to conduct a 2019 BRAC round. As indicated in testimony last year, the Department has excess capacity. The Army and Air Force have analyzed their infrastructure and have found that they have 18 percent and 30 percent excess capacity, respectively. We are currently conducting a DoD wide parametric analysis as directed by the FY 16 National Defense Authorization Act, which will likely indicate excess of around 20 percent. This level of excess is not surprising given the fact that in 2004 we found that the Department had 24% excess and BRAC 2005 reduced infrastructure by 3.4% (as measured by plant replacement value).

As we have said, a new BRAC round will be different than BRAC 2005. The new round will be efficiency focused. It will save about \$2 billion a year after implementation; with costs and

savings during the six year implementation being a wash at approximately \$7 billion. Our projection is based on the efficiency rounds of the 1990s.

In addition to being a proven process that yields savings, BRAC has several advantages that we have outlined before in our testimony. I want to highlight a few of these:

- BRAC is comprehensive and thorough - all installations are analyzed using certified data aligned against the strategic imperatives detailed in the 20-year force structure plan;
- The BRAC process is auditable and logical which enables the Commission to conduct an independent review informed by its own analysis and testimony from affected communities and elected officials;
- The Commission has the last say on the Department's recommendations - being fully empowered to alter, reject, or add recommendation;
- The BRAC process has an "All or None" construct which prevents the President and Congress from picking and choosing among the Commission's recommendations; thereby insulating BRAC from politics;
- The BRAC process imposes a legal obligation on the Department to close and realign installations as recommended by the Commission by a date certain that facilitates economic reuse planning by impacted communities and grants the Department the authorities needed to satisfy that legal obligation.

In recognition of your concerns about cost and the amount of time the BRAC Commission has to review our recommendations, the Department's request for BRAC authorization includes four key changes from prior year submissions as well as a handful of administrative and timeline changes. Each of the changes are narrowly tailored to address congressional cost concerns while not altering the fundamental principles of the BRAC process: treating all bases equally; all or none review by both the President and Congress; review by an independent Commission; making military value the priority consideration; and a clear legal obligation to implement all of the recommendations in a time certain together with all the authorities needed to accomplish implementation.

To ensure the next BRAC round is focused on saving money and maximizing efficiency, our legislation adds a requirement for the Secretary of Defense to certify that the BRAC round will have the primary objective of eliminating excess infrastructure to maximize efficiency and reduce cost. Like the existing requirement to certify the need for a BRAC round, this certification occurs at the outset of the BRAC process and is a precondition to moving forward with development of recommendations. Additionally, subject to the requirement to give priority consideration to the military value selection criteria, the legislation now requires the Secretary to emphasize those recommendations that yield net savings within 5 years of completing the recommendation and limits the Secretary's ability to make recommendations that do not yield savings within 20 years. In order to make a recommendation that does not yield savings within 20 years, the Secretary must expressly determine that the military value of such recommendation supports or enhances a critical national security interest of the United States.

Finally, the legislation also now specifically delineates those costs that must be considered when determining the costs associated with a recommendation. As revised, the legislation specifies that the Department must consider costs associated with military construction, information technology, termination of public-private contracts, guarantees, the costs of any other activity of the Department of Defense or any other Federal agency that may be required to assume responsibility for activities at the military installations, and such other factors as the Secretary determines as contributing to the cost of a closure or realignment. Previous versions of the legislation had only specifically mentioned the costs of any other activity of the Department of Defense or any other Federal agency that may be required to assume responsibility for activities at the military installations

Our proposal extends the Commission review period to run from April 15 to October 1 which adds two months to Commission review and requires that Commissioners be named by February 1<sup>st</sup> which enables the Commission to be up and running for ten weeks before our recommendations come to them. Our revision also requires the Chair of the Commission to certify that the Commission and its staff have the capacity to review the Department's recommendations.

Heretofore, we've addressed every concern raised by Congress. We conducted the European Infrastructure Consolidation to address concerns that we need to look at overseas installations first; we programmed the costs and pledged the next round will reduce excess instead of the 2005 round's more costly "transformation" focus in response to concerns that we could not afford BRAC; and we have demonstrated that excess capacity exists - Army and Air Force testified to 21 and 30 percent. We've updated our DoD-wide (parametric) analysis and will provide it to Congress soon; it indicates over 20 percent excess.

We hope the Department's efforts will result in a real dialog with members of Congress regarding the need for and value of the BRAC process, ultimately resulting in authority for a 2019 BRAC round.

## **European Infrastructure Consolidation**

In response to our recent requests for BRAC authority, Congress made it clear that it wanted DoD to look at reducing our overseas infrastructure first – particularly in Europe. We did so by conducting the European Infrastructure Consolidation (EIC) analysis - the first holistic and joint review of our legacy infrastructure in Europe.

To analyze our European infrastructure we used a process very similar to the proven U.S. BRAC process. We looked at capacity, requirements (including surge), military value, cost, and the diplomatic dynamics involved with each action. As we consolidate our footprint, the infrastructure remaining in place will continue to support our operational requirements and strategic commitments, but we will not need as many support personnel (military, civilian, and host nation employees) to do so.

The 26 approved EIC actions will allow us to create long-term savings by eliminating excess infrastructure without reducing our operational capabilities. In other words, operationally we

will continue to do everything we currently do but at a lower cost. After a one-time investment of approximately \$800 million in Military Construction to implement two major base closures, eight minor site closures, and 16 realignment actions, the Department will realize approximately \$500 million in annual recurring savings.

These actions will be executed over the next several years, but that does not mean that everything will remain static in Europe while these changes occur. There were consolidations made before EIC and there will undoubtedly be future basing actions – especially given the evolving security environment. However, our holistic review and the resultant actions allow us to redirect resources supporting unneeded infrastructure and apply them to higher priorities, thus strengthening our posture in Europe.

Although we continually seek efficiencies as we manage installations worldwide, the Department does not conduct this degree of comprehensive analyses of its infrastructure on a regular basis. That's one of the reasons we have requested BRAC authority from Congress to do a review of our U.S. installations. In this fiscal environment it would be irresponsible of us not to look for such savings.

## **Rebalance to the Asia-Pacific**

### **Rebasing of Marines from Okinawa to Guam**

The movement of thousands of Marines from Okinawa (and elsewhere) to Guam is one of the most significant re-basing action in recent years. We appreciate Congress' support allowing us to move forward on this essential component of our rebalance to the Asia-Pacific region, resulting in a more geographically dispersed, operationally resilient, and politically sustainable posture in the area. As a U.S. territory, Guam offers strategic advantages and operational capabilities that are unique in the region. Presence in Guam is a force multiplier that contributes to a force posture that reassures allies and partners and deters aggression.

Now that the very complex National Environmental Policy Act (NEPA) process (nearly five years of study) is complete, there is a clear path for construction to proceed in earnest. Utilities and site improvements (~\$300 million funded by the GoJ) for the main cantonment area at Finegayan, and a live-fire training range (\$125 million) at Andersen's Northwest Field will be the first projects under the new Record of Decision (ROD). Construction for the Marine Aviation Combat Element (ACE) at the North Ramp of Andersen proceeded earlier because it was covered under the original 2010 ROD; it remains on track.

We understand Congress' concerns regarding both the cost and feasibility of the relocation and we are firmly committed to the principles of operational effectiveness and fiscal responsibility. We remain confident in the estimate of \$8.7 billion for the program, which includes \$3.1 billion provided by the Government of Japan (GoJ) (\$1.152 billion transferred to date). The Department is evaluating this program in advance of each year's budget submission to pursue efficiencies that have the potential to reduce overall cost. For example, the Department's decision to relocate housing to Andersen Air Force Base reduced the requirement for a water works project (at the main cantonment area) saving the Department approximately \$50 million. Additionally, we

continue to provide the necessary oversight, conducting quarterly Deputy Secretary led Guam Oversight Council meetings to address issues related to the program’s implementation.

The Marines, in conjunction with the Naval Facilities Engineering Command (NAVFAC), have an established program management organization for construction execution and oversight. NAVFAC is standing up an Officer in Charge of Construction office and anticipates it will be in place by the first quarter of 2017. The Marines continue with planning to meet operational requirements on the ground. This is the largest infrastructure program (~\$9 billion) that has been executed in many years, so it is prudent to have the necessary management structure in place to ensure success.

The Economic Adjustment Committee Implementation Plan (EIP) (submitted to Congress in October 2015) was the last Congressional requirement restricting project execution on Guam. The Plan outlines the five “outside the fence” projects (listed in the table below) associated with the impacts of the build-up on Guam’s civilian infrastructure. Last year’s FY 2016 NDAA provides authorization for moving forward with the water/wastewater projects – but not for the cultural repository and the public health lab projects. Our FY 2017 President’s Budget requests authority for these two projects and the balance of funding (\$87 million).

**Table 7: EAC Projects Supporting DoN Record of Decision**

<b>Project Title</b>	<b>Project Total (\$Millions)</b>	<b>Previous FY (s) Appropriated (\$Millions)</b>	<b>FY 2017 Request (\$Millions)</b>
<b>Upgrade Wastewater Treatment Plan</b>	139	71	68
<b>Refurbishment sewer line Andersen AF</b>	31	31	0
<b>Repair/expansion Aquifer monitoring system</b>	4	4	0
<b>Public Health Laboratory</b>	32	13	19
<b>Cultural Repository</b>	12	12	0
<b>Total</b>	<b>218</b>	<b>131</b>	<b>87</b>

The cumulative impact of this stationing was carefully evaluated within the environmental analysis process and we determined that water/wastewater, public health, and our obligation to care for artifacts uncovered in our construction need to be addressed. The associated projects total \$218 million, which is a relatively small, but absolutely necessary, portion of this relocation.

Failure to provide authorization for these projects increases the risk of litigation and project delay and will affect DOD’s credibility with the Guam’s populace. Our inability to meet commitments to the Government of Guam will also adversely affect our credibility with the

Government and people of the Commonwealth of Northern Mariana Islands (CNMI) since they have similar concerns, as discussed below.

### **Commonwealth of Northern Mariana Islands (CNMI) Initiatives**

The Department continues to pursue two key military initiatives in CNMI- the CNMI Joint Military Training (CJMT) Complex (a U.S. Pacific Command (PACOM) initiative (led by USMC) to reduce joint training deficiencies in the Western Pacific); and an Air Force Divert and Exercise Field on Tinian.

PACOM requires a Joint Military Training Complex in-theater to meet Department of Defense training requirements in the theater. The Complex will make a key contribution to the readiness of Marines relocating to Guam and provide bilateral and multilateral training opportunities with foreign allies and partners. The Department sought to design the CJMT complex on Tinian and Pagan in a manner that minimizes the impacts on the local communities and provides direct economic and other benefits while meeting PACOM and its Service Components' training requirements.

The training complex includes a series of live-fire Range Training Areas, training courses, maneuver areas, and associated support facilities located in close proximity to each other. The total cost of the complex is ~\$900 million with GoJ contributing \$300 million. In April 2015, the Department of Navy (DoN) released the draft Environmental Impact Statement (DEIS) for the proposed action with an original public comment period of 60 days (extended to 180 days to accommodate requests by the CNMI Governor to give him more time in light of internet problems and damage from Typhoon Soudelor). In response to the over 28,000 comments received in October 2015 the DoN announced its intent to prepare a Revised DEIS to more fully address potential impacts to water, coral, and other natural resources. The DoN now estimates the ROD will be issued in the summer of 2018. This timeline still supports force flow to Guam in 2022.

The Air Force needs to establish a divert capability for up to 12 tankers if access to Andersen Air Force Base is unavailable. The Air Force proposes to construct facilities and infrastructure to support a combination of cargo, tanker, and similar aircraft and associated personnel not only for divert operations, but also to support periodic exercises and disaster relief activities. Efforts to establish this capability are on track for a Record of Decision in mid-April 2016. The Air Force is now pursuing a Tinian-only solution consistent with CNMI's desires.

### **Building and Maintaining Resilience in the Face of a Changing Climate**

Resilience to climate change continues to be a priority for the Department. Both the 2010 and 2014 Quadrennial Defense Reviews (QDRs) discussed the impacts associated with a changing climate that present a threat to DoD's national security mission. We recognize these impacts and their potential threats represent one more risk that we must consider as we make decisions about our installations, infrastructure, weapons systems and, most of all, our people. We have always dealt with the risks associated with extreme weather events and its impacts on our operations and missions. Our challenge today is how to plan for changes in the environment we will be operating from and in.

Even without knowing precisely how or when the climate will change, we know we must build resilience into our policies, programs, and operations in a thoughtful and cost effective way. In January 2016, we issued a DoD Directive on climate change adaptation and resilience that identifies roles and responsibilities across the Department for implementing these strategies over the next ten years.

Specifically, I am focusing on our installations and infrastructure. Sea level is rising and many coastal areas are subsiding or sinking. This impacts the operation and maintenance of our existing installations and infrastructure. As Arctic Sea ice melts and breaks apart, our early warning radar sites are being eroded away at a much greater rate than before. Drought and flooding, which ironically go together, threaten water resources for us and our surrounding communities and exacerbate wildfire issues across the country.

The Military Services have conducted a screening level assessment of all DoD sites world-wide to identify where we are potentially vulnerable to extreme weather events and tidal anomalies today. The information gleaned from this initial look will help to focus reviews of installation footprints, and shape planning for current and future infrastructure.

Given the projected increases in major storms, DoD continues its progress to ensure energy resilience for its military installations. We completed our power resilience review, and are now updating Department-level instructions to include energy resilience requirements. These requirements will ensure that the Department has the ability to prepare for and recover from energy disruptions that impact mission assurance on its military installations.

Our goal is to increase the Department's resilience to the impacts of climate change. To achieve this goal, we are integrating consideration and reduction of climate risks into our already established mission planning and execution.

### **Financial Improvement & Audit Readiness**

In order to effectively manage its financial resources, the Department remains focused on improving financial record keeping and conducting an independent audit of DoD's financial books beginning in FY 2017. This includes not only an audit of the Department's Statement of Budgetary Resources, but also validating the existence and completeness, rights and obligations, and financial valuation of slightly less than 562,000 facilities located at 513 installations world-wide. The results of a more accurate and reliable real property inventory will better inform our decisions and actions in addressing our real property management challenges.

The Department has made significant progress towards the environmental liabilities associated with our cleanup program and disposal of equipment aspects of the financial audit. Last fall we issued clarifying policies through which we are refining the cost estimates associated with those liabilities; thereby giving the Department a better understanding of our future environmental costs and the ability to plan for any required remediation.

## **Mission Compatibility Evaluation Process**

The Department appreciates the legislative changes made in FY 2016 to section 358 of the Ike Skelton National Defense Authorization Act of Fiscal Year 2011. These changes significantly streamlined the Mission Compatibility Evaluation Process, and ensured that DoD's mission capabilities are protected from incompatible energy developments. As a result of congressional direction and our own efforts we are effectively evaluating the mission impact of utility-scale energy projects, while being mindful of the need for a clean energy future. In 2015 the Department reviewed over 3,400 applications for energy projects that were forwarded by the Federal Aviation Administration. The DoD Siting Clearinghouse worked aggressively with the Military Departments, energy project developers, and relevant states to implement affordable and feasible mitigation solutions where DoD missions might have been adversely impacted. No project reviewed in 2015 rose to the level of an unacceptable risk to the national security of the United States, which is the threshold established in Section 358 of the FY 2011 NDAA to object to a project. The Department is prepared for an increased number of renewable energy project developments as newly approved tax credits become available to developers.

## **Conclusion**

Thank you for the opportunity to present the President's FY 2017 budget request for DoD programs supporting installations, energy, and the environment. Our budget situation requires that we take risk in our facilities. No one is happy about that, but we are effectively managing within this budget constrained environment and we appreciate Congress' continued support for our enterprise and look forward to working with you as you consider the FY 2017 budget request.

**RECORD VERSION**

**STATEMENT BY  
THE HONORABLE KATHERINE G. HAMMACK  
ASSISTANT SECRETARY OF THE ARMY  
(INSTALLATIONS, ENERGY & ENVIRONMENT)**

**BEFORE THE**

**SUBCOMMITTEE ON READINESS AND MANAGEMENT SUPPORT  
COMMITTEE ON ARMED SERVICES  
UNITED STATES SENATE**

**SECOND SESSION, 114<sup>TH</sup> CONGRESS**

**FY 2017 DEPARTMENT OF DEFENSE BUDGET REQUEST FOR  
MILITARY CONSTRUCTION, ENVIRONMENTAL, ENERGY, AND BASE CLOSURE  
PROGRAMS**

**APRIL 12, 2016**

**NOT FOR PUBLICATION UNTIL RELEASED BY THE  
COMMITTEE ON ARMED SERVICES**

## **Introduction**

Chairman Ayotte, Ranking Member Kaine, and Members of the Subcommittee: on behalf of the Soldiers, Families, and Civilians of the United States Army, thank you for the opportunity to present the Army's Fiscal Year (FY) 2017 budget request for Installations, Energy, Environment, and Base Realignment and Closure.

The U.S. Army's top priority continues to be readiness: the Army must be ready to shape the global security environment, defend our homeland, and win the nation's wars. To meet these missions, the Army requires ready and resilient installations – our power projection platforms – to enable regional engagement and global responsiveness. Our FY 2017 budget request reflects the Army's decision to take risk in our installation facilities and services to maximize available funding for operational readiness and modernization. The request focuses our limited resources on necessary and prudent investments in military construction, installation energy programs supporting operational activities, and environmental compliance.

The Army recognizes that reduced funding of installations accounts will lead to the continued degradation of our facilities and infrastructure, and risks our long-term ability to adequately support Army forces and meet mission requirements. The Army is stretched thin at a time when we are facing a global security environment that is more uncertain than ever. Without increased funding in the outyears or the authority to close and realign our installations, these problems will only get worse – expending precious funds and putting the readiness and welfare of our Soldiers at risk. It is therefore particularly critical that we maximize the efficient use of our resources at this time to meet mission requirements and ensure Soldier readiness.

The Army's FY 2017 military construction appropriations request strikes a careful balance to meet these growing and changing demands. We look forward to working with Congress to ensure that our national security needs and priorities are met in the upcoming fiscal year and well into the future.

## **Making Efficient Use of Army Facilities**

To meet readiness requirements, the Army must maintain installations that make efficient and effective use of available facilities. Army installations should be sized and

resourced to meet the needs of our current and future missions, both at home and overseas.

Efficient use of our installations includes the closure of low military value installations and the divestment of excess facilities that burden Army budgets. Reducing the portfolio of Army facilities was among the recommendations of the National Commission on the Future of the Army (NCFA), established by Congress as part of the FY 2015 National Defense Authorization Act (NDAA). The NCFA's report, released in January 2016, states that "Congress and the Administration should look for cost-saving opportunities in areas such as...a reduced inventory of military facilities."<sup>1</sup> The report recommends that the Army pursue these and other efficiency initiatives to free up funds that could be used to meet warfighting needs and other high-priority initiatives identified by the Commission.

The Army has made every effort to be fiscally prudent in the maintenance of excess infrastructure. The Army has employed its current authority to minimize costs and maximize the use of existing facilities. We have identified and are working to reduce excess capacity overseas through the European Infrastructure Consolidation (EIC) initiative, in addition to implementing efficiency measures across the board. Nevertheless, the modest savings attained from these efforts cannot substitute for the significant savings that can be achieved through base realignments and closures. Without them, the Army is forced to make deep cuts at our highest military value installations because we continue spending scarce resources maintaining and operating lower military value installations.

As the Army is planning to reduce its Active Component end strength to 450,000 by FY 2018, we will have over 170 million square feet of facilities that are not fully utilized – an excess facility capacity averaging 21 percent. Depending on the facility type, the excess infrastructure ranges from 18 percent to 33 percent. At an annual cost of about \$3 per square foot to maintain these facilities, the Army is incurring over \$500 million a year in unnecessary expenditures. If FY 2018-2021 budget caps remain, the

---

<sup>1</sup> National Commission on the Future of the Army, "Report to the President and Congress of the United States," 28 January 2016, p. 44: Recommendation 5.

Army will need to further reduce the number of Soldiers, and our excess capacity will continue to increase.

The Army cannot afford this status quo. Although Base Realignment and Closure (BRAC) forces difficult choices affecting the local communities surrounding our installations, they are already seeing fewer Soldiers and Families as force structure continues to decline. BRAC allows the Army to use a fair and non-partisan process to close a few lower military value locations and realign the remaining missions to help fill the excess capacity at our higher military value installations.

Today, facilities needed to support readiness, training exercises, airfields, and other priorities are deteriorating, while resources are diverted to supporting installations that could be closed. The Army cannot carry excess infrastructure costing over half a billion dollars per year indefinitely. Half a billion dollars represents the annual personnel costs of about 5,000 Soldiers, which is slightly less than the number assigned to a Stryker Brigade Combat Team. It represents five annual rotations at the Army's Combat Training Centers, which are the foundation of Army combat readiness.

Until we get the BRAC authority to analyze what types of excess exist at individual installations and develop recommendations on how to best consolidate into the highest military value installations we have, we do not know which lower military value installations should be closed and/or realigned. However, we do know BRAC is a proven process producing significant reoccurring savings of roughly \$2 billion per year for the Army, as validated by the Government Accountability Office (GAO). A future BRAC round has the capability to save the Army hundreds of millions of dollars per year. Once the up-front costs are paid, the intermediate and long-term savings from BRAC can fund any number of important Army warfighter initiatives, including force structure, additional CTC rotations, and modernization.

Not authorizing BRAC is a choice with real consequences. The lack of authorization for a BRAC results in our highest military value installations bearing the deepest impacts. This is an unacceptable result for the Army and a disservice to American taxpayers.

The BRAC process is a proven, cost-effective means for reducing costly excess infrastructure, while ensuring a continued focus on efficiency and consolidation. The

Army strongly supports DoD's request for a BRAC round, and urges Congress to enact legislation in FY 2017 authorizing the Department to begin the process.

### **Preserving Ready Installations**

Army installations – where Soldiers live, work, and train – are where Army readiness is built to meet future challenges and ensure the security of our nation. Increasing global threats generate installation requirements for force protection, cyber security, and energy security. Installation budgets provide the premier all-volunteer Army with facilities that support readiness and quality of life for our Soldiers, Families, and Civilians.

The Army continues to focus its limited resources on supporting readiness initiatives and replacing failed facilities. As we remain under pressure from current law budget caps, our installation services must continually be adjusted. Increases in deferred maintenance and reduced investments in installations and infrastructure ultimately increase our growing backlog of failing facilities. This degrades the Army's ability to be ready to project full spectrum forces over time. Excess facility capacity burdens the Army sustainment and base operations – consuming limited dollars that need to be better invested elsewhere.

Sustainment, Restoration, and Modernization (SRM) accounts fund investments to maintain and improve the condition of our facilities. Periodic restoration and modernization of facility components are necessary to ensure the safety of our Soldiers and civilians. Efforts are focused on preventing the degradation of our facilities and optimizing the use of Army investments, to prevent small maintenance issues from turning into large and expensive problems.

The FY 2017 \$3.1 billion budget request will help support our sustainment and restoration requirements. However, the Army is assuming risk in installation readiness to preserve operational readiness. The \$2.7 billion request for Sustainment meets 71% of our Facility Sustainment Model for long-term sustainment, whereas DoD recommended meeting an 80 percent threshold to stem the tide of further facility degradation.

Reduced funding in the outyears for installation readiness adversely impacts facility condition and ultimately increases future military construction and restoration and modernization requirements. This shifts the Army's investment focus to the worst facilities, diverting resources needed to preserve our newest and best infrastructure. Deferred sustainment over the long term can lead to higher life-cycle repair costs and component failure, significantly reducing facility life expectancy.

Responsibly managing over 12 million acres of real property also means that the Army must maintain extensive base operations. Through funding for Base Operations Support (BOS) accounts, Army installations provide services similar to those associated with a municipality: public works, security protection, logistics, environment, and Family programs. These programs and services enable Soldiers, Civilians, and Families to live and work on 154 Army installations worldwide.

Balancing BOS needs in a changing global environment calls for continued due diligence. The President's FY 2017 budget therefore requests a total of \$9.43 billion for BOS accounts, including \$7.82 billion for the Active Component; \$1.04 billion for Army National Guard; and \$573.8 million for Army Reserve.

### **Investing in Essential Infrastructure**

The Army's request for Military Construction provides secure and sustainable facilities and infrastructure critical to supporting the Combatant Commander's top priorities, enabling Army missions, and maintaining Soldier and unit readiness. For FY 2017, the Army requests just over \$1 billion for Military Construction, a reduction of \$229 million – 18 percent – from FY 2016 appropriations. The budget allocates \$503 million (approximately 50 percent) for the Active Component; \$233 million (23 percent) for the Army National Guard; \$68 million (7 percent) for Army Reserves; and \$201 million (20 percent) for Army Family Housing Construction.

The Army continuously reviews project scope and costs. We must continue to adapt to evolving missions, account for emerging organizational changes, and meet unit readiness needs, while simultaneously seeking efficiencies at every opportunity. However, funding for Army Military Construction has reached historically low levels. This reduces the Army's ability to recapitalize inadequate and failed facilities into

infrastructure that supports operations, readiness, and the welfare of the all-volunteer force.

The Army National Guard (ARNG) is the oldest component of the U.S. Armed Forces. The Guard has courageously participated in every war and every conflict this nation has ever fought, including Iraq and Afghanistan, and is our first line of defense in responding to domestic emergencies. These men and women perform an important mission for our country, and our military construction budget endeavors to ensure that the needs of their facilities are met.

The Guard's FY 2017 Military Construction request is \$232.9 million. This includes \$161.3 million to support seven Readiness Centers, \$50.9 million to construct three maintenance facilities, \$12 million to fund minor projects, and \$8.7 million for planning and design. Our ARNG budget request is focused on recapitalizing readiness centers – the heart and soul of the National Guard – as well as maintenance facilities, training areas, ranges, and barracks to allow the Guard to be ready to perform state and federal missions. These projects will address space constraints and focus on replacing failing facilities.

In the 2014 ARNG Readiness Center (RC) Transformation Master Plan, a key finding was that the RC portfolio is experiencing “critical facility shortfalls.” This budget request is a small step toward addressing the ARNG's challenges.

The FY 2017 budget request for the Army Reserve totals \$68.2 million, with four critical projects totaling \$57.9 million. Three of these will focus on replacing some of our most dilapidated and failing facilities on Army Reserve installations that are in the most dire need. This includes \$21.5 million to replace an Emergency Services Center at Fort Hunter Liggett, CA – currently in failing condition – which will provide life-saving police, fire, crash and rescue, and Emergency Medical Team (EMT) services. An additional \$10.3 million will support planning and design of future year projects, as well as to address unforeseen critical needs through the Unspecified Minor Military Construction account.

The Army Family Housing budget allows us to provide homes and services to the Soldiers and their Families living on our installations around the world. For FY 2017, the Army requests \$200.7 million for family housing construction. This will fund two projects

in Korea, at Camp Humphreys and Camp Walker, critical to supporting consolidation and quality of life for our Soldiers and their families. The projects are necessary to eliminate dilapidated family housing units and meet the U.S. Forces Korea (USFK) Commander's requirements for housing. An additional \$326 million is requested to help sustain all family housing operations, cover utility costs, ensure proper maintenance and repair of government family housing units, lease properties where advantageous, and provide privatization oversight and risk mitigation.

### **Ensuring Energy Security**

It is operationally necessary, fiscally prudent, and mission essential that the Army have assured access to the energy required to achieve our primary objectives for the United States. The Army has led the way toward increasing energy efficiency on our installations, harnessing new energy technologies to lessen Soldier battery loads, and improving our operational capabilities to reduce the need for fuel convoys. Our installation energy budget request is focused on enhancing mission effectiveness, and is supported by strong business case analyses. For FY 2017, the Army is requesting \$1.716 billion to pay utility bills on our installations, leverage private sector investment in renewable energy projects, and invest in discrete energy efficiency improvements.

In response to risks posed to our vulnerable energy grid, the Army is improving the "resiliency" of its installations through the use of on-base renewable sources of energy. A resilient Army installation is one that can withstand threats to its security – be they power interruptions, cyber-attacks, or natural disasters – and endure these hazards to continue its own operations and those of the local community. With this in mind, the Army conducted a test and temporarily disconnected Fort Drum, NY from the energy distribution network this past November, validating the installation's ability to operate independently from the wider grid.

The Army leads the Federal Government in the use of Energy Savings Performance Contracts (ESPCs) and Utility Energy Service Contracts (UESCs), which allow private companies and servicers to provide the initial capital investment needed to execute projects using repayments from Utilities Services Program savings. The amount of energy saved by Army ESPC and UESC projects awarded between FY 2010

and FY 2015 is equal to the amount of energy consumed by Fort Bragg – one of the Army’s largest and most populous installations – in a year. In total, the Army has reduced its facilities energy consumption by 22.6 percent since FY 2003, while also leading the Federal Government in reductions of its potable water intensity use and non-tactical vehicle (NTV) fossil fuel use.

In addition, our energy program account funds the Office of Energy Initiatives (OEI), which helps to plan and develop third party-financed renewable energy projects. OEI currently has 14 projects completed, under construction, or in the final stages of the procurement process – together providing an incredible 350 megawatts (MW) of generation capacity. These projects represent over \$800 million in private sector investment, saving funds that would otherwise be appropriated for military construction. Further, all of these projects provide electricity that is at or below the cost of conventional power.

The Army’s operational energy initiatives seek to extend range and endurance, increase flexibility, improve resilience, and enhance force protection, all while enhancing mobility and freedom of action for our Soldiers. Operational energy investment in science and technology has been a proven force multiplier, providing our Soldiers with a distinct advantage on the battlefield. Therefore, the bulk of our operational energy budget request, \$1.28 billion, is for investments in energy efficient equipment that will reduce physical and logistical burdens on our Soldiers and, most importantly, help save lives.

Improved use of energy enhances mission capabilities. Our operational energy program is focused on improving Soldier power, enhancing maneuver capabilities, advancing research and development of new technologies, and more effectively supporting our contingency bases. Working with the Marines, we have reduced the battery weight carried by infantry Soldiers by 23 percent. We have deployed tactical micro-grids and more efficient generators to our base camps, which reduce the volume and frequency of fuel resupply. Since fuel and water constitute 80 percent of our resupply convoy capacity by weight, these improvements can decrease the number of convoys, reduces the vulnerability of our Soldiers, and frees up assets for other purposes.

The Army's energy program has proven results – reducing our reliance on the grid, improving energy security and efficiency, and contributing to mission readiness – all at a minimal impact to Army budgets. Energy performance on our installations is a testament to the Army's success in leveraging its limited resources to achieve considerable results. We urge Congress to continue to support the Army's energy initiatives both in operational and installation environments.

### **Safeguarding our Environment**

The mission of the Army's environmental program is three-fold: (1) to comply with environmental laws and regulations and ensure proper stewardship of our natural, cultural, and Tribal resources; (2) to meet DoD's goals for installation restoration and munitions response; and (3) to invest in environmental technology research, development, testing, and evaluation.

The Army manages over 12 million acres of land, which requires the Army to protect endangered species and historic sites or structures. Efforts are made to remediate environmental contaminants that pose a danger to human health or the environment, while supporting Army operations and our Soldiers, families, and communities. Our FY 2017 budget request of \$1.05 billion will allow the Army to fulfill these objectives, keeping the Army on track to meet our cleanup goals and maintain full access to important training and testing lands, which are integral components of Army readiness.

### **Conclusion**

Readiness is the U.S. Army's top priority – there is no other “number one.” The Army's FY 2017 Military Construction budget request takes moderate risk to ensure our readiness needs are met by focusing our financial resources where they are needed most.

Maintaining failing facilities and low-military value installations takes money away from critical investments in the readiness of our Soldiers and the acquisition of advanced weapons and technology. BRAC allows the Army to optimize installation

capacity and achieve substantial savings, freeing up scarce resources that could easily be applied elsewhere.

The strength of the U.S. Army is its people, and our installations serve as the platforms for this strength. Without ready and resilient installations, our Soldiers will be ill-equipped to fight the growing threats facing our nation. We owe it to our men and women who wear the Army uniform to be prudent in the use of our installation budgets and prioritize them appropriately to ensure they have the best resources available to defend our homeland.

Thank you for the opportunity to present this testimony and for your continued support of our Soldiers, families, and civilians.

NOT FOR PUBLICATION  
UNTIL RELEASED BY THE  
SUBCOMMITTEE ON READINESS AND MANAGEMENT SUPPORT  
SENATE ARMED SERVICES COMMITTEE

**STATEMENT OF**

THE HONORABLE DENNIS V. McGINN

ASSISTANT SECRETARY OF NAVY  
(ENERGY, INSTALLATIONS, AND ENVIRONMENT)

BEFORE THE

SUBCOMMITTEE ON READINESS AND MANAGEMENT SUPPORT

of the

SENATE ARMED SERVICES COMMITTEE

12 APRIL 2016

NOT FOR PUBLICATION  
UNTIL RELEASED BY THE  
SUBCOMMITTEE ON READINESS AND MANAGEMENT SUPPORT

Chairman Ayotte, Ranking Member Kaine, and members of the Subcommittee, I am pleased to appear before you today to provide an overview of the Department of the Navy's (DON's) investment in its infrastructure, energy, and environment programs.

Our Navy and Marine Corps installations and facilities are the platform to train and prepare our Marines and Sailors, to deploy ships, aircraft and operational forces, as well as to support our military families. We are stewards of a large portfolio of installations - valued at \$229B (\$173B Navy and \$56B USMC, respectively) in plant replacement value – that is vital to our operational forces. Against the backdrop of world events and competing requirements and resources, we must balance our desired level of funding with the principal purposes for our existence: to optimize readiness of the operational forces and preserve their quality of life. Readiness-enablers include runways, piers, operations & maintenance facilities, communications & training facilities, and utilities; those that enable quality of life include barracks, mess halls, and recreation and fitness centers. We have a responsibility to balance the investments for this portfolio according to current year authorizations while being mindful of the impacts to life cycle and ever-evolving mission requirements.

### **Investing in Our Infrastructure**

We thank Congress for passage of the Bipartisan Budget Act (BBA) of 2015, the National Defense Authorization Act (NDAA) for Fiscal Year (FY) 2016 and the Consolidated Appropriations Act, 2016. Although the BBA of 2013 provided some budget stability for FY 2014-2015, and limited relief from the Budget Control Act (BCA) of 2011 sequestration levels, the unfortunate consequence of constrained DON funding levels and timing is that many of our installations' piers, runways, and other facilities are degrading. We continue to make progress in replacing and demolishing unsatisfactory infrastructure, yet still have challenges based on BCA caps and on the prospect of a return to sequestration levels in FY18.

In FY17, the President's Budget (PB) is requesting \$11.9B in various appropriations, a 10.4% decrease (\$1.4B) from amounts appropriated in FY16 to operate, maintain and recapitalize our shore infrastructure. Figure 1 compares the FY16 enacted

budget and the FY 2017 PB request by appropriation. Each appropriation is discussed more fully in the following sections.

Appropriation	FY2016 enacted (\$M)	PB17 (\$M)	Delta (\$M)	Delta (%)
Military Construction, Active and Reserve	1,739	1,126	-613	-35.3%
Family Housing, Construction	17	94	77	452.9%
Family Housing, Operations	353	301	-52	-14.7%
BRAC	170	154	-16	-9.4%
Sustainment, Restoration and Modernization	3,110	2,356	-754	-24.2%
Base Operating Support	7,625	7,610	-15	-0.2%
Environmental Restoration, Navy	300	282	-18	-6.0%
<b>Total</b>	<b>13,314</b>	<b>11,923</b>	<b>(1,391)</b>	<b>-10.4%</b>
Notes:				
MILCON, SRM and BOS include OCO				
BOS includes BSIT				

**Figure 1: DON Infrastructure Funding by Appropriation**

We strive to maintain a shore infrastructure that is mission-ready, resilient, sustainable and aligned with Fleet and operational priorities. Toward that end, and especially important given the risks inherent at these funding levels, Navy and Marine Corps have taken actions to more proactively manage the installations portfolio. For example, Navy has taken the initiative to:

- Standardize the facility inspection and Facility Condition Index (FCI) process that quantifies facility condition and documents the needed maintenance and repair work within our facilities portfolio. This information helps guide spending of available dollars.
- Incorporate principles of condition-based maintenance across all buildings, utilities and structures, in order to prioritize work on only the most critical components (e.g. roofs and exterior walls) at our most critical facilities or on components that relate to life, health and safety. We are able to focus resources on specific building components and systems where failure jeopardizes personnel safety or a warfighting mission.
- Led by Commander, Navy Installations Command, exercise a single integrated forum to receive and adjudicate demand signals from Fleet and Enterprise

Commanders to identify and prioritize projects, optimizing the available resources.

- Maintain focus on reducing footprint by demolishing or divesting unneeded buildings as funds are available, and recapitalizing existing facilities in lieu of new construction when possible.
- Supplement available appropriated dollars by the increased use of authorities that leverage third party financing for improving infrastructure while lowering energy consumption and energy costs.
- We support a DOD legislative proposal that would provide temporary authority to classify facility conversion projects as repair projects. This proposal would afford the Services the flexibility to use operations and maintenance funding to repurpose existing facilities. The proposal will help installations increase their facility utilization, will enable increased efficiency and effectiveness, and will support footprint reduction and energy efficiency goals. The Navy will collect data to determine the effectiveness of this proposal.

### **Military Construction (MILCON)**

Navy's MILCON program funds infrastructure at home and abroad, supports our warfighters, and meets the objectives in CNO's Design for Maintaining Maritime Superiority and the Secretary of Defense's Strategic Guidance. Together, Navy and Marine Corps will invest \$1.13B worldwide in military construction funds to support warfighting and modernization of our utilities and critical infrastructure.

For Navy, the FY17 request is for 25 projects, Planning and Design and Unspecified Minor Construction, at a budget of \$700M, which is 29% lower than the FY16 as-enacted budget of \$986M. Navy has invested an average of \$1B annually in MILCON since 2010, and the FY17 request is the lowest since 1999. Navy continues to invest prudently in MILCON, but assumes long-term risk in deferring recapitalization of our existing infrastructure.

The Navy's FY17 MILCON request supports Combatant Commander requirements, enables new platforms/missions, upgrades utilities and energy

infrastructure, recapitalizes Naval Shipyard facilities, and supports weapons of mass destruction (WMD) training requirements. They include:

Combatant Commander Support (\$233M, 9 projects)

- Medical/Dental Facility - Camp Lemonnier Djibouti
- Harden POL Infrastructure - NAVBASE Guam
- Coastal Campus Utilities Infrastructure - NAVBASE Coronado
- Coastal Campus Entry Control Point - NAVBASE Coronado
- Communication Station - NAVSTA Rota
- Grace Hopper Data Center Power Upgrades - NAVBASE Coronado
- Missile Magazine - NAVWPNSTA Seal Beach
- P-8A Hanger Upgrade - NSA Naples (Keflavik, Iceland)
- P-8A Aircraft Rinse Rack - NSA Naples (Keflavik, Iceland)

New Platform/Mission (\$198M, 6 projects)

- UCLASS RDT&E Hangar - Naval Air Station PAX River
- Triton Mission Control Facility - NAS Whidbey Island
- Triton Forward Operating Base Hangar - VARLOCS
- EA-18G Maintenance Hangar - NAS Whidbey Island
- F-35C Engine Repair Facility - NAS Lemoore
- Air Wing Simulator Facility - NAS Fallon

Utilities and Energy Infrastructure (\$85M, 4 projects)

- Upgrade Power Plant & Electrical Distribution System - PMRF Barking Sands
- Energy Security Microgrid - Naval Base San Diego
- Service Pier Electrical Upgrades - Naval Base Kitsap
- Shore Power (Juliet Pier) - COMFLEACT Sasebo

Naval Shipyards (\$76M, 4 projects)

- Sub Refit Maintenance Support Facility - Naval Base Kitsap
- Nuclear Repair Facility - Naval Base Kitsap
- Utilities for Nuclear Facilities - Portsmouth Navy Shipyard (NH)
- Unaccompanied Housing Consolidation - Naval Shipyard Portsmouth (NH)

WMD Training (\$21M, 1 project)

- Applied Instruction Facility - NAS Whiting Field, Milton, FL

MILCON Reserves (\$11M, 1 project)

- Joint Reserve Intelligence Center - NAS JRB New Orleans

For the Marine Corps, the FY17 request is for 11 projects, Planning and Design and Unspecified Minor Construction, at a budget of \$426M, which is 44% lower than the FY16 as enacted budget of \$754M. Investments in MILCON will primarily support new

warfighting platforms, weapons support, force relocation facilities (Rebalance to the Pacific, Aviation Plan), improve security and safety posture, and recapitalize and replace inadequate facilities. The 11 projects in the Marine Corps FY17 MILCON budget include:

New Platform and Weapons Support Facilities (\$110M, 2 projects):

- F-35 aircraft maintenance hangar at MCAS Beaufort, SC; and
- F-35 aircraft maintenance shops at Kadena Air Base, Japan.

Facilities to Support Force Relocations/Increased Force Requirements (\$119M, 3 projects):

- Aircraft maintenance hangar for VMX-22-MCAS Yuma;
- Expansion of Reserve Center Annex-Galveston; and
- Utility upgrades for Finegayan cantonment area- Guam.

Safety, Security, and Environmental Compliance (\$31M, 2 projects):

- EPA-required central heating plant conversion-MCAS Cherry Point; and
- Range safety improvements at MCB Camp Lejeune.

Recapitalize and Replace Inadequate Facilities (\$117M, 4 projects):

- Replace and consolidate communications, electrical, and maintenance shops-MCB Hawaii;
- Replace unreliable electrical power supply at reserve center- Brooklyn, NY;
- Replace reserve training facilities- Syracuse, NY; and
- Modernize recruit barracks and construct a recruit reconditioning center for injured recruits at MCRD Parris Island.

Reduced funding availability in MILCON will result in reduced investments in projects that support the consolidation of functions or replacement of existing facilities, which will cause degradation of the long-term health of existing facilities.

Relocation of Marines to Guam remains an essential part of the United States' larger Asia-Pacific strategy of achieving a more geographically distributed, operationally resilient and politically sustainable force posture in the region. Guam provides a critically important forward base for our expeditionary Marine ground and air forces and also provides key sustainment capabilities for our forward-deployed ships and submarines. The permanent basing of Marines in Guam significantly contributes to maintaining regional stability and provides reassurance for key allies and partners across the Pacific region.

With the PB 2017 budget request, the Navy will exceed the minimum 6% mandated by 10 USC 2476 for depot capital investment. The Navy has met this statutory requirement every year since its enactment in 2006.

### **Family Housing**

The Department continues to rely on the private sector as the primary source of housing for Sailors, Marines, and their families. When suitable, affordable, private housing is not available in the local community, the Department relies on government-owned, privatized, or leased housing. The FY17 request of \$395M supports Navy and Marine Corps family housing operation, maintenance, renovation, and construction requirements. Of this amount, \$79M is for the first phase of replacement of inadequate family housing at Naval Support Activity Andersen, Guam and \$11M is for the renovation of family housing at Marine Corps Air Station Iwakuni, Japan. The budget request also includes \$301M for the daily operation, maintenance, and utilities expenses of the military family housing inventory.

To date, over 62,000 Navy and Marine Corps family housing units have been privatized through the Military Housing Privatization Initiative (MHPI). MHPI has enabled the Department to leveraged private sector resources to improve living conditions for Sailors, Marines, and their families.

### **Facilities Sustainment, Restoration and Modernization (FSRM)**

To maximize support for warfighting readiness and capabilities, the President's FY17 budget request continues to carefully accept risk in FSRM.

The FY17 budget requests \$1.9B to sustain infrastructure, a 16% reduction from the FY16 enacted value of \$2.3B. Navy and the Marine Corps have resourced FY17 facilities sustainment at 70 percent and 74 percent, respectively, of the Department of Defense (DoD) Facilities Sustainment Model. Over time, this lack of sustainment will cause our facilities to deteriorate.

To restore and modernize our existing infrastructure, the FY17 budget request is \$463M, a 38% reduction from the FY16 enacted value of \$749M. Budget constraints have compelled the Department to focus its limited resources to address life/safety issues

and the most urgent deficiencies at our mission-critical facilities, piers, hangars, runways and utility systems. We are committed to fully funding infrastructure at strategic weapons facilities, accelerating Naval shipyard infrastructure improvements, supporting the Marine Corps Aviation Plan, and force relocations. However, as the Department defers less critical repairs, especially for facilities not directly tied to DON's warfighting mission, certain facilities degrade and the overall facilities maintenance backlog increases. At current funding levels, the overall condition of DON infrastructure will slowly, but steadily, erode over the Future Years Defense Plan (FYDP). Although we are proactively managing the risk we are taking in our shore infrastructure, we acknowledge that this risk must eventually be addressed.

### **Base Operating Support (BOS)**

The FY17 BOS request of \$7.6B is essentially the same as FY16 levels. Similar to the risk taken in our facility investments, the Department is accepting lower standards in base operating support at our installations. Base operations at Navy and Marine Corps installations are funded to the minimum acceptable standards necessary to continue mission-essential services. We have enforced low service levels for most installation functions (administrative support, base vehicles, grounds maintenance, janitorial and facility planning) in order to maintain our commitment to warfighting operations, security, family support programs, and child development. These measures, while not ideal, are absolutely necessary in the current fiscal environment.

### **Safety Program**

Our initiatives are improving the skills of our Safety Professionals directly benefiting over 800,000 personnel (uniformed personnel (Active and Reserve) and civilian) executing diverse, complex missions across the globe. DON's safety program has expanded its global online training resources to ensure the Naval Safety workforce is educated and trained through more effective and modernized cost efficient methods. We are acquiring commercial off-the-shelf information technology tools to enhance our tireless fight to reach our objective of zero mishaps. The Risk Management Information initiative will comprise a streamlined mishap reporting system, data base consolidation,

state-of-the-art analytical innovations, and data capabilities to improve our predictive abilities for safer Sailors and Marines.

### **Managing Our Footprint**

#### **Base Realignment and Closure (BRAC)**

We appreciate the Congressional support for additional FY16 funds for environmental cleanup at BRAC properties. For FY17, the Department has planned to expend \$154M to continue cleanup efforts, caretaker operations, and property disposal. By the end of FY15, we disposed of 94 percent (178,180 acres) of our excess property identified in previous BRAC rounds through a variety of conveyance mechanisms. Of the remaining 6 percent (11,674 acres), the majority is impacted by complex environmental issues. Of the original 131 installations with excess property, Navy only has 17 installations remaining with property to dispose.

Although many tough cleanup and disposal challenges remain from prior BRAC rounds, we have fostered good working relationships with regulatory agencies and local communities to tackle these complex issues and provide creative solutions to support redevelopment priorities.

#### **Compatible Land Use**

DON has an aggressive program to promote compatible land use adjacent to our installations and ranges. This program helps Navy and Marine Corps to operate and train in cooperation with surrounding communities, while protecting important natural habitats and species. We conduct Air Installation Compatible Use Zone Studies and Range Area Compatible Use Zone Studies, and provide them to nearby communities for their consideration in the exercise of their land management responsibilities.

A key element of the program is Encroachment Partnering, which involves cost-sharing partnerships with states, local governments, and conservation organizations to acquire interests in real property proximate to our installations and ranges. The Department is grateful to Congress for providing funds for the DoD Readiness and Environmental Protection Integration (REPI) Program. Since 2005, DON has acquired restrictive easements on approximately 91,000 acres.

### **Protecting Our Environment**

The Department is committed to environmental compliance, stewardship and responsible fiscal management that support mission readiness and sustainability, investing over \$1B across all appropriations to achieve our statutory and stewardship goals. The funding request for FY17 is about 2.3 percent less than enacted in FY16, as shown in Figure 2:

Category	FY 2016 enacted (\$M)	PB 2017 (\$M)	Delta (\$M)	Delta (%)
Conservation	86	93	7	8.1%
Pollution Prevention	22	19	-3	-13.6%
Compliance	480	485	5	1.0%
Technology	36	37	1	2.8%
Active Base Cleanup (ER,N)	300	282	-18	-6.0%
BRAC Environmental	158	141	-17	-10.8%
TOTAL	1,082	1,057	-25	-2.3%

**Figure 2: DON Environmental Funding by Program**

The Department continues to be a Federal leader in environmental management by focusing resources on achieving specific environmental goals, implementing efficiencies in our cleanup programs and regulatory processes, proactively managing emerging environmental issues, and integrating sound policies and lifecycle cost considerations into weapon systems acquisition to achieve cleaner, safer, more energy-efficient and affordable warfighting capabilities without sacrificing operational capability.

In FY17 we will complete environmental planning for Navy's Records of Decision (RODs) for EA-18G Growler training at Whidbey Island, Washington. As an example of our land stewardship responsibilities, we will complete natural and cultural surveys to support Marine Corps air and ground training at Twentynine Palms, California. To maintain our environmentally responsible operations at sea, we will continue to be leaders in ocean research by studying marine mammal behavioral response to sound in water. We will also build on our accomplishments this past fiscal year, which included finalizing the environmental planning processes for the new Marine Corps Base

on Guam; completing a five year authorization for testing and training in the Marianas Island Testing and Training area with National Marine Fisheries Service; and successfully rearing five hundred hatchlings and releasing thirty five mature tortoises with the University of California, Los Angeles (UCLA) at the Marine Corps Twentynine Palms Desert Tortoise Head Start Facility.

Coastal installations and the communities in which our Sailors, Marines, Civilians and their families live are especially vulnerable to rising sea levels and increased storm surge resulting from a changing climate. The resilience of these installations and communities is essential to future readiness associated with all naval mission areas. The DON continues to develop relevant policy and guidance to address climate change challenges.

## *Enhancing Combat Capabilities*

The Department of the Navy's Energy Program has two central goals: (1) enhancing Navy and Marine Corps combat capabilities, and (2) advancing energy security afloat and ashore. Partnering with other government agencies, academia and the private sector, we strive to meet these goals with the same spirit of innovation that has marked our history—new ideas delivering new capabilities in the face of new threats.

Our naval forces offer us the capability to provide power and presence –to deter potential conflicts, to keep conflicts from escalating when they do happen, and to take the fight to our adversaries when necessary. Presence means being in the right place, not just at the right time, but all the time; and energy is key to achieving that objective. Using energy more efficiently allows us to go where we're needed, when we're needed, stay there longer, and deliver more firepower when necessary.

Improving our efficiency and diversifying our energy sources also saves lives. During the height of operations in Afghanistan, we were losing one Marine, killed or wounded, for every 50 convoys transporting fuel into theater. That is far too high a price to pay. Reducing demand at the tip of the spear through energy efficiency, behavior change and new technologies takes fuel trucks off the road.

I'll mention just a couple of examples. The work that the Marine Corps is doing to integrate solar power and software into autonomous UAVs will allow them to take advantage of environmental conditions and provide persistent surveillance for periods far in excess of our current capabilities without refueling. They are also working on technologies that harvest kinetic and other forms of energy into an integrated power system capable of running a Marine's radios and electronic gear. These are real combat capabilities that will result in increased lethality.

Navy is pursuing similar combat capabilities. In 2016 we will begin installing hybrid electric drives in our destroyers, enabling our ships to remain on station longer during low speed missions and extend time between refueling. This is the same technology that is now onboard USS MAKIN ISLAND and USS AMERICA, allowing those ships to stay on station between refueling far longer than their predecessors.

## **Improving Energy Security and Resilience**

Reliable and affordable electricity at our installations is critical to mission effectiveness. Measures to reduce vulnerability and to increase resiliency of the electrical system improve and protect national security. The 2013 attack on key grid infrastructure in California is a reminder of how fragile the commercial system can be. The Department of the Navy recognizes this vulnerability and is working to enhance our energy security.

Navy's Renewable Energy Program Office (REPO) has brought one gigawatt (GW) of renewable energy into procurement. We expect those renewable energy projects to yield hundreds of millions in projected utility cost savings and even more important energy security benefits. For example, last August we celebrated the procurement of 210 megawatts (MW) of solar generation for 14 installations in California, with a projected cost savings of \$90 million over a 25-year term. At Naval Submarine Base Kings Bay, Georgia Power Company is constructing a 42 MW solar generation facility, which the base will have access to during external grid outages. Marine Corps Logistics Base Albany will receive access to a 44 MW on-base solar generation facility for use during grid outages and a second feeder line from Georgia Power Company's grid.

DON's successful industry partnerships form a foundation for future third party-financed energy resiliency projects in the form of microgrids, battery storage, fuel cells, and distributed generation, where these capabilities make sense. Industry has shown interest in battery storage by proposing facilities located at two Navy installations in California. The Arizona Power Service recently signed an agreement to develop a microgrid at Marine Corps Air Station Yuma and will provide the base unlimited access to onsite backup power, eliminating the need for up to 41 diesel generators. These and future energy security efforts using existing Title 10 authorities will help make DON's installations more energy secure and resilient mission platforms.

## **Strategic Investments in the Future**

We endeavor to make investments that enhance our operational flexibility. Our program to test and certify emerging alternative fuels is critical for us to keep pace with developments in the private sector and maintain interoperability with commercial supply chains. In addition, the Defense Logistics Agency (DLA) Energy (through which Navy

buys operational fuels) recently awarded a contract to provide us with an alternative fuel blend of F-76 – the fuel we use to power our ships. The contract was awarded at a cost competitive rate with traditional fossil fuels and represents an important step toward diversifying our fuel supply chains.

### **Conclusion**

Navy-Marine Corps Energy, Installations and Environment team will continue to carefully and deliberately manage our portfolio to optimize mission readiness, and improve quality of life. The Department's FY17 request makes needed investments in our infrastructure and people, preserves access to training ranges, and promotes environmentally prudent and safe actions, while ensuring energy resiliency and security.

Thank you for the opportunity to testify before you today. I look forward to working with Congress to deliver an innovative, resilient, sustainable and secure shore infrastructure that enables mission success for the United States Navy and Marine Corps, the most formidable expeditionary fighting force in the world.

# United States Air Force

---



Presentation

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

## ***Installations, Environment, BRAC, and Energy***

Witness Statement of  
The Honorable Miranda A.A Ballentine,  
Assistant Secretary of the Air Force for  
Installations, Environment, and Energy

April 12, 2016

April 12, 2016



# 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.



April 12, 2016

**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 2015)

April 12, 2016

## Introduction

Ready and resilient installations are a critical component of Air Force operations. Unfortunately, twenty-four years of continuous combat, a fiscal environment constrained by the Budget Control Act (BCA), and a complex security environment have taken their toll on Air Force infrastructure and base operations support investments. Furthermore, the Air Force is currently maintaining installations that are too big, too old and too expensive for current and future needs. This forces us to spend scarce resources on excess infrastructure instead of operational and readiness priorities.

Air Force installations are foundational platforms comprised of both built and natural infrastructure. Our installations serve as the backbone for Air Force enduring core missions delivering air, space and cyberspace capabilities; sending a strategic message to both allies and adversaries signaling commitment to our friends and intent to our foes; foster partnership-building by stationing our Airmen side-by-side with our Coalition partners; and 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 Air Force core missions.

The total Air Force Fiscal Year (FY) 2017 facilities budget request is down 4 percent from FY16 at \$8.5B including Military Construction (MILCON), Facility Sustainment, Restoration and Modernization (FSRM), Housing, BRAC implementation and Environmental programs. As in FY 2016, the FY 2017 President's Budget (PB) request for the Air Force attempts to strike the delicate balance between a ready force today and a modern force for tomorrow while also continuing its recovery from the impacts of sequestration and adjusting to sustained budget reductions. The result is the Air Force facilities budget accepts near term risk in the entire infrastructure Maintenance and Repair portfolio of MILCON and Sustainment, Restoration and Modernization accounts in order to protect readiness and maintain credible capabilities in other core missions. In doing so, it acknowledges this choice will have long term effects on the overall health of infrastructure.

The Air Force's FY17 President's Budget includes \$1.8 billion in Military Construction (MILCON) requirements, a 14 percent increase over the FY16 President's Budget. This allows the Air Force to replace degraded facilities that can no longer wait, while still meeting Combatant Commander (COCOM) needs and new weapon systems beddown requirements that must be accomplished now. This also allows us to provide an equitable distribution of \$333 million to the Guard and Reserve components. This increase was funded by reductions in our Sustainment, and Restoration and Modernization

April 12, 2016

accounts for which we request \$2.9 billion, about 10 percent less than last year. We recognize this reduction will expand a backlog of facility investment requirements that already totals nearly \$20 billion. To assure continued focus on taking care of our Airmen and their families, the FY17 President's Budget also requests \$274 million for Military Family Housing operations and maintenance, and \$61.4 million for Military Family Housing Construction, \$56.4 million for Base Realignment and Closure and \$842 million for Environmental programs.

### **Military Construction**

The FY17 MILCON program consists of three primary tiers. The first is support to the COCOMs; the second is providing facilities for the beddown of new weapons systems by their need dates; and the third is replacing our most critical existing mission degraded infrastructure on a worst-first basis.

#### *COCOM Support*

This year's President's Budget request includes \$293 million for COCOM requirements; \$35 million for Central Command (CENTCOM), \$97 million for European Command (EUCOM), \$29 million for Northern Command (NORTHCOM), and \$293 million for Pacific Command (PACOM). The Air Force continues with phase three of the U.S. European Command Joint Intelligence Analysis Center consolidation at Royal Air Force (RAF) Croughton, United Kingdom, which also supports four other COCOMs. Additionally, the Asia-Pacific Theater remains a focus area for the Air Force where we will make a \$109 million investment in FY17 to ensure our ability to project power into areas which may challenge our access and freedom to operate, and continue efforts to improve resiliency. Guam remains one of the most vital and accessible locations in the western Pacific. For the past ten years, Joint Region Marianas (JRM)-Andersen AFB, Guam has housed 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. Additionally, FY17 investments in the Pacific Theater include Kadena Air Base, Japan; Royal Australian Air Force Base (RAAF) Darwin, Australia; and the Commonwealth of Northern Marianas Islands (CNMI).

To further support PACOM'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 2017, the Air Force plans to construct a Satellite Communications Command, Control, Communications, Computers and Intelligence facility at JRM-Andersen AFB, Guam to sustain Guam's continued functionality. The Air Force also intends to recapitalize the munitions structures in support of the largest

April 12, 2016

munitions storage area in the Air Force. Furthermore, the FY17 budget invests in the aircraft parking apron expansion and aircraft maintenance support facility projects at RAAF Darwin supporting the Air Force's participation in bilateral training exercises. The FY17 PB investment also includes a land acquisition in CNMI, to support the Air Force's operational capability to execute weather diverts, accomplish training exercises and respond to natural disasters. Our total FY17 COCOM support makes up 16 percent of the Air Force's MILCON request.

*New Mission Infrastructure*

The FY17 President's Budget request includes \$623 million of infrastructure investments to support the Air Force's modernization programs, including the beddown of the F-35A, KC-46A, Combat Rescue Helicopter (CRH) and the Presidential Aircraft Recapitalization. The Air Force's ability to fully operationalize these new aircraft depends not only on acquisition of the aircraft themselves, but also on the construction of the aircraft's accompanying hangars, maintenance facilities, training facilities, airfields and fuel infrastructure.

The FY17 PB includes \$132.6 million for the beddown of the KC-46A at five locations. This consists of \$11.6 million at Altus AFB, Oklahoma, the Formal Training Unit (FTU); \$8.6 million at McConnell AFB, Kansas, the first Main Operating Base (MOB 1); \$1.5 million at Pease International Tradeport Air National Guard Base (ANGB), New Hampshire, the second Main Operating Base (MOB 2); \$17 million at Tinker AFB, Oklahoma, for KC-46A depot maintenance; and \$93.9 million at Seymour Johnson AFB, NC, the preferred alternative for the third Main Operating Base (MOB 3).

This request also includes \$340.8 million for the beddown of the F-35A at five locations consisting of \$10.6 million at Nellis AFB, Nevada; \$20 million at Luke AFB, Arizona; \$10.1 million at Hill AFB, Utah; \$315.6 million at Eielson AFB, Alaska; and \$4.5 million at Burlington International Airport, Vermont. Additionally, the FY17 investment includes \$7.3 million in support of the CRH beddown at Kirtland AFB, New Mexico. As the Air Force continues its efforts to modernize its fleet, we have moved forward to select installations to beddown our newest airframes. In January of this year, we announced the enterprise and criteria for the fourth KC-46A Main Operation Base (MOB 4).

In preparation for the Presidential Aircraft Recapitalization acquisition, the Air Force's 2017 budget request accounts for the planning and design requirements essential to this future beddown and a project to relocate the Joint Air Defense Operations Center Satellite Site at Joint Base Andrews, Maryland.

April 12, 2016

*Existing Mission Infrastructure Recapitalization*

This year's President Budget request also includes \$723 million in MILCON recapitalization projects addressing existing mission infrastructure. Existing mission projects include requirements that revitalize the existing facility plant and projects that address new initiatives for capabilities already contained in the Air Force inventory. The Air Force's FY17 PB supports Nuclear Enterprise priorities and includes three MILCON projects, totaling \$41 million. With this budget submission, the Air Force intends to provide a Missile Transfer Facility at F.E. Warren AFB, Wyoming, which recapitalizes the current facility and continues to ensure proper processing of missiles in support of the Missile and Alert Launch Facilities at three sites. The FY17 budget also includes a Consolidated Communications Facility recapitalization project at Barksdale AFB, Louisiana. Additionally, a new Missile Maintenance Dispatch Facility at Malmstrom AFB, Montana will be built in support of the UH-1 Helicopter and Tactical Response Force facilities beddown. Together, these projects will consolidate scattered installation functions and provide adequately sized and configured operating platforms for the UH-1 recapitalization. Additionally, the FY17 PB request includes three munitions storage projects to accommodate the realignment and relocation of primary Standard Air Munitions Package assets from McConnell Air Force Base, Kansas to Hill Air Force Base, Utah.

The Air Force's FY17 PB supports airfield recapitalization requirements to include a project to construct an updated, properly sized Air Traffic Control Tower at McConnell Air Force Base, Kansas and a new aircraft maintenance hangar in support of the Global Hawks at JRM-Andersen AFB, Guam. Additionally, the Air Force's FY17 PB supports force protection recapitalization requirements to include a project that constructs a compliant main gate complex at RAF Croughton, United Kingdom and new Combat Arms Training Maintenance facilities at Buckley Air Force Base, Colorado, Yokota Air Base, Japan, and Joint Base-Andrews, Maryland.

In total, our FY17 request represents a balanced approach ensuring critical infrastructure requirements to meet mission needs and operational timelines.

**Facility Sustainment, Restoration and Modernization**

In FY17, the Air Force requests \$2.9 billion for Facilities Sustainment, Restoration and Modernization (FSRM), which is approximately 10 percent less than our FY16 PB request and funds sustainment to 77 percent of the OSD modeled requirement. The Restoration and Modernization account is reduced by 34 percent in FY17 as compared to FY16. The Air Force cut this account in order to increase the MILCON program and therefore reduce the greatest risk within the facility infrastructure

April 12, 2016

portfolio this year. Nonetheless, the Air Force's FY17 FSRM request attempts to keep "good facilities good" as the AF continues to focus limited resources on "mission critical, worst-first" facilities through application of asset management principles.

### **Housing**

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 innovation, 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. The Air Force has privatized its military family housing (MFH) at each of its stateside installations, including Alaska and Hawaii. The Air Force has 32 projects at 63 bases, with an end-state of 53,240 homes and we are now focused on long-term oversight and accountability of the sustainment, operation and management of this portfolio.

Concurrently, the Air Force continues to manage approximately 18,000 government-owned family housing units at overseas installations. Our \$274 million FY17 Family Housing Operations and Maintenance (O&M) sustainment funds request allows us to sustain adequate units and improve inadequate units, and our \$61.4 million request for Family Housing Construction funds improves 204 tower units at Camp Foster, Okinawa and 12 units on Kadena Air Base. This request will ensure we support the housing requirements of our Airmen and their families as well as the Joint Service members the Air Force supports overseas.

Similarly, our focused investment strategy for dormitories enables the Air Force to achieve the DoD goal of 90 percent adequate dormitory rooms for permanent party unaccompanied Airmen, while continuing to support Airmen in formal training facilities. The FY17 PB MILCON request includes two training dormitories at Fairchild AFB, Washington and Joint Base San Antonio, Texas. With Congressional 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 support will take care of our most valued asset--our Airmen and their families.

### **Air Force Community Partnership Program**

In support of the Air Force priority to "make every dollar count", the Air Force has put a concentrated effort to cultivate partnerships between our installations and the local communities. The Air Force Community Partnership program has been heralded by our Wing Commanders and community leaders as an ideal forum for exploring win-win partnerships. To date, there are 53 installations and

April 12, 2016

communities participating in the Air Force Community Partnership program. Since the program's inception in 2013, we have completed more than 140 partnership agreements that have generated over \$23 million in Air Force benefits and \$24 million in community benefits. Beyond the tangible savings, the program creates an invaluable forum for fostering relationships and promoting innovation. Installations and communities now have the framework and tools needed to finalize many of the over 1,000 potential initiatives identified to date, such as shared medical/EMT training, joint small arms ranges, and shared refuse management services.

Without losing focus on fostering a partnership mentality across the Air Force, we are now turning our attention to cultivate initiatives that show significant promise of large returns-on-investment (ROI) or have Air Force-wide application. In the future, the Air Force Community Partnership program will continue to strengthen its foundation by building upon concepts under development while reallocating resources towards initiatives with large returns on investment.

Of course, we need your help to pursue the initiative, which has, by far, the largest return-on-investment -- Base Realignment and Closure.

#### **Base Realignment and Closure (BRAC)**

The Air Force has more infrastructure capacity than our missions of today and tomorrow require. Our numbers of aircraft and personnel have drawn down significantly since the Cold War. Since the last round of BRAC in 2005, we have continued to drawdown our forces, but we have not paired these drawdowns with comparable reductions in our infrastructure. Since BRAC 2005, the Air Force has thousands fewer personnel and hundreds fewer aircraft in our planned force structure, yet we have not closed a single installation in the United States. Ultimately, we are paying to retain more installations than we require, and that money could be used to recapitalize and sustain our weapons systems, on readiness training, and on investing in Airmen quality of life programs.

Congress has expressed concerns that BRAC may cost too much, is often hard on communities, and may not adequately consider potential future growth of our forces.

Regarding cost, Air Force experience shows that BRAC provides significant savings. BRAC pays for itself. In each prior round of BRAC, including BRAC 2005, the Air Force achieved net savings during the implementation period. Couple that with the plain truth that the Air Force simply cannot afford to maintain our current infrastructure footprint, and our request for BRAC makes fundamental economic sense. The Air Force has a \$20 billion facility investment backlog. We estimate (parametrically) that we

April 12, 2016

currently have about 30 percent excess infrastructure capacity when measured against our FY19 force structure. Sustaining and maintaining this extra infrastructure further strains our limited funds by forcing us to spread them even thinner to support infrastructure that we simply do not need. Without previous rounds of BRAC, the Air Force infrastructure bill would be about \$3 billion higher each year than it is now. BRAC has been effective in reducing our infrastructure cost and we need another round to truly align our infrastructure to our force structure. We acknowledge there will be upfront costs, but those costs are the down payment to significant savings in the future.

Regarding BRAC's impact on communities, we understand that Air Force installations are key components of their communities. These communities house not only our missions but also our families; our kids go to the local schools; our Airmen attend the local sporting events; our families volunteer across the spectrum of activities – these communities are our neighbors. With that in mind, the Association of Defense Communities asked our neighbors what they thought about BRAC, and 92 percent of community leaders<sup>1</sup> believe BRAC is better for their community than the status quo of hollowed bases, reduced manning and minimal investment. As BRAC is, by nature, a consolidation effort, some installations will be the recipients of new missions and these communities will benefit from the economic boost that increased installation activity will provide. Other installations will close; however, it is only under BRAC that communities whose bases are closing will receive direct economic support through redevelopment guidance and financial assistance. Based on prior rounds of BRAC, communities in which bases closed had lower unemployment rates and higher per capita income growth than national averages<sup>2</sup>. Additionally, the Air Force is committed to partnering with DoD, Congress, and communities to consider alternative approaches to the prolonged BRAC analysis and selection process that puts an economic drag on all communities surrounding military installations. In sum, without a BRAC, the Air Force will continue to spread out our people and force structure, and as this occurs many communities will continue to suffer the economic detriment of hollowed out bases without the economic support that BRAC legislation provides. This lose-lose scenario can only be reversed through BRAC.

Finally, Congress has expressed concerns that a BRAC will enable reductions in infrastructure that do not account for potential future force structure growth. In asking for the authority to

---

<sup>1</sup> From the June 2015 Association of Defense Communities National Summit at which General Session audience members were asked: "What would be worse for defense communities?" and chose from "Status Quo" or "BRAC".

<sup>2</sup> From Government Accountability Office (GAO) studies GAO-05-138 and GAO-13-436

April 12, 2016

permanently reduce our infrastructure footprint, the Air Force has considered both its needs for today and its needs for the future. The Air Force has no intent to close infrastructure that may support any realistically achievable surge or contingency needs of the future. While we estimate 30 percent excess infrastructure capacity, the Air Force would build specific reduction targets on future needs, and seek to reduce only infrastructure that exceeds future scenarios. BRAC would be driven first by a military value assessment grounded in operational needs, and would not compromise future growth in force structure. In comparing infrastructure capacity with force structure requirements going back to the 1990s, the Air Force has never dipped below 20 percent excess infrastructure capacity<sup>3</sup> despite numerous force structure changes and five previous rounds of BRAC. Thus, we believe we have the opportunity to significantly reduce excess capacity while ensuring more than adequate infrastructure to support any envisioned force structure. Further, we are certain that BRAC provides the most effective means for our infrastructure to achieve the right balance of effectiveness, efficiency, and support to AF missions.

### **Climate Change**

The 2010 and 2014 Quadrennial Defense Reviews (QDRs) recognized that climate change will shape DoD's operating environment, roles, and missions, and that we will need to adjust to the impacts of climate change to our facilities, infrastructure and military capabilities. As part of a larger DOD effort, the Air Force recently collected data from over 1,500 sites regarding impacts from past severe weather events. Surveyed sites not only included major installations, but also radar/communications sites, housing annexes, training ranges, missile sites, etc. Sixty percent of all sites reported some impact due to past flooding, extreme temperatures, drought, wildfire, and wind. The single most prevalent factor was drought which accounted for 42 percent of all reported impacts, followed by non-storm surge flooding and wind with 19 percent each. Further, roughly a third of the 78 sites within 2 kilometers of the coast reported having experienced storm surge flooding.

There are several pertinent examples of how climate change is affecting our plans for current and future infrastructure operations. The Air Force recently completed a study on the risks of coastal erosion to remote Alaskan radar sites. Our radar stations are at risk due to rapid, significant coastal erosion because the shore ice that used to protect the coast from waves has melted. We continue to

---

<sup>3</sup> From DoD reports to Congress on BRAC and capacity in April 1998 and March 2004 in accordance with section 2912 of the Defense Base Closure and Realignment Act of 1990

April 12, 2016

study the rate of erosion, mitigate impacts and incorporate considerations in future planning for these sites.

The DOD climate survey provided qualitative data that helped to frame a more holistic understanding of the impacts of climate on installations and operations. For the majority of reported severe weather events, bases reported emergency preparedness actions and procedures were successful in mitigating impacts on mission and personnel. That being said, mitigation becomes more difficult and cumulative impact to missions more crippling with increasing frequency and/or magnitude of severe weather events. The Air Force continues to integrate climate considerations into individual mission and installation planning efforts to produce informed and resiliency-focused decisions.

### **Energy**

The Air Force is the largest single consumer of energy in the federal government. Air Force budgetary constraints have strained investments in right-sizing, modernizing, and maintaining power systems. As energy costs increase and budgets decrease, energy places greater pressure on the constrained Air Force budget. From a cost perspective, in FY15, the Air Force spent approximately \$8.4 billion on fuel and electricity, with more than 86 percent going towards aviation fuel. That \$8.4 billion represented approximately eight percent of the total Air Force budget; only 10 years ago, less than four percent of the budget went towards energy expenses. As we refocus our efforts, the Air Force will take a multi-faceted energy investment approach to enhance mission assurance.

### **Mission Assurance through Energy Assurance**

The Air Force's ability to accomplish its mission—whether executing today's fight or training for future fights—is dependent on fuel and installation electricity. We must ensure reliable, resilient, cost-competitive power for our Airmen to fly, fight and win. To do so, the Air Force has revectoring its installation energy program from a largely conservation oriented stance to one of energy resilience through strategic agility in installation energy programs and projects. The guiding tenet for this strategic agility is "Mission Assurance Through Energy Assurance." This new paradigm focuses on providing the Air Force with the ability to complete its mission in light of disruptions to electricity and fuel, as well as optimizing its energy productivity through improvements in technology and process.

April 12, 2016

## Installation Energy

Over the last several years, the Air Force has seen installations lose power for significant periods of time as a result of ice storms, hurricanes, fallen trees, and other forms of denial of service. So far, the Air Force has been able to mitigate the most critical mission impacts due to those power losses by exercising alternatives such as moving missions in the case of weather events. There are several critical missions, however, that cannot be moved and where even a microsecond interruption in power puts Air Force mission capabilities at risk. Even though the Air Force has reduced its energy intensity by more than 23 percent since FY03, we still rely almost exclusively on expensive, non-networked diesel generators limited to very specific systems to provide the only depth of resiliency beyond that inherent in the electrical grid in our system. While that can be sufficient for short outages, today's grid is increasingly threatened by cyber incursions and physical attacks designed to disrupt power; increasing frequency and severity of natural disasters; and malfunctions from human error, aging equipment, and faulty infrastructure; all with the potential for long-term outages. To that end, we must enhance the energy resilience of Air Force installations through the adoption of innovative technologies and business models.

Going forward, the Air Force will transition to a more *comprehensive* approach to installation energy challenges, and it will holistically optimize cost and provide resilient, cleaner sources of energy by balancing the objectives of AF energy projects, including energy efficiency, renewable energy, energy resilience, and other energy projects. The core principles below will continue to characterize Air Force installation energy projects, but with an *increased focus on meeting multiple objectives* within single projects.

- **Resilient:** Every Air Force energy project should be designed through the lens of enhancing energy resilience; the strategic energy agility to maintain critical mission functions even during unexpected disruptions. Air Force missions require agile networks of platforms, communications equipment, satellites, and other technology and equipment. The Air Force will secure critical infrastructure and missions through a layered approach to energy resilience, taking advantage of rapidly evolving energy technologies to meet both home station and expeditionary needs. The Air Force will buttress commercial power with on-site electricity generation (preferably cleaner) paired with smart distribution networks and cyber-secure control systems, enabled to power critical infrastructure during grid disruptions.

April 12, 2016

- Cost-competitive: Air Force installations and commands should continue to “make every dollar count” when acquiring advanced, cleaner energy projects, while also examining trade-offs between lowest price and other priorities such as resilience. The Air Force will continue to pursue energy projects or transactions that will save money, leverage third-party investment, and prioritize resources to projects that also enhance energy resilience and reliability.
- Cleaner: Three global trends identified in *America’s Air Force: A Call to the Future* (rapidly evolving technologies, decreasing availability of natural resources, and diverse operating environments) work in favor of energy modernization. Renewable and other distributed energy technologies are key components of energy agility and assurance, especially when projects are on site and capable of delivering continuous energy when the grid is disrupted.

### **Resilience**

To help achieve Air Force energy resiliency goals, the Secretary and the Chief of Staff of the Air Force established the Air Force Office of Energy Assurance (AF-OEA) to serve as a central management office dedicated to the development, implementation, and oversight of privately-financed, large-scale renewable and alternative energy projects. This office leverages partnerships with the Army’s Office of Energy Initiatives and Navy’s Renewable Energy Program Office to develop projects that contribute to strategic energy agility by identifying and awarding third-party financed energy projects that provide 10MW or greater and cleaner (but preferably renewable) power that increases energy resiliency. These projects will provide significant energy alternatives to assure Air Force missions in the event of grid outages for short or long periods. The Air Force is establishing this office with existing personnel resources and will not include any new headquarters personnel; rather, it will co-locate AF-OEA with the Army’s Office of Energy Initiatives to share support and processes, and move forward as a team. The AF-OEA will proactively team with the Navy’s Renewable Energy Program Office to optimize opportunities that office identifies.

Finally, AF-OEA is charged to take a holistic, enterprise-level approach to its energy assurance programs brought to bear on the Air Force’s mission assurance through an energy assurance approach. This includes clean, cost-competitive, reliable and resilient energy through the application of utilities privatization, power purchase agreements, direct investment (e.g., energy conservation investment program), and third-party financed (e.g., ESPCs, etc.) authorities Congress has granted the Air Force. All available tools will be used.

April 12, 2016

### **Cost Competitive**

Although current and projected energy prices are relatively low, from a mission perspective, price volatility does not change mission vulnerability. With mission assurance as our focus, the Air Force still recognizes the need to reduce the cost of energy to allow our dollars to support readiness and recapitalization requirements. The Air Force directly invests in facility energy projects primarily using FSRM funding based on Air Force priorities. Based on an historical average, the Air Force anticipates approximately \$223 million of its FSRM funding going towards projects with energy benefits such as increased resiliency and efficiency through modernized infrastructure.

While the Air Force has made considerable progress to avoid costs through reduced energy consumption, there is 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 \$128 million across eight ESPCs and UESCs. In FY16, the Air Force expects to award up to \$359 million in such contracts. To take advantage of existing expertise, the Air Force has also partnered with the Defense Logistics Agency (DLA) and the U.S. Army Corps of Engineers (USACE) to expand its ability to identify and execute third-party performance contracts.

### **Clean Energy**

The Air Force recognizes both clean energy, and its more desirable renewable subcomponent, are key elements to diversifying our energy portfolio to achieve strategic energy agility. By the end of FY15, the Air Force had 311 renewable energy projects on 104 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. Cumulatively, the Air Force has 104.3 megawatts of on-base renewable energy capacity. These projects, which are typically owned and operated by private industry, have increased energy production on Air Force installations by more than 26 percent from FY14 to FY15. About eight percent of the Air Force's total electrical energy consumption in FY15 came from a mixture of renewable on-base projects and purchased commercial renewable supply. Unfortunately, little of this energy can be directly consumed by our bases in the event of a grid outage. As we evaluate both direct investment and third party investment opportunities, the Air Force will exhibit preference for renewable solutions where cost effective, followed by clean but not renewable solutions, and ultimately by solutions that provide mission assurance through energy assurance without a clean element.

April 12, 2016

### **The Sweet Spot**

Each of the principles above are spectrums, and the Air Force does not consider them “either-or” choices. The “sweet spot” projects will have elements of all three core principals, but not every project will demonstrate every characteristic. The Air Force will expect each project to demonstrate a clear connection to at least two principles. Projects that only achieve one principle will need strong mission justification. In short, energy projects should move toward the “sweet spot.”

### **Operational Energy**

Similar to the installation energy program, mission assurance is the basis for the Air Force’s operational energy program. Through behavioral and technological advancements, the Air Force is optimizing its capabilities in order to maximize combat readiness and reduce the mission risks posed by our fuel supply challenges. With more than 5,000 aircraft in the Air Force fleet, and a demand for over two billion gallons of jet fuel every year, improving how the aircraft and crew use their fuel can generate significant increases in capabilities. To address the risks posed by that demand, the Air Force has a goal to improve its fleet aviation energy efficiency, defined as productivity per gallon, by 10 percent by 2020. Since developing the goal in FY11, the Air Force has improved its aviation energy efficiency by almost six percent through a combination of materiel solutions and changes to policies and processes.

The Air Force is requesting \$682.6 million in operational energy related funding for FY17. Included in this is \$567.1 million to increase future warfighter capabilities, \$4.5 million to reduce the logistical risks to the mission from energy, and \$111.0 million to improve current mission effectiveness.

### ***Materiel Solutions***

The Air Force faces a challenge when implementing materiel solutions, as many of them require high upfront investments with long-term paybacks. However, those paybacks often provide significant returns in both fuel savings and reduced maintenance requirements. The Air Force is in the midst of a propulsion upgrade program for the KC-135 at a rate of 100 to 120 engines per year for the next 12 years, at a cost of approximately \$106 million per year. While this is primarily a service-life extension effort, it provides a 1.5 percent reduction in its fuel consumption rate per engine. Additionally, by improving reliability and durability, these upgrades will provide lifetime fuel and maintenance savings approaching \$3 billion.

April 12, 2016

### **Science and Technology**

Part of the Air Force's funding request for FY17 is for research, development, test and evaluation (RDT&E) opportunities with operational energy benefits. One of the main operational energy related projects is developing new adaptive engine technology, which provides revolutionary advances in turbine engine performance. By incorporating these advanced technologies, the Air Force will be demonstrating a transformational engine that can operate with the power and performance needed for a combat aircraft, while maintaining the higher fuel efficiency of large aircraft. Based on the results of Air Force lab experimentation, this engine will provide 25 percent greater fuel efficiency, 30 percent greater range, 10 percent greater thrust, and improved thermal management compared to current engines.

### **Modeling and Simulation**

While the Air Force is enhancing its fleet through current and future materiel solutions, it is also looking to improve how it manages fuel usage for future conflicts. As part of the Joint Operational Energy Modeling and Simulation (JOEMS) project, the Air Force is leading a collaborative effort to examine how technology upgrades impact operations in various scenarios through identification of fuel usage requirements and logistical fuel supply challenges. By incorporating energy considerations in wargames and other modeling and simulation efforts, the Air Force can better understand the role fuel and logistics can play in future operations. The way it manages and consumes fuel can be a catalyst towards a successful mission, and the Air Force is driving forward to ensure it maintains an energy advantage against potential adversaries.

### **Process Changes**

The Air Force is also actively fostering an energy-aware culture that empowers Airmen to take a smart approach to energy to better complete their mission. Simple changes in how a pilot flies and trains can affect aircraft fuel consumption. Through the Energy Analysis Task Force (EATF), the Air Force studied how instructor pilots and simulator instructors at Vance AFB in Oklahoma could incorporate fuel efficiency concepts into pilot training to ensure new pilots understand how to optimize fuel use. As part of a year-long trial, the EATF developed four training techniques to reduce fuel consumption in the T-1A Jayhawk, which were tested in T-1 simulators with a small group of students. The energy efficiency techniques explored for integration into the T-1 syllabus have the potential to save up to six percent in fuel requirements on navigation training sortie profiles. One of these techniques, called the Fuel

April 12, 2016

Efficient Descent, involves teaching student pilots to select the optimal point to begin their descent into an airfield. When the students select the correct point to begin their descent, they are able to reduce engine power to idle and descend using minimum fuel. So far, the new technique has proven the potential to reduce fuel usage by 35 percent during the descent phase of flight.

While this effort saves fuel today, it goes much further by instilling an energy aware culture in those new pilots, which proliferates into the Air Force's major weapons systems and will potentially provide exponential savings. This type of savings can be seen in the process changes executed at Altus AFB in Oklahoma, which instituted scheduling and airspace utilization initiatives in 2013 that are providing over \$60 million in cost savings on an annual basis.

### **Alternative Aviation Fuel**

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 resiliency. The ability to use alternative fuels in its aircraft provides the Air Force with enhanced capabilities by increasing 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 the other one is generated from bio-based materials.

### **Environmental Stewardship**

While the Air Force strives to prevent or minimize environmental degradation from our training activities and operations, we recognize that sustaining the world's most capable Air, Space, and Cyber Force inevitably results in environmental impact. As a result, we view our responsibility to protect human health and the environment as an extraordinary duty. The Air Force is subject to the same environmental statutes and regulations as any other organization in the country and recognizes both its legal and inherent environmental responsibility. The Air Force FY17 PB request assures our programs comply with applicable regulatory requirements but, more significantly, in a manner that ensures the ready installations and resilient natural infrastructure necessary to support the Air Force mission now and in the future.

#### *Environmental Program Funding Details*

Within our environmental programs, the Air Force continues to prioritize resources to ensure our defense activities fully comply with legal obligations and our natural infrastructure remains resilient

April 12, 2016

to support our mission and our communities; restore sites impacted by Air Force operations; and continuously improve. The FY17 PB seeks a total of \$842 million for environmental programs. This is \$20 million less than last year due to sustained progress in cleaning up contaminated sites and efficiencies gained through centralized program management. By centrally managing our environmental programs we can continue to fund full compliance with all applicable laws, while applying every precious dollar to our highest priorities first. Further, our environmental programs are designed to provide environmental stewardship to ensure the continued availability of the natural infrastructure; the air, land and water necessary to provide ready installations and ensure military readiness.

#### *Environmental Quality*

The Air Force's FY17 PB request seeks \$422.6 million in Environmental Quality funding for environmental compliance, environmental conservation, and pollution prevention. With this request, the Air Force ensures a resilient natural infrastructure and funds compliance with environmental laws in order to remain a good steward of the environment. We have instituted a standardized and centralized requirements development process that prioritizes our environmental quality program in a manner that minimizes risk to Airmen and surrounding communities, the mission and the natural infrastructure. This balanced approach ensures the Air Force has ready installations with the continued availability of the natural infrastructure it needs at its installations and ranges to 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 our groundwater by improving management of our underground and aboveground storage tanks; and properly disposing of wastes to avert contaminating our natural infrastructure.

Efforts in pollution prevention include recycling used oil, fluorescent lights and spent solvents, as well as sustaining our hazardous materials pharmacies to manage our hazardous materials so they don't turn into waste. We continue to make investments in minimizing waste and risk to Airmen through demonstrating and validating new technology such as the robotic laser de-painting process on aircraft.

The Air Force remains committed to a robust environmental conservation program. Prior appropriations allowed the Air Force to invest in conservation activities on our training ranges, providing

April 12, 2016

direct support to mission readiness. The conservation program in FY17 builds on past efforts to continue habitat and species management for 96 threatened and endangered species on 45 Air Force installations. This year's budget request also provides for continued cooperation and collaboration with other agencies, like the U.S. Fish and Wildlife Service, to provide effective natural resources management and safeguard military lands from wildfire hazards through coordinated planning and incident response, and the application of prescribed burn techniques. The FY17 budget will further the Air Force's implementation of tribal relations policy to ensure that the unique trust relationship the U.S. government shares with tribes continues, and to provide opportunities to communicate aspects of the Air Force's mission that may affect tribes.

As trustee for more than 9 million acres of land including forests, prairies, deserts, wetlands, and coastal habitats, the Air Force is very aware of the important role natural resources plays in maintaining our mission capability. Sustained military readiness requires continued access to this natural infrastructure for the purposes of realistic training activities. The Air Force utilizes proactive ecosystem management principles and conservation partnerships with other federal and state agencies to minimize or eliminate impacts on the training mission. We are challenged by the fact that in many instances, our installations have become the last bastion of habitat for certain species due to the increased development outside the installation boundary. The FY17 PB request includes \$53.4 million to implement the Air Force's conservation strategy, which will ensure that all aspects of natural resources management are successfully integrated into the Air Force's mission.

The Air Force remains committed to good environmental stewardship, ensuring compliance with legal requirements, mitigating mission impacts, reducing risk to our natural infrastructure, and honing our environmental management practices to ensure the sustainable management of the resources we need to fly, fight, and win now and into the future.

#### *Environmental Restoration*

The Air Force FY17 PB request seeks \$419 million in Environmental Restoration funding for cleanup of current installations and those closed during previous BRAC rounds. Our focus has been on completing investigations and getting remedial actions in place, to reduce risk to human health and the environment in a prioritized manner. Ultimately, the Air Force seeks to make real property available for mission use at our active installations, and to facilitate community property transfers and reuse at our closed installations.

April 12, 2016

The Air Force has made progress over time in managing this complex program area, with more than 13,500 restoration sites at our active and closed installations (over 8,200 active and almost 5,300 BRAC). The Air Force BRAC restoration program is on-track to achieve, at least, a "response complete status" at 90 percent of its Installation Restoration Program (IRP) sites at closed installations by the end of FY18. Our active installation restoration sites are currently projected to achieve the same 90 percent response complete level by FY20.

A new topic of focus is Emerging Contaminants (EC). ECs pose significant risk management challenges to the Air Force environmental program. Regulatory requests for environmental sampling and implementation of EC response actions are on the rise. Characterizing the extent of Air Force environmental releases of an emerging contaminant, assessing the potential risk and impact to human health and the environment, and initiating response actions and implementing appropriate mitigation measures, drive unforeseen, chemical- and site-specific environmental liabilities and program costs.

The Air Force response to releases of ECs from its facilities is a deliberate, science-based and data-driven process that is focused on protection of human health and the environment, conducted in accordance with the Defense Environmental Restoration Program, and consistent with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

The Air Force continues to work with regulators, city and state officials and other stakeholders to develop the best solution to an emerging problem. For example, for confirmed perfluorinated compounds (PFC) releases, the Air Force is determining the extent of contamination and taking steps to mitigate any validated human exposures with interim actions until cleanup standards and effective remedial technologies are available. When groundwater sampling results indicate PFC levels exceed the EPA's provisional health advisory for drinking water, the Air Force reduces PFC levels with filtration technologies or provides an alternate drinking water source. When PFCs are detectable, but below the provisional health advisory level, the Air Force may conduct well monitoring to track PFC level changes and determine if further action is needed.

While we cannot compromise on the protection of the public, our Airmen and civilian workforce and their families, neither can we endlessly absorb the operational and financial risks of attempting to work with a myriad of unregulated contaminants without some level of certainty that the cost of controlling exposure will have a commensurate public health and operational benefit.

April 12, 2016

## **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 FY17 PB request increases funding in MILCON to support COCOM and new weapon system requirements, reduces Restoration and Modernization (R&M) and continues to address the current mission backlog of deferred infrastructure recapitalization from the FY13 PB strategic pause. Sequestration 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. Privatized 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.