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Statement of
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(Energy, Installations and Environment)

Before the House Committee on Armed Services
Subcommittee on Readiness
Fiscal Year 2019 Department of Defense Budget Request for
Energy, Installations and Environment

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Introduction

Chairman Wilson, Ranking Member Bordallo, and distinguished members of the Subcommittee: Thank you for the opportunity to present the President's Fiscal Year (FY) 2019 budget request for the Department of Defense programs supporting energy, installations, and the environment. This is my first time appearing before you and I look forward to working with the committee to support the priorities of the Department and the quality of life for our military members and family members who are called to sacrifice so much for public service.

First, thank you for your continued support for our mission. We are grateful to Congress and the American people for the recently-enacted Bipartisan Budget Act of 2018, which lifts the caps so our military can be resourced at a funding level that begins to reverse the effects of sequestration. The Administration sent Congress a proposed Fiscal Year (FY) 2019 budget request of \$716 billion for national security, \$686 billion of which is for the Department of Defense. We have a responsibility now to honor the trust of the American people by spending each defense dollar wisely to address our most urgent priorities to build a more lethal, resilient, and rapidly innovating Joint Force.

In order to so, we need a timely appropriation in Fiscal Year 2019 to be fully effective. While the process of Continuing Resolutions instead of spending bills provides Congress with additional negotiating time, the price is paid in stress on the Department through a shortened period to execute contracts for combat capabilities and readiness requirements. Budgetary disruption and instability negatively impact the Department's ability to work efficiently and modernize rapidly.

Earlier this year, the President released a National Security Strategy which guided the development of a National Defense Strategy to clearly articulate the threats and challenges our Nation faces around the world. The objectives of the Department are *"to be prepared to defend the homeland, remain the preeminent military power in the world, ensure the balances of power remain in our favor, and advance an international order that is most conducive to our security and prosperity."* Our FY 2019 budget priorities enable the Department to establish a foundation for rebuilding the U.S. military into a more capable, lethal, and ready Joint Force. Each military service has a distinctive readiness recovery plan and the increases are targeted to advance these plans to improve readiness and increase lethality.

The National Defense Strategy acknowledges that great-power competition has reemerged as the central challenge to U.S. security and prosperity, demanding prioritization and hard strategic choices. *"The future Joint Force will have a modern, flexible, and tailored nuclear deterrent; decisive, globally-capable conventional forces; and competency in irregular warfare. The future force will be lethal and resilient in contested environments, disruptive to adversaries, and competent across the conflict spectrum."*

The strategy confronts the stark reality that the homeland is no longer a sanctuary. America is a target, whether from terrorists seeking to attack our citizens; malicious cyber activity against personal, commercial, or government infrastructure; or political and information subversion. New threats to commercial and military uses of space are emerging, while increasing digital

connectivity of all aspects of life, business, government, and military creates significant vulnerabilities. During conflict, attacks against our critical defense, government, and economic infrastructure must be anticipated and deterred.

The strategy stresses forward force maneuver, resilient posture, and agile logistics. Investments over the next few years will prioritize ground, air, sea, and space forces that can deploy, survive, operate, maneuver, and regenerate in all domains while under attack. Our investments must facilitate the transition from large, centralized, unhardened infrastructure to smaller, dispersed, resilient, adaptive basing that includes active and passive defenses.

Finally, the strategy requires each of us in the Department to drive budget discipline and affordability. Better management begins with effective financial stewardship. As noted in the National Defense Strategy, *“The Department will continue its plan to achieve full auditability of all its operations, improving its financial processes, systems, and tools to understand, manage, and improve cost. We will continue to leverage the scale of our operations to drive greater efficiency in procurement of materiel and services while pursuing opportunities to consolidate and streamline contracts in areas such as logistics, information technology, and support services. We will also continue efforts to reduce management overhead and the size of headquarters staff. We will reduce or eliminate duplicative organizations and systems for managing human resources, finance, health services, travel, and supplies. The Department will also work to reduce excess property and infrastructure, providing Congress with options for a Base Realignment and Closure.”*

Each mission within our energy, installations, and environmental portfolio is directly engaged in the successful execution of this strategy. The DOD representatives before you today provide warfighter capabilities through over 585,000 facilities on more than 500 bases, posts, camps, stations, yards, and centers around the world, with a replacement cost exceeding \$1 trillion, not including the cost of the 27 million acres of land that our installations occupy. We execute the construction of facilities to provide our Combatant Commanders in partnership with our Allies with basing adaptability and deployment flexibility.

Our warfighters need reliable energy to carry out their missions, whether they are out in the field or on base. We spend over \$12 billion annually on fuel and energy, not including investments to enhance the energy security of our critical facilities and assets in the Department. We are also working with other agencies in the Administration to support the President’s goal to accelerate development of all energy sources in ways that are compatible with the preservation of military capabilities.

Our warfighters need access to unencumbered land, water, and airspace to hone their readiness and lethality without compromising health and safety—we invest heavily in programs and achievements to secure access to ranges that support mission-essential activities. We are also heavily engaged with other Federal agencies to provide our warfighters with larger, and more realistic ranges with less maneuver restrictions to better simulate battlefields and threats around the world.

The continued support of Congress, and in particular, this subcommittee, allow us to use the resources provided to enhance the agility, resilience, readiness, and lethality of our forces around the world.

With a clear understanding of the Secretary's intent, we have set forth the following objectives to guide our efforts to carry out the strategy and to confront our challenges posed by years of underfunded facility and infrastructure accounts.

1. We are using every program and funding source available to us to eliminate waste in DOD installations and infrastructure and maintain what we need;
2. We continue to advocate for adequate funding for installation and infrastructure accounts to meet mission requirements and to address risks to safety and readiness;
3. We are working with other Federal agencies, States, and communities to protect installations and ranges from incompatible development and to enhance the combat credibility of our Nation's test and training ranges;
4. We are implementing programs to ensure combat capability, missions, and resiliency by enhancing the energy security of our forces and assets;
5. We are exploring new opportunities for third party partnerships and engaging with industry to determine best practices and innovative solutions for our current challenges;
6. We are working with the military engineering and contracting community to develop smarter contracts, and manage contracts smartly;
7. We continue to provide for the safety and welfare of our people and resources through unparalleled environmental stewardship and occupational safety programs;
8. And last, but definitely not least, we are enhancing our collaboration with the hundreds of dedicated defense communities around the Nation supporting our bases and providing for the quality of life for our troops and their families.

We have a number of high priority issues to review today, including the ongoing improvement and recapitalization of DOD facilities, access to training lands, protecting the health of our force, and ensuring energy resiliency for both our expeditionary forces and installations.

Fiscal Year 2019 Budget Request – Military Construction and Family Housing

The President's FY 2019 budget requests \$10.5 billion for the Military Construction (MILCON) and Family Housing Appropriation – an increase of approximately \$700 million from the FY 2018 base budget request, inclusive of FY 2018 budget amendments to support the Missile Defense Agency and hurricane recovery requests. This increase supports the Secretary of Defense's guidance. In addition to construction required to bed down new or changing missions,

this funding will also be used to restore and modernize enduring facilities, acquire new facilities where needed, and eliminate those that are excess or obsolete.

While the FY 2019 request makes significant progress in recapitalizing facilities in poor and failing condition, the funding will not in one fiscal year fully reverse the impacts of six years of sequestration. Many of our facilities have degraded significantly from reduced investments in Military Construction, Facilities Sustainment and Restoration and Modernization. The Department currently has an unfunded backlog of deferred maintenance and repair (M&R) work exceeding \$116 billion, and many of our facilities will require significant investment in the future. The stark reality is that it may be too costly to buy ourselves out of this backlog. The Department must ensure that its infrastructure is ideally sized to increase the lethality of U.S. forces while minimizing the cost of maintaining unneeded capacity, which otherwise diverts resources from critical readiness and modernization requirements.

We are requesting \$8.9 billion for military construction (excluding Overseas Contingency Operations funding) across the Services and defense agencies, which is the substantially higher than our previous budget submission. This represents a five percent increase from our FY 2018 request, inclusive of budget amendment requests for a Missile Defense missile field expansion at Fort Greely, AK, and repairs related to the 2017 hurricane season. This request addresses requirements for construction at enduring installations stateside and overseas, and for specific programs such as the NATO Security Investment Program and the Energy Resilience and Conservation Investment Program. In addition, we are targeting MILCON funds in key areas to support the national defense strategy.

1. *Delivery of power projection platforms:* In support of the Secretary of Defense's guidance that increased DOD funding will improve readiness and increase warfighter lethality, the DOD Components applied more than 66 percent of the MILCON budget request to construct operational/training facilities (\$3.5 billion) and maintenance/production facilities (\$1.4 billion).
2. *Combatant Command Priorities:* In support of the Secretary's priority to enhance our relationship with our Allies while providing adaptive basing opportunities for our warfighters, more than \$1.1 billion is included in the President's Budget request (\$291.1 million in the base and \$828.4 million in the Overseas Contingency Operations (OCO) request) to support Combatant Command priorities. Within the OCO request, \$700 million is for MILCON projects supporting the European Deterrence Initiative to improve infrastructure and facilities throughout the European theater to provide our allies, partners, and potential adversaries a clear indication of the United States' long-term commitment to Europe. The improvements support military readiness in the region and improve theater Joint Reception, Staging, Onward Movement, and Integration capabilities.
3. *Homeland Defense:* The FY 2019 budget request includes \$182 million to support missile defense of the homeland, including \$174 million for the second phase of the Long Range Discriminating Radar System Complex at Clear AFS, Alaska, and \$8 million for the expansion of Missile Field #1 to support two additional ground based interceptors at Fort

Greely, Alaska. We also have dedicated the bulk of our \$150 million Energy Resiliency and Conservation Improvement program (ERCIP) for FY 2019 to projects that will enhance the reliable delivery of power to mission facilities. We believe this program is a critical tool to quickly respond to emerging energy security requirements and request the continued support by the committees for full funding of this account.

The Department is committed to protecting the quality of life for military personnel and their families by ensuring access to suitable, affordable Family and Unaccompanied Housing. The environment in which our forces and their families live has an impact on their ability to do their job, and on the Department's ability to recruit and retain. Quality of life – to include the physical condition of the facilities in which our service members and their families live and work and a safe, healthy environment around and within those facilities – is also critical to support personnel readiness for new and current missions and strategic initiatives worldwide.

While the Department has privatized 99 percent (more than 200,000 units) of our family housing in the United States, our FY 2019 Family Housing budget request includes \$514 million to fund family housing construction at locations where privatization is not feasible or not authorized overseas. In addition, our FY 2019 budget request includes \$1.1 billion for operation and maintenance of government-owned and leased family housing worldwide, to include providing housing referral services to assist military members with their housing needs. This O&M budget request supports more than 34,000 government-owned family housing units, most of which are on enduring bases in overseas locations, as well as more than 7,500 government-leased family housing units where government-owned or privatized housing is unavailable. The requested funding will ensure that U.S. military personnel and their families continue to have suitable housing choices.

The Department also continues to modernize Unaccompanied Personnel Housing to improve privacy and provide greater amenities. The FY 2019 President's Budget request includes \$245.8 million for 8 construction and renovation projects, providing more than 1,690 new or replacement bed spaces that will improve living conditions for trainees and unaccompanied personnel.

Our request also includes \$1.7 million to support administration of the Military Housing Privatization Initiative (MHPI) program as prescribed by the Federal Credit Reform Act of 1990. This includes monitoring MHPI programmatic goals and performance, and risk associated with Federal credit assistance provided for MHPI projects (e.g., government direct loans and limited loan guarantees). The Department continues to work with our MHPI project owners to help ensure the long-term viability of individual projects and the program as a whole. We are continually assessing the impact that changes to the Basic Allowance for Housing may have on project revenue, which covers project operating and maintenance expenses, funds debt payments, and finances the future housing revitalization and recapitalization necessary to provide continued high quality housing for military families and to ensure these projects remain viable throughout their 40-50 year lifespans.

Special Considerations

Cost of labor in a post-storm bid climate and impact on 2018 and 2019 execution

The 2017 Atlantic hurricane season was one of the most destructive hurricane seasons on record, with over \$1 billion in damage in to DOD facilities. The private sector rebuilding will take years and many billions of dollars while consuming a large portion of the U.S. construction market. As such, the Department's FY 2019 MILCON budget request takes into account the impact on construction costs of a high demand for specialty craftsmen and material prices over the near-term. While the ongoing recovery from last summer's hurricane damage has tightened construction markets and driven up construction prices in the most impacted areas, the Department judges the impacts will last through October 2018, barring a repeat of last summer. As such, we plan on using prior-year bid savings from other MILCON projects to absorb potential bid spikes in FY 2018 in order to avoid delays in the award of critical warfighting requirements. We would appreciate a discussion with the committees prior to a decision to rescind funds from prior-year MILCON accounts which could threaten our ability to award FY2018 priority projects. We do not anticipate needing to adjust FY 2019 MILCON project cost estimates in the affected areas to reflect spikes in construction prices.

Actions planned to mitigate contract cost increases and time delays

We have undertaken a proactive assessment of recent challenges in MILCON project delivery and program management to improve our performance delivering MILCON projects on schedule and within budget. The Department is implementing reforms in a number of key areas, to include: improving identification of project requirements; enhancing collaboration between resource sponsors, end users, and construction agents to ensure projects meet mission requirements within budget constraints; selecting the best engineering and acquisition strategy to cost-effectively meet mission requirements; identifying risk mitigation measures before cost or schedule changes adversely impact the mission; and increasing awareness and accountability at all levels of management and performance as problems arise. The Department is also consulting with our industry partners to identify commercial best practices to lower costs, save time, measure performance differently, and improve project quality in support of the warfighter.

Further challenges to incremental funding of military construction projects

The Administration and Congress have competing interests on an incremental funding policy for large MILCON projects. Congressional decisions to reallocate incremental appropriations for a MILCON project results in the need for DOD to defer priorities late in the budgeting cycle in subsequent years in order to include remaining increments in the budget request. Further Congressional incrementation may result in delays to project delivery of critical warfighter requirements.

Facilities Sustainment and Recapitalization

In addition to MILCON, the Department invests significant funds to maintain and repair our existing facilities. Sustainment funding represents the Department's single most important investment in preserving 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, save

resources over the long term, maintain safety, optimize facility performance across its lifecycle, and help improve the productivity and quality of life of our personnel.

These activities have endured funding constraints under the Budget Control Act, forcing Defense Components to accept significant risk in facilities sustainment and recapitalization. Recognizing this, the Military Departments increased Facility Sustainment commitments in the FY 2019 budget request of \$9.1 billion, a 6.3 percent funding increase compared to the Department's FY 2018 budget request.

In addition, Restoration and Modernization funding is used to perform total facility renovations and critical repairs to ensure the facility can support assigned missions. Our FY 2019 budget request includes \$2.8 billion of O&M funding for recapitalization. The combined facility sustainment and recapitalization funding of \$11.9 billion, a slight decrease the FY 2018 request, still reflects an acceptance of significant risk in DOD facilities.

As a result of limited investments in previous budgets for facilities sustainment and recapitalization, 23 percent of the Department's facility inventory is in "poor" condition [Facility Condition Index (FCI) between 60 and 79 percent] and another 9 percent is in "failing" condition (FCI below 60 percent) based on recent facility condition assessment data. This will ultimately result in DOD facing larger bills in the out-years to restore or replace facilities that deteriorate prematurely.

Previous budgets also have limited investment for targeted demolition to eliminate obsolete, inefficient, and underutilized support infrastructure. Without a new Base Realignment and Closure round, DOD has largely been forced to rely on routine demolition or renovation of buildings as part of MILCON projects in order to right size its facility inventory. The Department dedicated some of its additional FY 2019 resources to demolish more unneeded facilities. The FY 2019 budget request includes \$442 million of O&M funding specifically for demolition or conversion of existing facilities and \$65.4 million for MILCON funding to support demolition of assets in conjunction with new construction. In total, almost 30 million square feet of building space will be removed or replaced.

Environmental and Safety Programs

Restoring military readiness requires that we maintain access to training lands and protect the health of our force. The Department's environmental budget accomplishes these objectives through activities ranging from managing critical habitat and avoiding training restrictions to addressing drinking water health advisories and making the best use of limited cleanup dollars. At the same time, we manage a \$27 billion (and growing) environmental liability, the second largest DOD liability, while sustaining our reputation as the Nation's premier steward of natural resources and cultural assets. The President's FY 2019 Budget requests \$3.4 billion for environmental programs, which is comparable to the FY 2018 request, to continue our efforts in these areas.

We are requesting \$1.3 billion to continue cleanup efforts at the 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 \$1.1 billion for “Environmental Restoration,” which encompasses active installations and Formerly Used Defense Sites (FUDS – sites that DoD transferred to other Federal agencies, States, local governments, or private landowners before October 17, 1986). The remaining \$245 million is for “BRAC Environmental.”

Our focus remains on continuous improvement in the restoration program: minimizing overhead, adopting new technologies to reduce cost and accelerate cleanup, and refining and standardizing our cost estimating. We have improved our relationships with State regulators through increased dialogue, which reduces the number of formal disputes over cleanup levels and allows us to implement cleanup activities in a timelier manner. All of these initiatives help ensure that we make the best use of our available resources to complete cleanup.

Table 5: Progress Towards Cleanup Goals

Goal: Achieve Response Complete at 90% and 95% of Active and BRAC IRP and MMRP sites, and FUDS IRP sites, by FY 2018 and FY 2021, respectively			
	Status as of the end of FY 2016	Projected status at the end of FY 2018	Projected status at the end of FY 2021
Army	91%	92%	96%
Navy	82%	83%	89%
Air Force	83%	85%	91%
DLA	86%	88%	96%
FUDS	84%	86%	93%
Total	86%	88%	93%

By the end of 2017, the Department, in cooperation with State agencies and the Environmental Protection Agency, completed cleanup activities at 86 percent of Active and BRAC IRP and MMRP sites, and FUDS IRP sites, and is now monitoring the results. During FY 2017 alone, the Department completed cleanup at over 500 sites. Of the roughly 39,800 restoration sites, almost 33,200 are now in monitoring status or have completed cleanup.

In addition, DOD has made significant progress in the cleanup of our FUDS sites, completing 84 percent of the IRP sites. Despite this progress, 1,700 of the over 5,100 FUDS sites still need to be addressed, many of which are MMRP sites. The Department is evaluating opportunities, such as partnering with landowners at our FUDS sites, to expedite cleanup and make these lands available for development sooner.

While DOD is committed to cleaning up all the remaining sites in a timely manner, many of these sites present complex challenges. New and changing standards require DOD to reprioritize or reopen previous remediation decisions which delays progress. Additionally, some sites have no feasible solution to clean up the contamination, and as a result, the Department is making significant investments in environmental technology to identify new potential remediation methods.

Environmental Technology

A key part of DOD's approach to meeting its environmental obligations and improving its performance is the pursuit of advances in science and technology. The Department has a long record of success developing innovative environmental technologies and quickly transferring them from the laboratory to actual use on 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 2019 budget request for Environmental Technology overall is \$172 million, our core efforts are conducted and coordinated through two key programs – the Strategic Environmental Research and Development Program (SERDP – focused on basic and applied research) and the Environmental Security Technology Certification Program (ESTCP – focused on validating more mature technologies to transition them to widespread use). The FY 2019 budget request includes \$77 million for SERDP and \$24 million for ESTCP for environmental technology demonstrations, with an additional \$16 million requested specifically for energy technology demonstrations.

These programs have already achieved demonstrable results and have the potential to increase training land availability by developing more effective management strategies for installation managers, to reduce costs by developing new ways of treating groundwater contamination, and to reduce the life-cycle costs of multiple weapons systems. In the area of Environmental Restoration, we are launching an aggressive initiative to develop more cost-effective treatment options for other newly-identified contaminants in addition to addressing Perfluorooctane Sulfonate (PFOS) and Perfluorooctanoic Acid (PFOA). In the critical area of installation energy, we are focused on proving technology and solutions that cost-effectively improve the energy security of our installations and that protect our energy assets and facilities from cyber attacks.

Environmental Conservation and Compatible Development

The Department continues to preserve access to the land, water, and airspace needed to support our mission. As training, testing, and operational activities expand and new weapons systems are introduced, access and use of ranges becomes even more important. The FY 2018 budget request for Conservation is \$419 million. The Department will invest these funds to maximize our flexibility to use lands for military purposes, as well as addressing incompatible land uses beyond our fence lines.

The Department's lands and waters are vital to readiness, but also support a diverse array of fish and wildlife species, including over 400 that are federally protected under the Endangered Species Act (ESA). Managing for healthy and resilient natural landscapes provides the conditions necessary for mission-essential activities, such as reducing fire risks, avoiding wildlife conflicts, and improving range and training area conditions.

Species endangerment and habitat degradation can and does have negative impacts on the mission through regulatory protections. In recent years, there has also been a marked increase in the number species being petitioned and evaluated for listing under the ESA. We have initiated a TIGER TEAM with the Department of the Interior to develop proactive, collaborative conservation initiatives to help prevent additional species of concern to the Department from

being listed under the ESA, and implementing conservation actions to facilitate species recovery and de-listing. As a result of our management, research, and coordination efforts, the Department has regained access to important training lands. For example, our continued cooperation with the U.S. Fish and Wildlife Service (USFWS) and other partners for the conservation of the black-capped vireo at Fort Hood has significantly reduced training restrictions on 73,000 acres, and the species is currently being evaluated for de-listing. Similarly, working with partners in the USFWS and Bureau of Land Management (BLM) in California, the US Marine Corps translocated over 1,000 endangered desert tortoises from newly withdrawn lands at Marine Corps Air Ground Combat Center (MCAGCC), Twentynine Palms. This translocation opened over 160,000 acres for training, filling a critical need to support large-scale Marine Expeditionary Battalion (MEB) exercises. Ongoing management and monitoring efforts will help sustain military readiness.

We have also realized great success and mission benefits from the unique regulatory provisions within the ESA that exclude military lands from critical habitat designations. Building on this success, we will continue to work with our partners at the USFWS and National Marine Fisheries Service, as well as other Federal, State, and non-governmental partners, to develop new and innovative regulatory approaches that streamline processes and provide greater mission flexibility. We will also be working to develop more landscape-scale initiatives to better capitalize on both our on-installation conservation programs and our off-installation conservation partnerships through the Readiness and Environmental Protection Integration (REPI) Program.

Readiness and Environmental Protection Integration Program

REPI investments protect training, testing, and operational assets of the Department. As training, testing, and operational activities increase and new weapons systems are introduced, the ability to work with Federal, State, local and private partners to promote compatible development, relieve regulatory restrictions, and leverage resources that sustain critical military capabilities, becomes even more important. Investing in and taking advantage of current opportunities for innovative collaboration is paramount to securing the operational viability of local installations and ranges. REPI is able to directly leverage the Department's investments at approximately one-to-one with those of our partners, effectively ensuring compatible land uses around our installations for half the price. Through REPI's partnering efforts, we can continue to support the warfighter, provide value to the taxpayer, and enhance military readiness and capabilities.

To enable DOD to sustain its national defense mission and to ensure military installations do not become refuges of last resort for threatened, endangered, or at-risk species, the Department has developed an approach that supports land protection beyond installation boundaries. Under this approach, DOD engages with other governmental and non-governmental partners who work with private landowners, to develop initiatives and agreements for protecting properties for the purposes of avoiding or mitigating regulatory restrictions on training, testing, and operations on DOD lands. 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.

A recent, innovative example of this approach is the Department's Gopher Tortoise Conservation Crediting Strategy, which the Department, the United States Fish and Wildlife Service, and three State agencies finalized in March of 2017. This Strategy seeks to address the conservation of the gopher tortoise, a candidate species for protection under the Endangered Species Act (ESA), thereby providing the regulatory predictability that commanders require to effectively operate at installations and ranges throughout the southeast. Through the 2018 REPI Challenge, a competitive funding process that seeks to cultivate innovative approaches to sustaining military capabilities, the Department seeks to fund similar species crediting strategies that will help reduce existing or future regulatory restrictions to testing, training, and operational activities.

Within the \$424 million for Conservation, \$75 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 15 years, REPI partnerships have protected more than 510,000 acres of land around 93 installations in 31 States. In addition to the tangible benefits of preserving DOD's existing training, testing, and operational assets, these efforts have resulted in significant contributions to the economic health and recreational opportunities for local communities.

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.

Since the initiation of the Partnership, agencies from the three Departments have designated seven locations as Sentinel Landscapes. Some of the military's most important installations anchor these Landscapes: Joint Base Lewis-McChord in Washington; Fort Huachuca in Arizona; Naval Air Station (NAS) Patuxent River and the Atlantic Test Ranges in Maryland (Middle Chesapeake Sentinel Landscape); Avon Park Air Force Range in Florida; Camp Ripley in Minnesota; and two consortia of installations in Eastern North Carolina and Georgia. Partnerships at each of these locations are collaborating to preserve, enhance, and protect habitat and vital working lands near military installations in order to reduce, prevent, or eliminate military test, training, and operational restrictions due to incompatible development. At Joint Base Lewis-McChord, Fort Huachuca, and Middle Chesapeake Sentinel Landscapes combined, partners have invested more than \$86 million between Fiscal Years 2013 and 2016 to advance each location's specific military mission and resource conservation goals. Over \$17 million of the total investment during this period has come from State and local governments, whose support for the mission of the Partnership has helped to ensure its success.

In addition to investments made in these areas, partners at each of the Sentinel Landscapes are working collaboratively on innovative approaches to better leverage existing efforts to preserve working lands and promote compatible development. In the Middle Chesapeake and Avon Park Air Force Range Sentinel Landscapes, partners are working to improve efforts to match REPI funds with funding from the other Departments by aligning or merging agency requirements for the acquisition and monitoring of easements and land interests. This unprecedented level of

interagency cooperation will enable the most efficient use of taxpayer funding to protect military capabilities and sustain readiness.

Department of Defense Energy Programs

Unlike the Department's MILCON and Environmental Remediation programs, where the budget request includes specific line items, our energy programs are subsumed across other accounts, yet are critical to our support for military readiness, resiliency, and agility.

Operational Energy - *"Unleash us from the tether of fuel"*

Operational energy is the energy required for training, moving, and sustaining military forces and weapons platforms for military operations. While energy is an essential component of our warfighting capability, longer operating distances, remote and austere geography, and anti-access/area denial threats are challenging the Department's ability to assure the delivery of fuel. As the ability to deliver energy is placed at risk, so too is the Department's ability to deploy and sustain forces around the globe.

Based on his experience in Iraq, then Lt Gen James Mattis, Director of Marine Corps Combat Development Command, directed researchers in 2005 to identify technological and operational improvements that would "unleash us from the tether of fuel." The operational energy investments in the FY 2019 budget request are focused on reducing that "tether" and increasing the capability of our forces on land, air, and sea.

The FY 2019 President's Budget supports a broad set of investments to ensure lethality in contested environments through resilient and agile logistics. The Department is investing over \$2.8 billion to upgrade and procure new equipment, improve propulsion, adapt plans, concepts, and wargames to account for increasing risks to logistics and sustainment, and enhance how the Department considers energy in developing new capabilities. As the Department responds to changing threats in Europe, the Indo-Pacific, and the Middle East, these initiatives are increasing capability and decreasing risks for warfighters deployed around the globe.

Significant initiatives include:

- **Operational Energy Capability Improvement Fund (OECIF)**: The Department is requesting \$40.6 million in RDT&E funding to support operational energy research programs that improve military effectiveness. Ongoing initiatives include efforts to improve the fuel economy of our tactical vehicle fleets, increase the energy performance of unmanned systems, enhance power and thermal management for high pulse power weapons, and wirelessly transmitting energy in the far field. Our new starts this year include assessments of operational energy science and technology gaps in meeting warfighter requirements over the near-, mid-, and far-term.
- **Operational Risk in Wargames**: To better plan for the impact of operational energy in contingencies, we are actively engaged in supporting war gaming and exercises conducted by the Department. Recently, my office participated the Air Force's Global Engagement wargame, the Army's Deep Futures 17 wargame, as well as the U.S. Pacific Command

Logistics Wargame. Operational Energy staff continuously participate in the planning and execution of the games, as well as the assessment of game results. With the integration of realistic constraints to logistics capacity and threats to our fuel storage and distribution, our efforts will improve Department decision-making in operation plans, concept and capability development, and program investments.

- Direct Support to the Warfighter: In coordination with the Combatant Commands and the Military Services, my office works closely with the warfighter to enhance lethality and readiness. We invested \$4 million in 2017 to adapt Service training and education programs in each of the Services to increase operational reach and readiness. We have developed a repository to capture operational energy lessons learned and are using the information we have gleaned to influence warfighters on the effects of their energy decisions on risk, reach, and the readiness of the force. Finally, my team works with AFRICOM, EUCOM, and CENTCOM to decrease risk to operations by leading power assessments resulting in improved power reliability and reduced fuel consumption, which has direct effects on the reduction of vulnerable logistics convoys while providing more operational capability to commanders on the ground.

Installation Energy

Installation energy is the energy used to power our 500 plus permanent installations here in the U.S and overseas, including the fuel used in our 160,000 non-tactical fleet vehicles. Our installation energy bill remains our single largest base operating cost. In FY 2017, we spent \$3.5 billion to heat, cool, and provide electricity to our facilities. To reduce this cost, the Department is pursuing energy efficiencies through building improvements, new construction, and third party financed investments.

The Department of Defense has identified a top priority to ensure that our military capabilities and our ability to protect our Nation's interests are assured through the delivery of reliable and resilient power. Given recent federal reports on the vulnerability of our national commercial electrical grid to emerging threats, we have reviewed the scope of our efforts to concentrate resources on projects which will enhance the resilience of our defense critical and task critical assets. These efforts will include the continued development of distributed energy sources which can be used to power critical missions regardless of the condition of the commercial grid.

The Department's FY 2019 budget request includes approximately \$726 million for investments in energy resilience and energy conservation, most of which are directed to existing buildings. This includes \$576 million in the Military Components' Operations and Maintenance accounts for sustainment and recapitalization projects, which generally involve retrofits to install improved lighting, high-efficiency HVAC systems, double-pane windows, energy management control systems, and new roofs. The remainder (\$150 million) is for the Energy Resilience and Conservation Investment Program (ERCIP), a MILCON account which funds projects that improve energy resilience and security, save energy and water, reduce DOD's energy costs, and most importantly, contribute to mission assurance.

Energy Resilience and Conservation Investment Program

Secure access to energy resources on our installations is critical to the execution of the DOD mission. The interdependent and vulnerable nature of existing electric power grids supporting our installations places risk on our mission capabilities and installation security as well as our power projection ability and support to global operations.

ERCIP is one of the Department's key tools to enable more robust energy security. DOD is requesting \$150 million for this program for FY 2019, including \$113 million for energy resilience projects and \$37 million for energy conservation projects. These projects include two microgrid projects, one at Schriever AFB, CO and one at Camp Williams, UT. In addition, the portfolio includes a project at Fort Sill, OK, to construct a new underground electric service connection between an existing substation and a newly constructed substation. This project will support critical missions of our Field and Air Defense Artillery Brigades by eliminating the single point of failure at Fort Sill and providing complete redundancy to critical missions in the event of a power disruption caused by a natural disaster, physical attack, or other event.

These resilience projects have a combined Savings to Investment Ratio (SIR) of 2.26. In other words, every dollar we invest in ERCIP, generates more than two dollars in savings, demonstrating that, in most cases, energy resilience does not have to come at a premium price.

Energy Resilience Planning and Facilities Energy Management

In addition to investing in energy resilience projects, the Department is committed to real-world scenario-based planning, including using the results of the North American Reliability Corporation (NERC)-sponsored GridEx and our installation reliability exercises to drive more sophisticated internal testing and investment for resilient infrastructure. This improves our installations' security posture, increases our planning effectiveness, and ensures our ability to continue critical missions in the face of grid power disruptions that could occur due to weather events and/or direct physical or cyber attack. We are also working with the Departments of Energy and Homeland Security to pinpoint the energy needs of critical defense assets and national infrastructure in order to maximize the use of reliable electricity delivered through our national power administrations.

Leveraging strong energy sector relationships of the Critical Infrastructure Partnership Advisory Council, DOD is engaging with industry and Federal interagency stakeholders to identify opportunities to enhance the Department's mission assurance through outside-the-fence solutions. Inside the installation fence, DOD is actively improving data sharing between mission operators and installation owners to use all available technologies that produce energy resilience solutions prioritized by mission, informed by metrics, and validated by results. Furthermore, the Department is working with the Department of Energy to support the early-stage research and development of advanced reactor technologies, including small modular reactors and very small modular reactors. DOD envisions potential future use for very small reactors at remote operating bases and independent strategic sites where an assured source of power aside from the commercial power grid is critical for the delivery of national security missions and capabilities.

Energy resilience includes cybersecurity of Facility-Related Control Systems (FRCS). FRCS supporting Defense Critical Infrastructure (DCI) are essential to perform warfighting

capabilities, execute critical missions, and project power; therefore they are actively threatened by adversaries and are highly vulnerable to cyber security attacks and failures. Malware such as Stuxnet, BlackEnergy, and Crashoverride specifically targeted FRCS and the Ukraine electric grid attack demonstrated the capability to cut power to mission-critical facilities. Risk to missions increase as more devices are connected to networks without appropriate security protections, and poor cyber hygiene persists by system operators without cybersecurity skills. To build a FRCS defense posture, the Department recently began developing FRCS cybersecurity plans to account for the capabilities and resources required to implement cyber security controls on its highest prioritized assets and systems. We will continue to work with the Department's Chief Information Officer and Principal Cyber Advisor toward solutions and resources ensuring FRCS are defensible, survivable, and resilient to operate and sustain critical functions in a cyber-contested environment.

The Military Departments are continuing to implement updated energy resilience policies, which requires plans for energy disruptions and the capability to ensure available, reliable, high-quality, and cyber secure power to continuously accomplish our missions from our installations and facilities. This includes prioritizing installation missions, conducting assessments, and planning and programming energy projects that reduce mission risk by improving energy resilience and security. My office also issued an Energy Resilience: Operations, Maintenance and Testing Strategy and Implementation Guide last year to provide installation commanders, mission operators, and energy managers procedures to ensure that energy generation systems, infrastructure, equipment, and fuel are available and reliable to support critical mission operations on military installations. We will be releasing further guidance this year that enables the Department to identify and align critical mission operations with critical energy requirements and effectively plan outage scenarios, which directly translates energy resilience metrics into tangible improvements in power and fuel resiliency for mission assurance.

The Department's energy efficiency efforts not only contribute to energy resilience by reducing critical loads, but also by lowering our base operating costs, which frees up funds for the warfighter. Since FY 2005, the Department has continued to reduce facility energy usage, freeing up approximately \$5.4 billion for higher priorities. To further improve facilities energy management, my office issued a policy to require the Military Departments to develop Installation Energy Plans (IEP) by the end of FY 2019. These plans directly enable installations to plan and carry out investments to enhance mission assurance for critical facilities.

Smart Financing to Promote Energy Resilience

The Department has broad alternative financing authorities that can be leveraged to implement installation energy initiatives that assist in improving energy resilience and mission assurance at our installations at lower cost to the taxpayer. These authorities allow us to use performance-based contracts, power purchase agreements, enhanced use leases, and utilities privatization, among others. Using Energy Savings Performance Contracts (ESPCs) and Utility Energy Service Contracts (UESCs), private energy firms or utility companies make energy upgrades at our installations and are paid back over time using utility bill savings. Since December 2011, the Department has awarded \$2.6 billion in performance-based contracts, which are expected to save DOD over \$4 billion across the contract terms, which are then used to pay for energy improvement.

Another way the Department leverages its financing authorities is non-Federal financing for large-scale distributed energy projects. This minimizes DOD's capital investment by leveraging smarter contracts that incentivize industry to fund resilient infrastructure improvements. When the business case supports it, the Department is pursuing distributed energy projects with micro-grid-ready applications that enable the provision of continuous power in the event of a disruption. For example, the Army leased land to Hawaiian Electric Company to construct, own and operate an on-site 50 megawatt (MW) multi-fuel/biofuel generation plant at Schofield Barracks, Hawaii. The on-site generation system will enhance the resilience of the Oahu electrical grid and can provide Schofield Barracks, Field Station Kunia, and Wheeler Army Air Field with one hundred percent of their electrical power needs in the event of a power grid disruption. Additionally, at the Pacific Missile Range Facility in Kauai, the Navy signed an enhanced-use lease with a developer to construct an on-site solar plus battery energy storage system that includes infrastructure and contractual rights that allow the Navy to greatly improve power quality and reduce costs during normal operations. During a power disruption, this project will operate as a micro-grid to provide a reliable and continuous source of backup power, directly reducing risk to our mission.

To maximize opportunities for these types of smart contracts, the Department is standardizing project information and streamlining processes to spur investment by the financial services industry. DOD is initiating a study to accelerate adoption of energy resilience projects through a shared risk rating, which incentivizes third parties to seek opportunities that support DOD mission, retains the Department's control over its assets and operations, and improves facility contract execution. This will enable low-cost, high-value contracts that make prudent use of resources and ensure our military's capability, lethality, and readiness.

High Interest Programs Supporting the National Defense Strategy

Base Realignment and Closure (BRAC)

As stated in the National Defense Strategy, the Department is working to reduce excess property and infrastructure. To achieve greater performance and affordability, we must ensure that our basing infrastructure is ideally sized to increase the lethality of our forces while minimizing the cost of maintaining unneeded capacity, which diverts resources from critical readiness and modernization requirements. These efforts will be enhanced by a comprehensive enterprise review of how and where we base new forces and capabilities in support of the National Defense Strategy. Emerging technologies such as hypersonic systems, autonomous vehicles, and cyber forces may require new basing concepts. Bases may also need to be assessed in order to optimize the training and deployment of directed energy programs, electronic warfare, and artificial intelligence systems. In lieu of another request for legislation in FY 2019 to authorize an additional Base Realignment and Closure (BRAC) round, we will review our facilities, to include facility usage optimization review to ensure we have a better accounting of excess infrastructure. We also have proposed for FY 2019 increased efforts to demolish unneeded or obsolete facilities over the course of this year. Our collective efforts will allow us to provide Congress with fair, objective, and transparent options for future base realignments and closures, which maximize Department resources while also addressing any outstanding Congressional

concerns.

Business Operations Reforms

In the weeks and months ahead we will relentlessly pursue a host of initiatives that directly contribute to the SecDef's priorities of building a more lethal force, strengthening alliances and attracting new partners, as well as reforming the Department for greater performance and affordability. In particular, the Deputy Secretary of Defense established the Reform Management Group to lead the Department's business operations reform effort. This group, which is led by the Chief Management Officer in close coordination with the Director of Cost Assessment and Program Evaluation, consists of nine cross-functional teams, including information technology, human resources, community services, contracts, real property, testing and evaluation, medical services, logistics and supply, and financial management. They are led by subject matter experts within their respective fields and call upon their experience and relationships within their communities to generate ideas for both immediate and longer term business process improvements.

My Principal Deputy leads the real property management reform team, which is identifying "best business practices" throughout the Department and across the entire Federal Government that can be applied toward increasing resource effectiveness and reducing operating costs on an enterprise-wide basis. Additionally, we are working with local municipalities outside the gates of our military installations to gain insights on the "Smart Cities" movement sweeping the nation that will enable us to expand the use of public-private and public-public partnerships. Further, we are engaging the private sector to identify and, where feasible, adopt "corporate best practices" to enhance the mission assurance of our installations made all the more resilient through the application of innovative solutions provided by emerging technologies and bolstered by the Internet of Things (IoT).

Though the individual teams are responsible for creating opportunities to increase effectiveness, efficiency, and performance throughout the Department of Defense, leadership is responsible for overseeing the execution of these reforms. As we move forward, the Department will be grading the reform efforts based on evolving performance and productivity measures, benchmarked from private sector best practices, with an enduring focus on increased lethality and improved readiness.

Protecting and Enhancing our Training and Test Range Infrastructure

In addition to test and training lands owned by the Department of Defense, we have a close, cooperative relationship with the Department of the Interior to manage public lands and off shore areas for use by DOD. This relationship is crucial to our ability to protect and enhance our test and training capabilities across the country. From time to time, we also have a recurring requirement to renew public land withdrawals in order to continue military operations. This withdrawal renewal process can take up to seven years, significant resources, and extensive man-hours to undertake an exhaustive environmental review and other studies for a land use which has been in place for decades and is still determined to be of critical use by DOD. We also have been identifying locations where the Department would like to expand ranges, which will

significantly improve the combat credibility of our test and training ranges by offering opportunities for more realistic maneuver, attack, and opposing force capabilities. Offering our combatant forces a combined-arms environment more closely resembling what may be encountered in a contingency against a peer competitor is a vital element to increasing the lethality and readiness of our forces. As such, we are actively engaged with the Department of the Interior on improvements to streamline the review process, thereby reducing the time and resources required for execution.

Addressing Perfluorooctane Sulfonate (PFOS) and Perfluorooctanoic Acid (PFOA)

The investigation and cleanup of PFOS and PFOA in drinking water where previous Department of Defense activities are determined to be the source of the contamination continues to be a top priority for my office. PFOS and PFOA are part of a class of man-made chemicals used in many industrial and consumer products to make products resist heat, stains, water, and grease. In the 1970s, DOD began using aqueous film forming foam (AFFF), which quickly extinguishes petroleum-based fires, but contains PFOS, and in some cases PFOA.

On May 19, 2016, the U.S. Environmental Protection Agency (EPA) issued Lifetime Health Advisories (LHAs) recommending the individual or combined levels of PFOS and PFOA in drinking water be below 70 parts per trillion.

In response, the Department began testing DOD drinking water systems to identify drinking water that exceeded EPA's LHA. DOD has tested all 524 DoD-owned drinking water systems worldwide. As of August 31, 2017, twenty-four DOD drinking water systems tested above the LHA and DOD has followed the EPA advisory recommendations, to include providing consumers bottled water or additional treatment of water. Where DOD purchases drinking water, we identified 12 drinking water systems where the results are above the EPA LHA level. These installations are working with the drinking water supplier to taking appropriate actions (such as providing bottled water) to ensure all personnel receive safe drinking water.

Although the EPA LHA level is only guidance under the Safe Drinking Water Act (SDWA) and is not an enforceable drinking water standard, DOD considers the EPA's LHA toxicity information when assessing risk to human health under its cleanup program. DOD followed a comprehensive approach to identify installations where we have stored or used AFFF containing PFOS or PFOA and suspect there was a release that may impact drinking water.

As of August 2017, DOD has identified 401 active and BRAC installations where there are one or more areas with a known or suspected release of PFOS or PFOA groundwater that may impact drinking water off an installation. The Military Departments are following the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) process. The DoD Components then determine whether there is exposure through drinking water and, if there is exposure, the Departments' priority is to cut off the drinking water exposure. As of August 2017, the Military Departments have sampled over 2,600 groundwater wells for PFOS/PFOA (on 90 installations) with 1,621 sampling results exceeding the EPA LHA. The Military Departments will prioritize sites for further action using a risk-based approach. The Department's fundamental premise in site prioritization is "worse first," meaning the DoD

Components will address sites that pose a greater potential risk to human health and the environment first. These known or suspected PFOS and/or PFOA release areas are in various stages of assessment, investigation, and cleanup. Throughout the CERCLA process, the Department will work in concert with regulatory agencies and communities, and will share information in an open and transparent manner. Now that we have an initial inventory, it may take a few years to determine the potential cleanup costs as we collect information on the nature and extent of the releases. As DOD moves through the CERCLA process, it will be necessary to understand the regulatory cleanup standards for PFOS and PFOA.

We are also taking steps to remove and replace AFFF containing PFOS from our supply system. In January 2016, the Department issued a policy requiring Service-specific risk management procedures to prevent uncontrolled land-based AFFF releases during maintenance, testing, and training activities. The policy also requires the removal and proper disposal of AFFF containing PFOS from the local supplies for non-shipboard use where practical. Each of the Military Departments is taking actions to remove AFFF containing PFOS from the supply system.

In addition, SERDP is addressing environmental issues associated with PFOS and PFOA and the use of AFFF. SERDP researchers are developing technologies to quantify and remediate these substances in both soil and groundwater. SERDP is also researching fluorine-free substitutes for AFFF which meet the military's stringent performance requirements. In FY 2019, ESTCP will initiate demonstrations of existing replacement AFFF formulations at DOD facilities to determine if their performance can meet DOD's needs.

Finally, we are working with EPA and States to address the many challenges that have been identified since the EPA issued the LHA. Likewise, we are working with the Agency for Toxic Substances and Disease Registry (ATSDR) to support the effort to conduct the exposure assessment and health study required by the FY 2018 NDAA. Addressing PFOS and PFOA is a priority for the Department, and we are committed to finding an alternative that meets critical mission requirements while protecting human health.

Focus on the Indo-Pacific Region

Guam and the Commonwealth of the Northern Mariana Islands (CNMI)

Our posture in the Pacific must be capable of persistent engagement with all countries in the Indo-Pacific. The National Defense Strategy recognizes that China is leveraging military modernization, influence operations, and predatory economics to coerce neighboring countries to reorder the Indo-Pacific region to their advantage. As the most forward U.S. territories in the Pacific region, Guam and the Commonwealth of the Northern Mariana Islands (CNMI) are critical to countering China's influence. To that end, the Department's has three ongoing initiatives in Guam/CNMI: the Marine Corps relocation from Okinawa to Guam; a CNMI Joint Military Training (CJMT) proposal to develop ranges and training areas on Tinian and Pagan Islands; and the establishment of a Divert and Exercise Airfield on the north side of Tinian International Airport.

The relocation of Marines from Okinawa to Guam, which is estimated to cost \$8.7 billion and involves 5,000 Marines organized as a Marine Air-Ground Task Force (MAGTF), supports the

Department's restructured posture in the Indo-Pacific region and our alliance with Japan. It will better align our forward-deployed forces to enable us to respond quickly and effectively to any contingency threatening regional security, to ensure rapid delivery of humanitarian assistance in response to natural disasters, and to provide a foundation of stability for the continued free movement of trade, investment, and commerce. It will also ensure that we fulfill our commitments to the Government of Japan and the Japanese people to reduce the number of Marines on Okinawa.

The relocation is expected to achieve initial support capability (ISC) in 2024, contingent on affordability and environmental analyses. The FY 2019 budget request includes \$266 million in MILCON and Planning & Design funding, including \$143 million for a multi-purpose machine gun range on Guam. Last year, the Department awarded approximately \$750 million in construction projects, including the foundational \$309 million utilities and site improvement project for the future Marine Corps Base Guam. Approximately \$500 million of these contracts come from Japanese-provided funding. Overall, the Government of Japan has committed \$3.1 billion to fund this relocation and has already transferred \$1.5 billion of its commitment to the U.S. Treasury.

In addition to ranges constructed on Guam for the Marine relocation, the Department is proposing a \$910 million initiative to develop ranges and training areas in the CNMI to increase joint military training capabilities in the Indo-Pacific region. The Marine Corps is leading this initiative on behalf of the U.S. Pacific Command. While the Marines relocating to Guam will use the proposed CNMI ranges and training areas, these two initiatives have independent utility and are being studied under separate environmental analyses.

The Air Force is continuing efforts to establish a divert capability for up to 12 tankers on the north side of Tinian International Airport, at an estimated cost of \$375 million. It will also be used for humanitarian assistance staging, exercises and other aircraft support activities, significantly improving the Air Force's ability to conduct strategic airlift operations and provide humanitarian assistance and disaster relief. For FY 2019, the budget request includes \$51 million to construct a cargo pad and maintenance facility. The CNMI's Commonwealth Ports Authority approved the Air Force's Airport Layout Plan in January and forwarded it to the Federal Aviation Administration for final review and approval, allowing us to kick off land lease negotiations. Those efforts are on-going and we anticipate completion sometime later this year.

Public Infrastructure in the Commonwealth of Northern Mariana Islands (CNMI)

U.S. military initiatives are competing with Chinese promises of significant investments in new casinos and hotel construction. As such, public infrastructure assistance is a key component of our strategy to foster commitment and cooperation between the Department and the CNMI.

The Mariana Islands play a critical role in providing a platform for maintaining a significant forward presence in the Indo-Pacific region. However, many parts of the CNMI's infrastructure are more than 30 years old, and some portions date back to the end of World War II. The tropical climate and typhoons, combined with system age and limited maintenance, have degraded the infrastructure even further. To address the mutual requirement for adequate transportation infrastructure, DOD has proposed to partner with the local government and the

local community in the immediate term to carry out civilian infrastructure assistance projects as training activities for military engineering units – a win-win for DOD and the community. For FY 2019, the Department is requesting \$10.5 million in investments via the Office of Economic Adjustment to improve public infrastructure on Tinian. Providing tangible improvements to the local community not only supports our military activities on the island, it demonstrates that DOD is committed to the CNMI's long-term economic growth, advancing Secretary Mattis' goal of strengthening partnerships.

Workforce Issues in Guam and Commonwealth of Northern Mariana Islands (CNMI)

Stable economies in Guam and CNMI, underpinned by a sustained labor pool, are critical to the Department's ability to implement the National Defense Strategy and achieve national security objectives in the Indo-Pacific region. However, both Guam and the CNMI are having a difficult time sustaining their workforce due to geographic isolation and a small population base. The initial cost just to get to Guam and or the CNMI is generally prohibitive for the type of laborer needed, and people from the U.S. mainland are historically hesitant to move so far from family and stateside conveniences. These issues will only get worse when Guam's/CNMI's exemption from the otherwise applicable nationwide cap for H-2B nonimmigrant workers and the CNMI-only transitional worker (CW-1) program expires on December 31, 2019. Without long-term access to a foreign labor pool, the economies of these isolated U.S. territories will suffer and the cost of ongoing defense projects could skyrocket beyond their current estimates.

Although Section 1049 of the Fiscal Year 2018 National Defense Authorization Act provided some short-term relief, the Department believes a long-term solution recognizing Guam and the CNMI's unique challenges is necessary.

Office of Economic Adjustment

The request of \$70 million for the Defense Office of Economic Adjustment directly funds programs to support and preserve our installations and ranges, including collaborative studies with local communities to ensure compatible civilian development. We also use these funds to study and strengthen the resiliency of supply chains to remain responsive to the needs of our industrial base through fluctuations in procurement activity. The Office is an essential interface to promote constructive and mutually beneficial alliances and partnerships with local communities, States, and territories that provide critical support to our warfighters. These partnerships have fostered an unprecedented level of support and preservation of military installations by States and communities who protect our bases as regional economic engines. The Office also provides funds to ensure that adequate planning and implementation occurs in the expansion of public services and investments to support our existing and growing missions. Maintaining support for this Office is crucial to the continued ability of our installations to safely and securely operate while responding to fluctuations in military activities, and keeping faith with our service members and families by addressing quality of life issues in local defense communities.

Military Aviation and Installation Assurance Siting Clearinghouse

The Military Aviation and Installation Assurance Siting Clearinghouse is the primary office within the Department of Defense charged with the mission to support the expansion of commercial energy development and power transmission in the United States in areas and using methods that are compatible with preservation and safe operation of military activities and capabilities. The Department appreciates the statutory changes made by Congress to Title 49 of the United States Code. The revised authority increases the public visibility of DoD impacts from specific projects, increases State engagement in the impact review process, improves DoD's ability to protect its missions from incompatible energy development, and strengthens installation commanders' ability to highlight potential impacts.

As a result of Congressional direction and our own efforts, we are effectively evaluating the mission impact of commercial energy projects to identify and implement affordable and feasible mitigation solutions where DOD missions might be adversely impacted. In 2017 the Department reviewed over 4,200 applications for energy projects that were forwarded by the FAA, which nearly matched the high number from 2016. Due to the extensive collaboration between our office, local communities, States, and energy developers, no commercial energy project reviewed in 2017 rose to the level of an unacceptable risk to the national security of the United States.

Conclusion

Thank you for the opportunity to present the President's FY 2019 budget request for DOD programs supporting installations, energy, and the environment. We appreciate Congress' continued support for our enterprise and look forward to working with you as you consider the budget request.