DEPARTMENT OF THE AIR FORCE STATEMENT

TO THE COMMITTEE ON ARMED SERVICES

SUBCOMMITTEE ON READINESS AND MANAGEMENT SUPPORT

UNITED STATES SENATE

SUBJECT: ENERGY, INSTALLATIONS, AND ENVIRONMENT UPDATE

STATEMENT OF:

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## Introduction

Chairman Sullivan, Ranking Member Hirono, and distinguished members of the subcommittee, thank you for the opportunity to provide you with an update on Department of the Air Force (DAF) energy, installations, and environment programs.

Today, our nation finds itself in a strategic competition with our adversary China. The People's Liberation Army is expanding, modernizing, and diversifying its entire military—including cyber, space, and nuclear forces—at a rapid pace to support revisionist goals and objectives. These developments pose unique and fundamentally new challenges for deterrence, and while conflict is certainly not inevitable, the risk of military confrontation is increased in this environment. This new strategic environment demands that we rebuild the lethal and ready force to provide the warfighting capability our nation needs to compete and win.

To that end, the DAF's Installation Infrastructure Action Plan (I2AP) is re-optimizing our installations to ensure the Air Force and Space Force can deliver combat power with the necessary speed, range, and intensity to deter adversaries and win decisively, if needed. Throughout every stage of conflict, our installations serve as warfighting platforms and provide the bedrock for our readiness and lethality. They also address quality-of-life needs of our Airmen and Guardians while maintaining readiness to respond swiftly to mission needs, even in the face of attack. Indeed, the ability of our installation to fight through these challenges and quickly recover is critical to success. Our Airmen and Guardians depend on ready and resilient infrastructure, reliable on-demand energy, and safe environments to defend the homeland and deter our adversaries – and we are committed to providing them with nothing less.

## Installation Infrastructure and Readiness

The DAF relies on its Military Construction (MILCON) and Facilities, Sustainment, Restoration, and Modernization (FSRM) programs to provide ready and resilient installations. Yet, solely relying on direct investment at the currently budgeted levels is insufficient to reverse the longstanding trend of deteriorating facilities and failing infrastructure. Our installation portfolio of 177 installations, 69,000 facilities, and 183 million square yards of airfield pavement and is not sized to optimize the vital infrastructure of the current force structure.

Therefore, the DAF is re-optimizing its Air and Space Forces, including installations, to match the pacing threat while focusing on the Department of Defense's priorities to revive the warrior ethos, rebuild the military, and reestablish deterrence. However, approximately two decades of assuming risk in infrastructure investment, coupled with the burden of excess infrastructure, has led to a backlog of maintenance and repair requirements and degraded infrastructure. The Department's I2AP works to mitigate these challenges by setting clear objectives, goals, and key actions to align installations with critical mission capabilities; optimize vital infrastructure; and maximize mission assurance.

To achieve these objectives, the Department is instituting data-driven, proactive policies and streamlining processes. Examples include policies that centralize enterprise funding, focus on the most critical infrastructure, and prevent expenditures on unauthorized or excess facility spaces. The Department is also working to reduce costs to operate and sustain infrastructure through innovative cost-sharing and strategic Plant Replacement Value reduction initiatives. These initiatives include the potential transfer of portions of installations to other government or commercial entities and expanding utility privatization where data shows it would reduce

outages and improve utility system conditions. This strategic framework will guide investments towards modernizing mission critical infrastructure, enhancing resiliency, and curtailing long-term operating and sustainment costs.

*Excess Infrastructure*

The DAF currently carries significant excess infrastructure along with a $49.5 billion maintenance and repair backlog that continues to grow. Since 1990, the Department has reduced in size considerably, including a nearly 40% reduction in Active Duty end strength and a 60% reduction in fighter squadrons, but it has only reduced its CONUS footprint by 15%. Moreover, roughly half of all infrastructure across the DAF is currently in a moderate or high-risk condition. While the DAF has prioritized its resources to keep critical mission generating infrastructure (e.g., runways) in good working order, such prioritization has come at the expense of our supporting infrastructure. For example, over 70% of utility infrastructure on DAF bases in the Indo-Pacific are in a high-risk condition. This problem is exacerbated by the highly corrosive tropical or arctic environments of many facility locations and by limited skilled local labor in others. Meanwhile, our buying power has eroded, with construction costs rising roughly 50% in the last ten years and far outpacing the annual inflation rate.

The DAF acknowledges the section 2680 in the National Defense Authorization Act (NDAA) for Fiscal Year 2025 requirement to fund infrastructure investment at four percent of plant replacement value by FY30. This will help us restore facility condition to acceptable levels, but we will struggle to meet this requirement in full without optimizing our inventory.

Despite these challenges, we are aggressively moving forward with our I2AP, which employs innovative approaches, leverages third party investment, and prioritizes resources to the

most critical warfighting needs while driving down the cost to deliver and operate our installations. This includes solutions such as Enhanced Use Leases, Strategic Real Estate Opportunities, and Intergovernmental Support Agreements (IGSAs) that enable the DAF to partner externally with industry, communities, and other agencies for mutual benefits. These solutions also help us identify where we can transfer portions of our installations as a means of reducing our infrastructure sustainment costs.

For example, 2005 Base Realignment and Closure (BRAC) converted Otis Air National Guard Base in Massachusetts from a Fighter Wing to an Intelligence Wing in 2008. In 2025, we are finally optimizing the base to meet its current mission. When divestment of excess land is complete, it will represent approximately 90% decrease in acreage.

We are also increasing our annual demolition investments, targeting the removal of excess and severely degraded infrastructure. Moreover, the Department recently instituted a policy requiring all new construction and actions that result in adding square footage to our real property inventory to be offset with equivalent demolition or disposal in order to limit footprint growth and the associated sustainment responsibility.

*Military Construction*

The Department seeks to execute MILCON investment to support the Interim National Defense Strategic Guidance priorities by focusing on preparing our installations as warfighting platforms and deterring our sole pacing adversary.

A significant focus of our MILCON program is to support the bed down of new weapon systems to rebuild the military and reestablish strategic deterrence. Programs like the Sentinel Ground Based Strategic Deterrent and the B-21 Raider recapitalize two thirds of the Nation's

nuclear triad and ensure we maintain a credible and capable nuclear deterrent capability. Our program also supports Combatant Commanders, with a focus on Indo-Pacific Command, and their most critical requirements to build a more lethal and ready force. Finally, our program seeks to recapitalize current mission facilities that have outlived their useful life or no longer meet mission requirements. We are also working to enhance quality-of-life for our Servicemembers and their families with new Child Development Centers and dormitories.

Additionally, the Department seeks to leverage innovative approaches within our MILCON program to maximize taxpayer dollars and the Department's ability to deliver combat power. We are utilizing Other Transactional Authority provided by Congress to pilot innovative construction techniques and project delivery constructs. The on-going $3 billion rebuild of Tyndall Air Force Base (AFB), Florida, incorporates lessons learned from the storm which destroyed it and novel approaches to installation planning and construction. This Installation of the Future will be resilient, efficient, and innovative and will serve as a model for future construction.

*Facility Sustainment, Restoration, and Modernization*

DAF analysis reveals that the current budget can sustain approximately 65% of the enterprise. The balance of the infrastructure is equivalent to approximately 19 installations, further evidence that existing infrastructure investments are spread too thin to effectively maintain the DAF enterprise. Maintenance and repair funding levels have not kept pace with the rising cost of construction, leading to compounding sustainment costs, widespread degradation, and increases in infrastructure issues that adversely impact mission execution. Aging facilities

and antiquated control systems further compound these threats, making installations vulnerable to adversaries and placing mission generation at risk.

To mitigate this, the I2AP guides DAF FSRM program investment to address the facilities and infrastructure that are most critical for generating warfighting capability, while also improving quality-of-life initiatives for our Airmen, Guardians, and their families.

Sustained progress requires a long-term vision. The minimum FSRM funding thresholds established in the FY25 NDAA, ramping to 4% of the Plant Replacement Value by FY30, are not merely about maintaining the status quo – they represent critical and strategic investments for reversing years of accumulated infrastructure degradation and reducing the substantial deferred maintenance and repair backlog. This will help us restore facility conditions – but these investments must be applied to an optimized portfolio to ensure they enable our installations to remain ready, resilient, and credible warfighting platforms that our national security demands.

*Spaceport of the Future*

Our Spaceport of the Future (SOTF) program is an all-encompassing initiative where the Space Force is taking a comprehensive approach to look at all factors contributing to range costs and launch throughput. SOTF focuses investments into our aging launch infrastructure to ensure the DoD's ability to provide world-class launch capability to public and commercial partners. These investments are necessary to preserve and advance national security interests and reestablish deterrence with capacity to support launch and test operations on demand.

*Sentinel Program*

The Minuteman III Intercontinental Ballistic Missile (ICBM), first deployed in 1970, is the world's oldest land-based strategic missile system and must be recapitalized to provide the

Nation a safe, secure, and reliable nuclear deterrent capability. The Sentinel program recapitalizes 450 missile launch facilities across multiple states and upgrades command and maintenance infrastructure to ensure operational readiness through at least 2075. Following the Office of the Secretary of Defense's thorough review and certification of the program, the Sentinel program is moving ahead. The DAF is continuing requirements definition, assessment of acquisition strategies, exploration of the design trade space, and seeking ways to generate competition to drive cost and schedule risk down. Notably, the program office recently decided to minimize risk by pursuing the construction of new silos instead of reusing the existing silos.

*Installation Resilience*

DAF installations, both enduring and expeditionary, are warfighting platforms from which the DAF successfully executes its core missions. DAF installations are the foundation of combat readiness and must be capable of supporting the lethality and readiness of the force. Strengthening installation resilience, reducing reliance on vulnerable energy sources, and rapidly fielding emerging technologies are essential to defending the homeland and sustaining deterrence.

The DAF is utilizing third-party financing and innovative partnerships with industry that modernize our utilities and drastically reduce system outages at our bases. We are also continuously reviewing our utility privatization portfolio to enhance resilience across our installations. The DAF has privatized 25 percent of our utility systems and continues to explore the viability, costs, and benefits of additional systems at several bases. These vital investments deliver improved utility infrastructure, reliable systems with redundancy for emergency preparedness, and greater installation energy resiliency.

*Energy and Water Resilient Infrastructure*

In line with recent Executive Orders on Unleashing American Energy and Declaring a National Energy Emergency, the DAF is focused on maintaining national security and military preparedness by ensuring reliable, diversified, and affordable energy at every one of our installations.

Our vision of "Mission Assurance through Energy and Water Assurance" emphasizes sustainment of warfighting capabilities while optimizing resource use through enhanced planning, technology, and process improvements. We assess near and long-term energy and water requirements based on the installation's resiliency needs, cost considerations, and opportunities to leverage more reliable and abundant domestic sources.

The DAF conducts Energy Resilience Readiness Exercises (ERREs), also known as "black start exercises," to help installations assess mission readiness at degraded energy levels. During an ERRE, an installation intentionally disconnects from commercial power for 10 hours to assess onsite backup power systems and validate (and in some cases, identify) infrastructure and mission interdependencies. This allows us to actively test key enabling systems under "blue sky" conditions to identify gaps in energy and mission capabilities.

Similarly, we are conducting the Water Resilience Readiness Exercises (WRRE) Pilot Program, an initiative designed to help installations assess water vulnerabilities and strengthen response strategies. WRREs will provide critical insights to shape enterprise-wide policies, ensuring all bases are better equipped to manage water risks. There are currently four installations in the pilot phase of the program, Dyess AFB in Texas, Hill AFB in Utah, and Cannon AFB and Kirtland AFB in New Mexico. Lessons learned from these installations will

inform broader water resiliency efforts as we seek to reestablish deterrence and defend our homeland.

The DAF is also pursuing innovative solutions to build energy-efficient and resilient systems for improved energy security and mission assurance. We are changing the overall DAF approach to future energy initiatives by exploring diversified energy opportunities such as advanced nuclear, geothermal, battery energy storage, installation microgrids, and other forms of on-site generation that enhance energy resilience. We continue to partner with the Defense Innovation Unit (DIU) to execute prototype agreements with non-traditional defense contractors as we explore the potential for on-site resilient baseload power via geothermal energy. One promising site is Mountain Home AFB in Idaho, and the potential for a second installation is being evaluated.

At Eielson AFB in Alaska, the DAF continues to pioneer the first commercial application of a microreactor on DoD property, laying the groundwork for future advanced nuclear energy projects. Technologies such as small modular reactors and microreactors will help deliver more reliable and resilient energy to our installations. This increased resilience is particularly critical at strategic and austere locations such as Eielson AFB. In addition, we are partnered with DIU on their Advanced Nuclear Power for Installations (ANPI) project, which aims to put a micro-reactor on an Air Force location that is still being determined.

*Community Partnerships*

Community Partnerships are mission force multipliers that promulgate resources and information, reduce costs, increase interoperability, prepare for contingencies and disasters, and unify the civic-base community. The Air Force Community Partnership Program offers a

framework through which installations and communities can work together in innovative ways to tackle shared challenges through shared solutions.

Building on the successes of IGSAs under 10 USC § 2679, the DAF implemented innovative applications of this authority to reduce overall operating costs. For instance, Air Force Materiel Command and the Arizona Department of Emergency and Military Affairs (AZDEMA) entered an IGSA to meet weapon system storage requirements for both new and existing acquisitions. This partnership leverages AZDEMA's manpower, equipment, time, and materials, and the DAF avoids the costs to construct, or upgrade, facilities.

Additionally, Tinker AFB in Oklahoma partnered with the Association of Central Oklahoma Governments to enhance emergency 9-1-1 support. Through this IGSA, Tinker AFB gains access to the existing 9-1-1 system used throughout Central Oklahoma, avoiding the high costs associated with updating or replacing their current system, while also ensuring efficient response times and improved interoperability.

Finally, Andersen AFB will enter its first IGSA with the Guam Department of Agriculture for stray animal management. This is the first DAF IGSA in a U.S. territory and the first where services are shared between the installation-community partners, rather than provided or received from the community partner to the installation. Andersen AFB provides manpower, equipment, and materials, and the GovGuam Department of Agriculture provides shelter, animal adoption services, neutering services, and village education events. This partnership is estimated to save approximately 320 hours for the pest management program by reducing the number of stray animals on the installation. It also serves as a model for future IGSAs across a range of DoD installation support services in Guam.

The Defense Community Infrastructure Program is a competitive grant program designed to address deficiencies in community infrastructure that supports military installation readiness and lethality. Vibrant relationships between the DAF and our installation communities were instrumental to the Department of Defense awarding approximately half of the $100 million in grants awards in FY24 to DAF communities. These awards include $13 million for March Air Reserve Base, California – Grantee: Western Municipal Water District of Riverside; $10.7 million for Peterson SFB, Colorado – Grantee: City of Colorado Springs; $5.3 million for United States Air Force Academy, Colorado – Grantee: Colorado Springs Utilities; $11.6 million for Grand Forks AFB, North Dakota – Grantee: Grand Forks County; and $8.9 million for Rickenbacker Air National Guard, Ohio – Grantee: Columbus Regional Airport Authority.

*Mission Sustainment*

The Air Force Mission Sustainment (AFMS) program applies a holistic approach and strategy to preserve mission capabilities at installations and ranges by identifying, assessing, and reporting risk and actions to reduce vulnerabilities. This effort is imperative to ensure DAF installations can generate maximum combat power and lethality without encroachments that negatively impact training, operations and the safety of the local population. To mitigate encroachment, the AFMS program works with DAF, other DoD installations and Office of the Secretary of Defense (OSD) to assess seven mission sustainment hazard categories: airspace, land/sea, spectrum, water, energy, weather, and natural/cultural resources.

Our primary objective is to preserve and protect military readiness across the entire operating picture including airspace, ranges, missile fields, and community assets that directly support missions (e.g. community airports, small arms ranges, water/power sources, etc.). The

DAF reviews proposed projects (199’ above ground level or higher) filed with the Federal Aviation Administration (FAA), submitted for DoD review pre-filing, or submitted for DoD review from other Federal agencies.

In 2024, the AFMS program managed the review of 90,343 proposed obstructions that were formally filed with the FAA. It also managed the review of ~500 Informal Review obstruction evaluation projects submitted for DoD pre-filing review from developers or other Federal agencies. We coordinated with the Military Aviation and Installation Assurance Siting Clearinghouse

(Clearinghouse), Air Force Flight Standards Agency, other Services, and Federal Agencies to ensure that the proposed activities are compatible with DAF training, testing, and operations.

Cumulative impacts of development continue to increase, causing significant concern for military training routes, special use airspace, radar lines of sight, and certain geographical areas. In response, the AFMS program has formed temporary Mitigation Response Teams (MRTs) with DoD, the Services, and project proponents to identify compatible development solutions to projects which pose impacts to Air Force testing, training, or operations. In 2024, the AFMS program established 77 formal MRTs, including at least one MRT for each Major Command (MAJCOM), as well as for the North American Aerospace Defense Command, the Air National Guard, and the Space Force. The AFMS program managed the MRT review process, established MRTs through the Clearinghouse, and facilitated MRT meetings with units, MAJCOMs, Headquarters Air Force, project developers, and other stakeholders. Ultimately, the formal MRTs and Informal Reviews established in 2024 helped to protect DAF and DoD missions

associated with hundreds of unique DoD assets, including airspace and ranges, airfields, missile fields, and radars.

The AFMS program also leads DAF efforts in reviewing offshore projects, including providing responses to the Clearinghouse and the Bureau of Ocean Energy Management. This on-going effort includes continued engagement and collaboration with developers, Department of Navy, and consultants.

## Housing, Dormitories, and Child Development Centers

Quality-of-life for our Airmen and Guardians and their families remains a top readiness priority for the DAF. We continue to focus investment and innovation on our housing, dormitories, and child development centers.

*Dormitories / Unaccompanied Housing*

The DAF is on-track to meet the FSRM investment requirements established by the FY22 NDAA. This is part of the largest dorm investment in over a decade. However, we recognize more is needed. Further, we continue to exceed OSD performance goals for dorm conditions since the inception of the metric in FY13. In FY22-FY24, we funded 104 projects totaling $570 million to repair and renovate dorms, HVACs, roofs, and other critical facility systems. Projects are underway or being planned at eighteen installations that will continue our efforts to improve quality-of-life for our most junior Airmen and Guardians.

The DAF unaccompanied housing (UH) inventory includes nearly 58,000 permanent party and over 45,600 training beds. Per FY24 NDAA requirements, interim guidance from DoD established Building Condition Index (BCI, a 0-100 scale) as the UH Uniform Condition Index.

The DAF's overall strategy remains focused on restoring and modernizing dorms with FSRM funds and addressing capacity shortfalls and facility recapitalization with MILCON funds. The DAF Dormitory Master Plan guides this effort by providing the comprehensive forecasts, estimates, and recommendations required to strategically execute dormitory projects when and where they are most needed. Current assessments show 53% of permanent party beds are at or above the target of 80 BCI, and 0.1% of beds are less than 60 BCI.

Training dorms are another key component of our military service members' growth and development. Currently, 69% of training beds assess at or above the target 80 BCI and 0.1% are less than 60 BCI. Notably, the DAF executed seven FSRM projects for $67 million at training dorms in FY23-FY24.

*Family Housing*

The DAF is focused on eliminating inadequate housing from the DAF inventory and correcting health and safety deficiencies. In addition to enabling planning studies, designing for future construction projects, and renovating existing DAF-owned homes, the Military Family Housing construction program also supports restructuring Military Housing Privatization Initiative (MHPI) projects.

The DAF's Military Family Housing construction program focuses on planning studies and design for future construction – to include projects at Yokota Air Base, Japan to improve homes for Senior Non-Commissioned Officers, Company Grade Officers, and Field Grade Officers

Our Military Family Housing O&M funds efforts to sustain, improve, and modernize our inventory of approximately 15,200 DAF-owned family housing units and provides enhanced

oversight of over 52,000 privatized homes. Combined, the family housing O&M and construction programs will ensure continued support for the housing needs of Airmen, Guardians, their families and caregivers, as well as our Army, Navy, and Marine Corps teammates living in DAF-owned and privatized family housing.

The DAF MHPI inventory contains over 52,000 privatized end state unit homes spanning 31 projects across 63 installations. In some cases, the financial assumptions and economics of the deals fall short of expectations through no fault of the project owners. In these cases, the DAF requests funding to restructure to ensure projects don't default on loans and conditions of the homes remain acceptable.

*Commercial Apartment Complex*

The DAF is currently pursuing an innovative MHPI partnership with Mayroad (the existing MHPI project owner) for a 142-unit commercial apartment complex at Edwards AFB in California. The project broke ground in September 2024 and serves as the DAF's first-ever commercial apartment complex on-installation. The project is fully financed by private investment (no upfront DAF scoring or cost) and will provide 246 beds in response to housing shortages at the remote installation.

*Lodging Commercialization*

Lodging operations on DAF installations are paramount to support the mission and for the continued resiliency of Airmen, Guardians, and their families. Lodging is critical not only during permanent change of stations moves, but also for temporary duty assignments away from home stations. Indeed, these lodging assets directly support mission readiness and capability.

Upgrading and ensuring the long-term sustainment of lodging for Airmen, Guardians, and their families is a strategic imperative for the DAF to maintain readiness and achieve mission success.

The DAF is seeking to commercialize all the on-base lodging in the United States, its territories, and possessions – which currently covers 58 DAF installations. The Commercial On-Base Lodging (COBL) effort would be accomplished through the conveyance of facilities and execution of a 50-year ground lease with no upfront cost to the DAF. The government seeks to apply private sector expertise, resources, and market-based incentives to improve the quality-of-life for Airmen, Guardians, their families, and other authorized travelers while in a transient status. The objective is to provide quality, on-base hotel accommodations that meet the varying needs of a mobile military community through improvements to the on-base lodging inventory and/or new construction, and to appropriately maintain these facilities throughout a long-term business relationship.

Within the DAF, the Assistant Secretariat for Energy, Installations and Environment will serve as the office of primary responsibility for the COBL program and has delegated execution responsibilities associated within the program, including lease administration and oversight, to the Air Force Installation and Mission Support Center – who has established a Program Management Office (PMO).

The process to solicit and competitively select a private sector lease applicant and then successfully negotiate and close the lease of installations in groups and phased over several years. DAF anticipates releasing a request for proposal in the Summer 2025.

This COBL initiative would affect approximately 3,100 Non-appropriated Fund DAF Lodging (DAFL) personnel, who may be eligible for either reemployment priority, severance

pay, or voluntary or involuntary retirement benefits. Just as when the Army privatized its lodging, the DAF expects the selected project owner will offer positions to many current DAFL employees.

The COBL initiative is incorporating key lessons learned from previous innovative real estate programs to ensure high performance. Under COBL, the selected project owner would earn fees based on Installation Commander and lodging customer feedback. Reports, approval process, response triggers, and the incentive fee structure would be consistent with the successful Army's Privatized Lodging program. DAF's COBL PMO would perform frequent site visits and direct oversight of both operations and recapitalization of the portfolio over the 50-year lease period.

*Child Development Centers (CDCs)*

We continue to strive to provide a high quality-of-life for our members and their families. At the heart of that goal is affordable, accessible childcare for our Airmen and Guardians. Like our dormitory strategy, the DAF is using a two-prong programmatic approach to improve CDCs: targeted FSRM investment to address facility condition concerns and MILCON projects to increase capacity and recapitalize. While no CDCs in the DAF portfolio are failing or in poor condition, we know we still have work to do. Generous congressional support in recent years has enabled the DAF to initiate the design of additional CDC projects for inclusion in future President's Budget requests.

The Child and Youth Facility Master Plan facilitates project advocacy by identifying CDC MILCON and FSRM projects that address child and youth facility conditions and capacity challenges. Out of the 35 MILCON projects identified, 13 have been authorized and

appropriated, adding approximately 1,800 spaces. One project was funded with O&M, 13 are in active design to add another 1,500 spaces, and 18 additional projects are in planning to validate requirements.

## Environmental Stewardship

Part of reestablishing the warrior ethos is an unwavering commitment to the well-being of our servicemembers and their families. It remains among our highest priorities to ensure the health and safety of those who live and work on our installations and those who reside in surrounding communities. We appreciate the support of Congress in our efforts to address Per- and Polyfluoroalkyl Substances (PFAS) and make further progress in our Environmental Restoration Program.

Our proactive PFAS strategy is yielding positive results, and we remain dedicated to making incremental gains in addressing this complex challenge. The DAF looks forward to continued appropriations support to maintain our PFAS efforts. These efforts include PFAS investigation and cleanup, on-base and off-base drinking water monitoring, Aqueous Film Forming Foam (AFFF) replacement facility repairs, and AFFF disposal and research and development. As of December 31, 2024, the DAF expended $68.7 million to transition from AFFF to fluorine-free foam or water only; 36% (192 of 541) facilities have completely removed and disposed of all AFFF and 86% (1,008 of 1,175) of vehicles are complete. We are currently on-track to meet the FY20 NDAA compliance date, with the extension Congress has enacted.

### *Environmental Restoration*

We remain focused on being good stewards of the environment by preventing spills and releases, while also meeting our cleanup obligations under the Comprehensive Environmental

Response, Compensation and Liability Act and the Resource Conservation and Recovery Act. Investigation objectives and environmental response actions performed under these statutes aim to reduce risk to human health and the environment in a risk-based, prioritized manner at approximately 15,000 restoration sites across our active and closed installations. Much of our restoration program focuses on the DAF PFAS response, though we continue to address legacy sites.

The DAF PFAS Strategy is built on the following objectives: (1) Protect human health and the environment; (2) Transition from fluorine-containing products to fluorine-free alternatives and minimize potential PFAS release or exposure risk; (3) Fulfill cleanup responsibilities related to PFAS releases at DAF sites; (4) Invest in new PFAS Alternatives, and treatment and destruction technologies; (5) Integrate PFAS mitigation into compliance programs; and (6) Engage and collaborate with stakeholders (local communities, states, Federal agencies, and Congress). Through the end of Fiscal Year 2024, the DAF expended $2.3 billion identifying, investigating, and responding to PFAS releases.

On April 10, 2024, the Environmental Protection Agency published Maximum Contaminant Levels (MCLs) for PFAS for public drinking water systems, requiring sampling by 2027 and compliance with the new limits by 2029. The DAF is actively mitigating PFAS impacts to meet the MCLs in on-base drinking water systems under our purview, and addressing impacts to off-base private drinking water wells linked to our activities. In alignment with DoD policy, DAF is also incorporating the final PFAS MCLs into our cleanup program. We continue to investigate, clean up, and conduct interim response actions to address our past PFAS releases, all of which will significantly increase DAF's requirements.

As we continue this important work, the DAF is committed to open communication with communities concerned about the potential environmental impacts of PFAS. We actively engage with residents and collaborate with local Restoration Advisory Boards to continually improve and ensure our community outreach programs are transparent, inclusive and responsive.

*Environmental Quality*

As trustee for more than 8.3 million acres of land, including forests, prairies, deserts, wetlands, and coastal habitats, the DAF understands the important role natural resources play in maintaining our mission capability and readiness. We remain fully committed to a comprehensive and integrated approach to conserving environmental, natural, and cultural resources. The environmental quality program funds mission sustainment and environmental compliance with applicable regulations across several media areas. This includes natural and cultural resources management, environmental planning, hazardous waste storage and disposal, hazardous materials management, healthy air and water quality, and completely funded Air National Guard clean-up. Additionally, the program supports ongoing habitat and species management for 123 threatened and endangered species found across 54 identified DAF installations. The program also provides for continued cooperation, collaboration, and leveraging of manpower and other resources with other Services, Federal government agencies such as the United States Fish and Wildlife Service, and applicable state fish and game agencies.

*Base Realignment and Closure (BRAC) Sites*

Our BRAC cleanup and property transfer program continues to facilitate environmental restoration and property transfer activities at 34 former DAF installations closed through prior BRAC law. We remain on-track to transfer the remaining four former installations by 2031.

## Operational Energy

The DAF remains the largest consumer of fuel in the Department of Defense. We have implemented a full range of strategies to increase our operational agility and mitigate our contested logistics risk in theaters like the Pacific. An energy-optimized fleet allows the warfighter to fly greater distances, increases loiter time for intelligence, surveillance and reconnaissance assets, and increases payload range. Our recent efforts resulted in a $222 million fuel cost avoidance, with $64 million of prior year expired funds recouped and reinvested to further enhance combat capability and mission assurance.

The Mission Execution Excellence Program (MEEP) incentivizes Airmen to optimize use of aviation fuel in preparation for future conflict in a fuel-constrained environment such as the Indo-Pacific theater. Since May 2022, MEEP has saved over 14 million gallons of aviation fuel, valued at $52 million, and has expanded from four participating squadrons to 29 total force C-17, C-5, and KC-135 units.

Improved tools and software lead to more battlefield effectiveness. For example, training software, like Extended Reality Air to Air Refueling (EARL) trainers, creates more effective training opportunities for aerial refueling by providing pilots and boom operators with a highly realistic extended reality capability across multiple aircraft. Time spent training on EARL stations can offset time spent in live-flight sorties, allowing for more crews to be trained in less time, reducing stress on aircraft and schedules.

Engine optimization technologies, such as those currently deployed by commercial airlines, reduce fuel burn and increase engine performance, reliability, and time on wing for DAF aircraft. Efforts include a compressor blade coating which, if implemented across the C-17 fleet,

is projected to spur an estimated $20.9 million in fuel and maintenance savings annually (based on FY25 fuel prices). Additionally, engine detergent and foam washes can restore efficiency and power while reducing fuel consumption by 0.5 to 1.15%. The incorporation of a detergent additive into the Air Force's engine wash contract has yielded significant additional benefits, including enhanced engine performance through improved removal of carbon debris and soot, resulting in restored engine efficiency and power output.

Drag reduction initiatives, like technologies currently used by commercial airlines and foreign militaries, reduce fuel consumption and improve operational range and capability of the current fleet of Air Mobility Command aircraft. In partnership with the Air Force Research Lab and Air Force Life Cycle Management Center, we are implementing drag reduction technologies across our legacy aircraft, which has the potential to decrease drag and increase fuel efficiency by 1-8% for our existing fleet. In addition to increasing operational capabilities, most initiatives have a return-on-investment of less than three years. For instance, the C-17 is currently undertaking a 6-month logistics service test for 3-D printed microvanes that is projected to provide up to 1.5% drag reduction and 1.5% fuel savings across the 222-aircraft fleet.

Finally, we are investing in the Blended Wing Body (BWB) demonstration aircraft to rapidly field new technology that meets the demands of modern air operations. In 2023, the DAF partnered with DIU to prototype an improved aircraft design that provides more aerodynamic efficiency than today’s tankers, bombers, and cargo aircraft, enabling increased range, loiter time, and fuel offload capabilities for the DoD. As a result of this competitive process, DAF selected JetZero to demonstrate this new capability by 2027, which is projected to improve aerodynamic efficiency by 30 percent. In addition, part of the capability development strategy

for this effort includes to garner private investment and significantly augment Air Force funding. To date, $65 million in private funding and in-kind support has been captured, including investment from two major U.S. commercial airlines. The project remains on schedule and recently completed a Demonstrator Critical Design Review in May 2025.

## Conclusion

The DAF Energy, Installations and Environment portfolio is aligned with the Department of Defense priorities of restoring the warrior ethos, rebuilding the military, and reestablishing deterrence by increasing the lethality, readiness and warfighting capability of our installations. We remain committed to aligning installation infrastructure to mission critical capabilities and optimizing our footprint while ensuring our installations have the resilience necessary to support Air and Space Force operations in a contested environment. With the continued support of Congress, I am confident our installations will continue to facilitate combat power projection with enough speed and intensity to be decisive for the Joint Force while also supporting our Airmen, Guardians and their families.

Thank you for the opportunity to update you on the DAF's programs supporting energy, installations, and environment. We appreciate Congress' continued support for our enterprise and look forward to continuing to work closely with you.