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HEARING
ON
NATIONAL DEFENSE AUTHORIZATION ACT
FOR FISCAL YEAR 2025
AND
OVERSIGHT OF PREVIOUSLY AUTHORIZED
PROGRAMS
BEFORE THE
COMMITTEE ON ARMED SERVICES
HOUSE OF REPRESENTATIVES
ONE HUNDRED EIGHTEENTH CONGRESS
SECOND SESSION
SUBCOMMITTEE ON READINESS HEARING
ON
**FISCAL YEAR 2025 BUDGET REQUEST FOR
DEPARTMENT OF DEFENSE ENERGY,
INSTALLATIONS, AND ENVIRONMENT
PROGRAMS**

HEARING HELD
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FISCAL YEAR 2025 BUDGET REQUEST FOR DEPARTMENT OF DEFENSE ENERGY, INSTALLATIONS, AND ENVIRONMENT PROGRAMS

HOUSE OF REPRESENTATIVES,
COMMITTEE ON ARMED SERVICES,
SUBCOMMITTEE ON READINESS,
Washington, DC, Tuesday, April 16, 2024.

The subcommittee met, pursuant to call, at 3:01 p.m., in room 2212, Rayburn House Office Building, Hon. Michael Waltz [chairman of the subcommittee] presiding.

OPENING STATEMENT OF HON. MICHAEL WALTZ, A REPRESENTATIVE FROM FLORIDA, CHAIRMAN, SUBCOMMITTEE ON READINESS

Mr. WALTZ. Let's call the subcommittee to order.

I ask unanimous consent that the chair be authorized to declare a recess at any time.

Without objection, so ordered.

I also ask unanimous consent that non-subcommittee members, if any -- I believe we may have one -- be allowed to participate in today's hearing after all other subcommittee members have had an opportunity to ask questions.

Without objection, so ordered.

Ladies and gentlemen, good to see many of you again. Welcome to this hearing in the Readiness Subcommittee on the fiscal year 2025 budget request for Department of Defense Energy, Installations, and Environment Programs.

I will start with an opening statement and then hand off to my friend and colleague Mr. Garamendi.

So, I just want to thank our witnesses for coming in again. I want to thank you for your time and participation in today's hearing.

We will continue what I think have been constructive discussions on military construction, on housing, on infrastructure, environmental energy programs, as well as base and facility counts. It is a broad topic, obviously, but these issues are critical to our warfighters. And getting it right is critical to our overall readiness.

So, this fiscal year 2025 budget request included \$17.5 billion and authorizations for more than 120 new construction projects. I look forward to discussing how these efforts help meet our force posture goals, and support operational efforts.

However, building the new facilities, as we have discussed in the past, is only half the battle. Modernizing and maintaining our existing facilities to meet future requirements must also be

prioritized. I remain concerned about funding for facility sustainment, restoration, and modernization, FSRM.

Maintenance of existing facilities is chronically neglected to pay for other priorities. This repair of military facilities has had significant impacts on everything from quality of life of our service members to sustainment and innovation. We have talked about in our last hearing sustaining our labs in particular.

So, I am not going to rehash those previous comments about the unacceptable state of our barracks. We are not going to flash up what were despicable, frankly, photos of mold and feces in our service members' living quarters.

Assistant Secretary Owens, I appreciate your discussion of dealing with that GAO [Government Accountability Office] report and its recommendations in your, in your statement. But I do look forward to further discussion during questions about how this budget request, I hope, really starts taking a serious bite out of this issue.

I am interested in your perspectives, also, as we have discussed, on privatization and learning lessons from housing, and how we are going to apply that to barracks, and whether it is a key piece of the solution here.

On the operational side, the Department is not far along as we should be, given the threats on the environment. And we need to posture accordingly.

And, finally, we have to ensure that our installations -- I really can't believe we have to continue to discuss this -- but we have to ensure our installations are not reliant on energy supplied by our enemies. Recent defense bills have highlighted the threat posed by our reliance on Russian energy, particularly at our EUCOM [European Command] installations, yet, frankly, the Department has dragged its feet on adhering to congressional mandates.

And I am particularly concerned with this Administration's focus on climate change as a national security priority and how that could impact our operational priorities. I support efforts to increase resiliency, of course, but climate change policies can't be an end in and of itself that ignore operational realities. We have to remove China, in particular, from the supply chain of our energy resilience efforts.

So, thanks again to all our witnesses for being here. I look forward to your testimony.

And over to you, Mr. Garamendi, for your opening remarks.

[The opening statement of Mr. Waltz can be found in the Appendix on page 31.]

OPENING STATEMENT OF HON. JOHN GARAMENDI, A REPRESENTATIVE FROM CALIFORNIA, RANKING MEMBERS, SUBCOMMITTEE ON READINESS

Mr. GARAMENDI. I thank you, Mr. Chairman.

Looking at our witnesses, we have been here before, haven't we? But there is much more to discuss.

I will continue our conversation as we work through the myriad of issues facing our portfolio. We would ask ourselves whether we have the right balance between the CoCOM [Command Combatants] requirements and service priorities.

As the subcommittee with the oversight over both military construction and the majority of the operation and maintenance budgets we must ensure that service requirements such as barracks, renovating unaccompanied housing, modernizing our nation's research programs, development testing evaluation, infrastructure, on and on, that we do not continue to sacrifice those for the so-called higher priorities.

Our investments in the Pacifics will be worthless if we cannot recruit and retain talent. How can we expect to do that when we continually send the message that our most precious resource, our people, are our last priority?

I will go back to the statement that the chairman made about barracks a moment ago. Resiliency is another area in which this committee has been focused for years, whether it is ensuring our installations are resilient to hurricanes, wildfires, ice storms, earthquakes, or building resiliency into our installations' power sources to guarantee that the bases from which we execute critical missions and projectiles can perform those missions in the event of power interruptions, whether natural or manmade.

To date these efforts have been overwhelmingly bipartisan.

Another area of bipartisanship has been the Department's operational energy programs. These programs seek to increase the range and on-station time by lowering the fuel consumption and providing more survivable weapons systems, less dependent on contest logistical lines. We learned that lesson in Iraq, Afghanistan, we are watching it play out in Ukraine, and will absolutely be a factor in the Pacifics.

That is why I was a bit disappointed -- no, really disappointed that the fiscal year 2024 defense appropriation contained a significant mark against what it characterized as wasteful climate change projects.

I just crossed out three lines here, Mr. Chairman, so to avoid conflict. So, I will just go on.

Because the cost avoidance and increase of on-station time for our operational energy programs also has the ancillary benefit of lowering greenhouse gas emissions, those programs were targeted for these cuts. That microgrid was going to allow our installations to island for perhaps 10 days or more, continuing the installations' critical missions uninterrupted -- it, too, might be cut -- if it happened in some way to update an old inefficient diesel generator.

Over the years, this subcommittee has endeavored to dismantle the false and ultimately dangerous idea that programs can be either good for readiness or good for the climate. Actually, it can be good for both. And I think we have proved that in many, many ways. And I would hope that we would continue to do so.

Finally, I would be remiss if I did not note the significant continuing investments in my favorite subject, the Sentinel, Ground Based Strategic Deterrence System, that is contained in the President's Budget Request despite the ongoing Nunn-McCurdy process. It is mostly where I have been on this program -- skeptical, to say the least -- since it is a major MILCON [Military Construction] issue. It is before this committee.

I find it particularly galling that the President's Budget Request continues to invest billions, including 700 million in military con-

struction funds, when we are only midway through the mandatory statutory mandate to review the Sentinel program in whole and then make a decision about how we continue.

I guess maybe I just disagreed with the President. Does that make you happy, Mr. Chairman?

Mr. WALTZ. Speak your mind.

Mr. GARAMENDI. Thank you.

With that, I yield back.

[The opening statement of Mr. Garamendi can be found in the Appendix on page 32.]

Mr. WALTZ. Thank you, Mr. Garamendi. Appreciate the candor. And over to our witnesses.

We have The Honorable Brendan Owens, Assistant Secretary of Defense for Energy, Installations, and Environment;

The Honorable Rachel Jacobson, Assistant Secretary of the Army for Installations, Energy, and Environment;

The Honorable Meredith Berger, Assistant Secretary of the Navy for Energy, Installations, and Environment, and;

The Honorable Ravi Chaudhary -- Chaudhary, excuse me. I got it wrong. I thought I got it right last time. Assistant Secretary of the Air Force, Energy, Installation, and Environment.

And over to you, Mr. Owens, for your opening remarks.

STATEMENT OF THE HONORABLE BRENDAN OWENS, ASSISTANT SECRETARY OF DEFENSE FOR ENERGY, INSTALLATIONS, AND ENVIRONMENT, OFFICE OF THE SECRETARY OF DEFENSE

Secretary OWENS. Thank you, Chairman.

And I agree with your statement earlier about the fact that these discussions have been both constructive and critical for the warfighters.

Chairman Waltz, Ranking Member Garamendi, distinguished members of the subcommittee, thank you for the opportunity to discuss the President's fiscal year 2025 Budget Request for the Department of Defense energy, installation, and environment programs.

We appreciate this opportunity to engage on how this budget request supports our efforts to address the issues we discussed a few months ago, particularly quality of life issues for our service members, as well as other critical priorities within the portfolio.

When we spoke in February, I discussed how we were working with the military departments on three lines of effort to guide our infrastructure investments: adopting human centered requirements; optimizing our footprint; and transforming our portfolio management. The Department has codified these priorities into the Resilient and Healthy Defense Community Strategy which will ensure that our spaces are healthy, safe, functional, resilient, and enhance the quality of life and readiness of our service members, their families, and the civilian workforce.

The RHDC lays out key strategic enablers that underpin these efforts. And we look forward to sharing with this committee, working in partnership to deliver on these quality of life improvements.

Together, our efforts will drive changes across the Defense Infrastructure Enterprise and ensure that it is managed as a strategic asset to promote the well-being of our total force.

To that end, we are requesting \$15.6 billion for military construction across the Department. This includes \$1.8 billion for facilities that will enhance and support quality of life, including child development centers, unaccompanied housing, health care and dining facilities, and schools.

To provide ongoing support for our existing facilities, the Department is requesting \$13.6 billion in facility sustainment funding, and \$6.3 billion in restoration and modernization funding. To ensure these investments are optimized for readiness and quality of life we are working with the DoD components to transform our military construction processes and adopting a sustainment management strategy to support consistent and sustained delivery of high-performing assets.

For housing specifically, we are requesting \$2 billion for family housing construction, operations, and maintenance, and nearly \$1.1 billion for unaccompanied housing projects.

These investments, synchronized with the efforts of the Tiger Team we established in February, will support our efforts to enhance our oversight of the portfolio. We have a lot of work ahead of us, but we are all committed to getting after it.

Reliable, adaptable, and resilient energy remains essential to military capability and readiness. And we are requesting \$3.8 billion for installation energy, and \$3.6 billion for operational energy to enhance resilience and ensure the Department is postured to fight and win in contested environments.

But, a resilient, mission-ready installation is much more than just what is inside the fence line. Partnership with the defense -- with the communities that support our installations is critical, as is responsible stewardship of the environment. I am pleased to note that we have begun our transition from AFFF [aqueous film-forming foam] firefighting foam to PFAS [perfluoroalkyl and polyfluoroalkyl substances]-free alternatives. And the military departments are executing plans ensuring a safe transition that does not degrade readiness.

We are requesting \$1.6 billion for our environmental clean-up programs to support our efforts to address risks to human health and the environment from past DoD activities, including nearly \$300 million for PFAS clean-up.

While we are making progress, EPA's [Environmental Protection Agency's] new drinking water rule will significantly increase the amount of PFAS-impacted drinking water that DoD treats, both as a water purveyor and under its clean-up program. These efforts, in addition to PFAS-related cost increases to other programs will require significant resources over the coming years. And we will rely on a partnership with Congress to address these new requirements.

As we continue to ensure our installations are healthy and resilient places that support our ready -- support readiness of our current and prospective service members, we greatly appreciate your sustained attention to and support for these critical priorities.

We stand ready to work with this committee to continue aligning our policies and resources to support the National Defense Strategy

and the readiness and quality of life of our soldiers, sailors, airmen, marines, guardians, and their families.

Thank you. And I look forward to your questions.

[The prepared statement of Secretary Owens can be found in the Appendix on page 35.]

Mr. WALTZ. Thank you, Mr. Owens.

Ms. Jacobson, for your opening statement.

**STATEMENT OF THE HONORABLE RACHEL JACOBSON, AS-
SISTANT SECRETARY OF THE ARMY FOR INSTALLATIONS,
ENERGY AND ENVIRONMENT, DEPARTMENT OF THE ARMY**

Secretary JACOBSON. Thank you, Chairman Waltz, Ranking Member Garamendi, and distinguished members of the subcommittee for inviting me to present the Army's fiscal year 2025 budget for installations, energy, and environmental programs.

The readiness and resilience of our force starts with providing our soldiers and families with high quality places to work and live. We must also ensure our installations support reliable and modern infrastructure systems.

Working with Congress, we will continuously refine our planning and programming to make sure we have adequate funding to tackle these issues. From nine new barracks buildings, to four child and youth centers, the Army's fiscal year 2025 budget request will improve our soldiers' and families' quality of life.

Our budget request also includes important investments in operational facilities, including in the organic industrial base that are critical to ensuring our soldiers are trained, equipped, and ready to defend our nation.

Our 2025 budget request will allow the Army to continue to address significant risks to our energy and water infrastructure. Through conservation, innovation, and collaboration with third parties, the Army is upgrading our installation utilities infrastructure. But much more needs to be done.

The Army recognizes that we have a sizeable backlog of deferred maintenance needs for hundreds of thousands of buildings. This deferred maintenance, which emerged over the course of many years, has serious repercussions, as we have seen with barracks. We welcome the congressional focus on these issues, as evidenced in both the 2024 NDAA and the recent Quality of Life Report.

Simply put, any increase in our inventory of poor and failing barracks, for any reason, is unacceptable and must be reversed. And barracks that are in good condition must stay that way. That is why the Army is requesting 100 percent of the funding required for barracks sustainment.

We are also taking a number of steps to improve the soldier experience in new and renovated barracks, both in living spaces and communal areas.

To build ready installations of tomorrow we must consider resiliency today by modernizing how we construct and operate our buildings. It is important to think critically during the design phase of a building how it will function efficiently and perform under adverse conditions throughout its lifecycle.

For example, early consideration of the building's location can mitigate environmental risks such as flooding. Constructing with

more durable materials will help the building last longer and reduce repairs and maintenance costs.

These up front considerations will make our buildings more resilient and ready to support the Army of the future.

The Army's 2025 budget request also reflects operational energy and research development initiatives that will give our Army a competitive advantage over our adversaries. From exploring options to hybridize our fleet, to building mobile and modular expeditionary energy systems, investing now in operational research and development will promote readiness tomorrow.

Tactical vehicles of the future will go further, operate longer, be less detectable in the contested global environment, and they will reduce our logistical tail by avoiding the need to haul fuel convoys across the battlefield.

We must also ensure that contamination emanating from our installations does not pose health risks, both on or off base. The Army welcomes the regulatory certainty in the newly promulgated Safe Drinking Water Act standards of PFAS, and we stand ready to comply.

Through the investments reflected in our fiscal year 2025 Budget Request, the Army seeks to improve soldiers' quality of life and operational effectiveness. We look forward to working with Congress to build and maintain the installations of the future.

Thank you. And I look forward to your questions.

[The prepared statement of Secretary Jacobson can be found in the Appendix on page 65.]

Mr. WALTZ. Thank you for your opening statement, Ms. Jacobson.

Ms. Berger, for your opening statement.

STATEMENT OF THE HONORABLE MEREDITH BERGER, ASSISTANT SECRETARY OF THE NAVY FOR ENERGY, INSTALLATIONS, AND ENVIRONMENT, DEPARTMENT OF THE NAVY

Secretary BERGER. Chairman Waltz, Ranking Member Garamendi, and distinguished members of the panel, thank you for inviting me to come talk to you today about our fiscal year 2025 Budget Request.

We are grateful for the focus of this subcommittee and the House Quality of Life Council's Report, which reflects actions that uphold a sacred trust: to take care of our marines and sailors the way that they take care of us.

To fight and win, the Department of the Navy requires ready, reliable, and resilient installations. And that includes the buildings, systems, environments, and assets that comprise them. The majority of our infrastructure, whether barracks, utilities, or our public shipyards is not in the shape it should be. As an institution, we have allowed these assets to degrade over time. We have accumulated and deferred significant risks, and allowed the risks to accumulate and compound.

And the adversary always has a say. Whether we are talking about kinetics and components, or water and weather, we have seen increased external impacts that reduce our ability to be resilient and respond, with the emerging urgent frequently overtaking the enduring important in a constrained funding environment.

No matter what the cost -- excuse me, no matter what the cause, the cost is readiness. And our soldiers and Marines shoulder the consequences.

As I talk about the EI&E [energy, installations and environment] portfolio, I often talk about communities, critical infrastructure, and climate action. What I am talking about are our people, our power projection platforms, and making sure that both are ready, resilient, and survivable. This is mission critical.

A sailor or marine recruited and retained that is healthy, safe, and trained, with a physical space that supports the mission, will return infinitely more value to our warfighting force than the dollars that it will cost. Lockstep with my Navy and Marine Corps teammates we are prioritizing projects that assure mission with the funds we receive.

The Navy and Marine Corps are taking steps to improve how we resource these critical requirements through the Installation Investment Plan and the Facilities Investment Strategy respectively. These efforts inform the development of the Department of the Navy's 30-year infrastructure plan, which looks at the interdependencies among projects through mission assurance in order to prioritize and sequence necessary investments in the infrastructure, both natural and built, that keep our people safe and project power around the globe.

A budget -- and, Mr. Chairman, you make this note often -- is an investment in institutional values that happens over the course of years. Our fiscal year budget request puts executable priorities in place to build on the past and anticipate the future, and keep on task in the time in between.

While we do not include MILCON for barracks or CDCs [child development centers] in this year's request, we gratefully moved faster on the barracks and CDCs Congress pulled forward last year, and we anticipate eagerly the 13 CDCs and 10 barracks that will be across the fydp [Future Years Defense Program].

In between, we use our FSRM to its highest and best use.

The Department of the Navy is focused on the essential warfighting, readiness, and quality of life support that naval facilities provide.

From the Marine Corps Barracks 2030 and their wall-to-wall inspection just completed, the Navy's decisive investment in the Shipyard Infrastructure Optimization Program, to strengthening relationships with communities, tribal and indigenous partners, and enhancing quality of life and resilience through the improvements to energy, water, and wireless, we are using authorities and policies to make our appropriations go farther.

Above all, we strive to ensure that we are good stewards of every appropriated dollar. The Marines recently completed a third party audit that lasted two years, which qualified them as the first service that has received an unmodified audit opinion in the Department of Defense.

The Marines are leading from the front. The audit shows that we are accountable for the dollars spent.

Our Navy and Marine Corps respond when the nation calls. Around the globe, around the clock our enabled forces are where

they need to be when they need to be there because of the critical readiness enablers across the EI&E portfolio.

I am grateful to the sailors, marines, civilians and their families who answer the call, and to you for supporting them. They are trusting us to get it right.

Thank you for the chance to work with you to do just that.

[The prepared statement of Secretary Berger can be found in the Appendix on page 82.]

Mr. WALTZ. Thank you, Ms. Berger. Appreciate your opening statement.

Mr. Chaudhary, over to you.

**STATEMENT OF THE HONORABLE DR. RAVI I. CHAUDHARY,
ASSISTANT SECRETARY OF THE AIR FORCE FOR ENERGY,
INSTALLATIONS, AND ENVIRONMENT, DEPARTMENT OF THE
AIR FORCE**

Secretary CHAUDHARY. Chairman Waltz, Ranking Member Garamendi, and members of the Readiness Subcommittee, thank you for the opportunity to discuss the Department of the Air Force's energy, installations, and environment programs for fiscal year 2025.

The Department recognizes that we are in a decade of consequence, an era of Great Power competition in which the impact of our installations has become crucial to our ability to project combat power. Our adversaries have committed to using both kinetic and non-kinetic means to cripple infrastructure nodes.

As Secretary Kendall recently stated, we are out of time. Whether in the CONUS [continental United States] or abroad, we must ensure vital infrastructure at our installations is resilient, survivable, and ready to meet the demands of more sophisticated threats posed by China or even Russia, who have demonstrated their ability and intent to weaponize energy resources in their aggression against Ukraine.

First, I would like to thank the members of the Readiness Subcommittee for your support in meeting this imperative. Our fiscal year 2025 budget focuses on ensuring we can equip our airmen and guardians with the tools they need to effectively execute their mission. More importantly, we owe them modernized facilities and quality housing that is befitting of their service.

Last year's initiatives marked the beginning of a transformative strategic effort at the Department designed to ruggedize our installations for integrated deterrence and resilience in the face of Great Power competition. To maintain our cadence of modernization programs, we are requesting a total DAF [Department of the Air Force] MILCON investment of \$3.45 billion through the fiscal year 2025 President's Budget.

This is \$371 million more than the fiscal year 2024 requested amount. Pending passage of an appropriation, these MILCON funds will support combatant commanders in their most critical requirements, to include bed down of new weapons systems like B-21, F-35, C-130J, and T-7 Aircraft.

This effort also includes large-scale investments in the Indo-Pacific, like Tinian, where we will be applying agile combat employ-

ment techniques that complicate the targeting solutions for potential adversaries.

We are also securing critical investments at our Space Force installations where mission ready resilient facilities are integral to the Space Force's readiness and effectiveness. Our Spaceport of the Future Program, which optimizes range costs and launch throughput will receive \$77 million in MILCON, primarily for planning and design, and \$84 million in operations and maintenance.

Upon my confirmation in March, I made it my personal mission to ensure our airmen, guardians, and their families have housing befitting of their service. I visited over 30 bases and conducted detailed focus groups with our youngest airmen, guardians, and their families to garner their feedback. As a former Air Force officer and pilot, I have lived in military housing, to include raising a family during the transition to privatization.

My service has given me first-hand knowledge of how housing can impact quality of life for our personnel. And as a concerned parent of an Air Force officer candidate, I can tell you that there is no issue that is more personal than this one.

That is why I am proud to share that in fiscal year 2025 the DAF requested 1.1 billion for housing, dormitories, and child development centers, to include all new dorms at joint bases in Virginia and Texas. This is part of a \$1 billion FSRM investment from fiscal year 2022 to fiscal year 2026 to improve the condition of our dormitories that nearly triples the investment over the previous five years, and is the largest dorm investment in over a decade.

Additionally, as the Department of Defense's largest fuel consumer, the Air Force is implementing groundbreaking approaches to improve operational energy efficiency. One of these initiatives is our blended wing body aircraft, a novel new aircraft design projected to lower fuel consumption by 30 percent.

We are also investing in advanced winglets, engine blade coatings, and 3-D printed microvanes that will reduce fuel use by millions of gallons.

Once these and other projects are fully implemented, we project annual fuel savings of 75 million gallons, roughly \$300 million in savings.

Increasing our range and endurance will have a crucial impact in operations in the Indo-Pacific where the tyranny of distance can have a dramatic impact on our geostrategic position in the region.

Finally, we recognize that in the high-end fight our installations can no longer be considered a sanctuary. As a result, we are transforming our installations with all new resiliency initiatives designed to reduce electrical grid stress, bolster cyber resiliency with microgrids, and new energy storage capabilities.

We are also pursuing redundant power sources like geothermal, small modular reactors, and wind. These capabilities are designed to harden installation infrastructure and enable commanders to fight the base for extended periods.

As an example, Kadena Air Base recently installed a microgrid funded by energy efficiency savings. This capability ensured full power on the installation during a typhoon, a testament to the resiliency that can be achieved when we invest in innovative technologies.

I will close with a quote from General Henry Hap Arnold, who declared in 1941 that air bases are a determining factor in the success of air operations.

I agree. And add that investments in our installations today could prove to be the margin of victory in Great Power competition, a competition in which we dare not come in second place.

Once again, thank you for your support of our airmen and guardians. And I look forward to your questions.

[The prepared statement of Secretary Chaudhary can be found in the Appendix on page 106.]

Mr. WALTZ. Thank you, Mr. Chaudhary.

And I will go ahead and kick off the questions. And in the interest of time, members, stick to the 5 minute, for both of us, if that is okay with you, Mr. Garamendi.

So, let's talk about EUCOM and our bases that are still running on Russian gas, which I just find mind-blowing that we have to talk about this, and that, frankly, that Congress is having to push the Department on this. One would think that this would be something the Department would be pushing itself on.

But, nothing like a good visual that shows the supply chain and our bases in Baumholder, in Heidelberg, in Hohenfels. This is a joint issue in Stuttgart, Aviano, Vicenza, Ramstein. I mean, even our bases that house NATO [North Atlantic Treaty Organization] are running on Russian gas.

And I know there have been some efforts. But what is really amazing -- actually the Washington Post just had some good investigative reporting -- it is now being exported through the Black Sea, going into refineries in Turkey and Greece. And then, voila, it is now no longer Russian-provided oil and gas, it is now NATO gas. But at the end of the day the dollars are going to fuel Putin's war machine.

So, this is a much more complicated issue than just giving Ukraine the munitions it needs. We are fueling Russia. Taxpayer dollars are fueling Russia's war machine. And we have a pretty amazing vulnerability.

So, since this is truly a joint issue, Mr. Owens, we have language in the fiscal year 2023 NDAA, all we asked for was a plan to get us off Russian gas in the next five years. And we still don't have the plan.

So, what is the status, Mr. Owens? If you could speak more broadly, why do we have -- I know we are reliant on local grids, but we are doing a lot of, a lot of kind of back patting here on base resiliency.

And to my friend Mr. Garamendi's point, here is a perfect example of where a climate agenda and operational agenda you get two for one: you are off of gas, you are off of oil, and you get an operational resiliency. And, gee, you start impacting Putin's war machine for which we are asking the American people to keep digging deeper and deeper into their pockets to combat against.

Over to you.

Secretary OWENS. I certainly appreciate your focus on this issue. Last week, we did a swing through EUCOM, AFRICOM. We met with leaders in Wiesbaden, Stuttgart, and at Ramstein.

And, this was a significant point of conversation everywhere we went because of the types of graphics that you're showing right there.

One of the things I am encouraged by, is that this is not something that when -- this is not, at this point, something that OSD [Office of the Secretary of Defense] is bringing up and catching our installation commanders and their energy folks off guard.

They are leaning in. They are settling on this issue. It is a challenge as they look at how they engage in the operations of their buildings and the resilience of the installations themselves. And, in the way that they're posturing themselves to bring the energy resources that they need, increasingly closer to the fence line.

I was encouraged by one particular conversation I had with the interview team at Ramstein, that was looking outside the fence line and looking to really partner with the utility providers.

Mr. WALTZ. Mr. Owens, just in the time I have, I appreciate that you're having conversations and looking at it. The law asked for a plan to change this.

Not next month, I mean, in five years, to change this dynamic. What is the status of this Committee receiving this plan, particularly as we continue to spend billions of our constituents' dollars?

Can you imagine if I took this to one of my town halls right now as we're talking about billions and billions going more to Ukraine. And, that their money is basically fueling the other side of the war through our bases. And, oh by the way, making our service members vulnerable.

So, what's the status of the plan? I need to move onto another topic.

Secretary OWENS. The plan is under development. I'll come back to it as specific --

Mr. WALTZ. It's late. So, what's the --

Secretary OWENS. I'll be happy to come back to you at a later date with it in the timeline.

Mr. WALTZ. I'd appreciate an answer this week, at least with the timeline.

Secretary OWENS. Understood.

Mr. WALTZ. At least with a goal. Thank you. And, I had an amendment in the last, the '24 NDAA. Again, I can't believe that Congress needs to push this, weaning our clean energy programs off of Chinese Communist Party production.

So, can you speak to what the Department is proactively doing to encourage investment in domestic or allied, for that matter, energy capabilities and production sources?

I'll stick with you, Mr. Owens. These are really -- these are really Department-wide issues.

Secretary OWENS. Agreed. And, thank you again, for raising this point and giving us this, the opportunity to engage around this.

We have been working through the interagency, through the Federal Consortium for Advanced Batteries and with our partners in industrial-based policy, to onshore and friend-shore the critical production of the energy resources that we are going to be relying on.

One other thing that I'll highlight is that in a recent CFE [carbon pollution-free energy] procurement that DoD and the military

departments engaged in, we did have -- we did hold the developer accountable on made in the U.S.A. solar panels.

So, we are moving forward and really focused on making sure that we are doing everything we can to send the correct market signals. So, that these companies that are moving forward domestically are going to be rewarded.

Mr. WALTZ. Great. That's positive news. Final question, and I know, Mr. Garamendi, I went over my own rule here.

But, this is critical because of the years and years of backlog and deferred maintenance. So, now that we have the FY25 request, can you confirm that FSRM lines were requested to meet 100 percent of the requirement for unaccompanied housing?

I'll go to each service.

Secretary JACOBSON. For the Army, the answer is yes.

Mr. WALTZ. What about, what would be the cost for the Army to address the backlog?

Secretary JACOBSON. It would be multi-billions. I don't have the exact numbers here.

Mr. WALTZ. Can you come back to the Committee with that number?

Secretary JACOBSON. Yes, sir.

Mr. WALTZ. Thank you. Ms. Berger, 100 percent unaccompanied housing?

Secretary BERGER. For the Navy, yes. For the Marine Corps, under the capital planning tool, it's a deviation from 100 percent to make sure that we are applying all of those funds to include demo.

And so, as we do an assessment, we make sure that we are applying it across the board in a way that puts every dollar where it counts.

The capital planning tool, which I'd be happy to come brief you on --

Mr. WALTZ. Mm-hmm.

Secretary BERGER. Looks at sustainment in a different way. And so, we have maybe sustained it at 100 percent in a different approach that I would give you a full brief on when there's more time --

Mr. WALTZ. Okay.

Secretary BERGER. Under the Marine Corps capital planning tool.

Mr. WALTZ. So, that's not 100 percent of the requirement? Or, we don't --

Secretary BERGER. There are items on the UPL [unfunded priority list] this year that we could move, left with more opportunity. A little bit of sequencing was off.

But, we're trying to make sure that we are moving it forward with what we did request to keep going forward.

Mr. WALTZ. I'll take that as a yes for Navy and a no, to be explained, for the Marine Corps.

Secretary BERGER. Yes.

Mr. WALTZ. Air Force? Oh, I'm sorry. And, please come to the Committee with what the backlog number is. Thank you.

Secretary CHAUDHARY. Mr. Chairman, we're at 100 percent on unaccompanied, a backlog of \$46 billion. We're going to get it with -- by tripling our demo rate.

And, when I say backlog of \$46 billion, that's the total of all of our assets. So, we're going to get at that by reducing our inventory and utilizing privatization to reduce the denominator so that those backlogs go.

So, turning over things with privatization activities allows us to reduce that backlog. But, also, we're roughly quadrupling our demo from roughly \$30 million a year to about \$140 to \$160 million per year across the FYDP.

Mr. WALTZ. Okay. Great. That sounds smart. But, that is a pretty astounding number.

Over to you, Mr. Garamendi.

Mr. GARAMENDI. Mr. Chairman, thank you for that line of questioning. And, if the witnesses could provide to the Committee specific information on your plans for the privatization expansion for both accompanied as well as unaccompanied housing and how you might carry that out.

We know we have a squaring issue on a lot of that. But, please come with as much detailed information as you could.

I wasn't going to go back into the Sentinel. However, Mr. Chaudhary, I shall. So, I read your statement. And, you say the need remains to recapitalize the over 50 year old ICBM [intercontinental ballistic missile] system.

The Nunn-McCurdy process is specifically designed to answer that question, is it needed? What are the alternatives? What will not be done, if we spend \$130 billion?

I think, I never shared with you the \$130 billion cost of the Sentinel going forward does not include the weapon systems themselves. That is the bombs and the pits and so forth.

So, that would be added. And, that's probably another \$20 to \$30 billion there. However, the cost of a B-21 is about \$700 million.

Simple math would indicate you could almost get 180 B-21s if you did not spend \$130 billion on the Sentinel. Just something to think about for deterrence purposes.

I think I'll go back to local issues. After all, the encroachment issue is a very real one. We've talked extensively about Travis Air Force Base, and the new city being built next to it, and so forth.

I appreciate the Air Force, them very quickly coming forward to assist in trying to figure out what in the world is going on there. However, Secretary Jacobson, did you know you have a problem at the MOTCO [Military Ocean Terminal] facility?

You do. Overlooking the MOTCO facility, which is the principal way in which the military will move munitions from the West Coast of the United States, presumably through the west.

Overlooking directly within a few hundred yards of that facility, which is a very high security, secret facility, is public land, excuse me, private land that could become a development and could easily see exactly what's going on at MOTCO. Which I suspect our adversaries would like to know.

So, let's pay attention to this issue. It's not just the two that I've raised, Travis and MOTCO. But, it goes beyond most of our bases.

And, I would suggest there are strategies that we could use, principally the purchase of easements. Not necessarily the purchase of the land, but rather the purchase of the easements. And, let the landowner then maintain the land.

So, I'll let that one go there. We do have a problem, Ms. Berger, Mare Island, doing cleanup. I'll use this as an example of cleanups that need to be done almost everywhere for every department.

Muir Island, we're looking to transfer the land. But, we've got to finish the cleanups. You and I talked about this in detail. I won't take much time here to raise the issue.

But, please get on with it. We want to get that transfer done. Get that land off the military books. There's more to be done there as the Navy tries to figure out how to and where it might repair more ships that are likely to be in the Pacific.

For the other Assistant Secretaries, please keep in mind this issue is really worldwide. And, you did talk, all of you, about the PFAS and the issues there.

I'd be very interested in hearing the technology that you intend to use to meet those requirements, those cleanup requirements. I am not sure that that really exists.

With that, I think I'll let it go. Mr. Chairman, thank you for the hearing. Well, excuse me, I've got 29 seconds. Mr. Chaudhary, \$700 million is a down payment on one of the most expensive MILCON projects ever, otherwise known as the Sentinel Silos Command Control, on and on.

Do you have any notion of what is the actual MILCON expenditure over the next decade or so?

Secretary CHAUDHARY. Ranking Member Garamendi, we are currently letting the Nunn-McCurdy process conduct their analysis.

But, we will have a number of facility folks, one of my staff members will be engaging in that process. And, we'll be looking at that very subject.

So, we look forward to reporting to you what the result of that is and what the future projections are on the facilities. We do anticipate, in all transparency, for it to grow, as you know as well.

But, we'll let the Nunn-McCurdy process execute that analysis and give us a report.

Mr. GARAMENDI. I'm not sure we've ever seen a real baseline number. But, yes, we do need that specific information.

Mr. Chairman, I yield back.

Mr. SCOTT. [Presiding] The Chair now recognizes Mr. Moylan for five minutes.

Mr. MOYLAN. Thank you, Mr. Chairman. Secretary Berger, thanks for visiting my office. Once again, I appreciate it.

And, there are Navy leaders who have relayed to me that forces are preparing the breakwater. And, I've been told that this piece of infrastructure is at risk of failing, which in turn would destroy Guam's civilian harbor.

However, the breakwater is also very important to the Navy. So, could you please explain why fully funding a repair of the Guam breakwater is the Navy's number two unfunded priority?

Secretary BERGER. And, it was very nice to visit with you as well. And, this is an unfunded priority because of the timing of it.

And so, we weren't able to get the submission in the right way. But, the \$600 million that you see there, as you rightly note, is for where the Navy has issued ownership of that breakwater.

And so, this would be funding that we would be able to obligate within the year and be able to move forward and execute on to

make sure that we are taking care of the infrastructure that supports not only the Navy's work, but is shared in this space of the government, the community. And then, go forward.

We will have some challenges, I will note, that we will prioritize as we think about material and the support of workers and construction.

Thank you to all of Congress for making sure that we did have the extended H2B Visas, which helps us think about how to manage work across Guam that we will need to do. But, a priority and one that we will be able to execute on if funded.

Mr. MOYLAN. Thank you. You also answered my second question. But, my third and last would be, Secretary, a centralized energy storage system is necessary to provide steady shore power for the Virginia Class submarines on Guam.

Investing in the power grid infrastructure would also support resilience for the island civilian population and reducing the amount of load shedding my constituents' experience.

Would you advocate the Department of Defense enter and negotiate partnership with the Guam Power Authority to install a centralized energy storage system sufficient to meet such a critical need, and in general, could more be done to work with the Guam Power Authority?

Secretary BERGER. Yes, Representative Moylan. We've seen some very good results of exactly the construct that you describe.

A near example is in Hawaii, where we've been able to combine resilient and renewable energy with battery storage, to ensure that not only the mission has the energy that it needs, but also the community has the energy that it needs. And, it works exactly as you say, by working with our utility, our energy providers.

And so, this is something that very recently my office, representatives went out to spend time with Guam Power and make sure that we understood both the requirement and the way forward.

And, certainly, something that we are learning more about considering and are to continue working with Guam Power to make sure that we are thinking together on that. And, I would welcome the opportunity to show you some of the places that we've had successes.

Mr. MOYLAN. Thank you for the invitation. And, thank you to the panel. Mr. Chairman, I yield back. Thank you.

Mr. SCOTT. The Chair recognizes Ms. Sherrill for five minutes.

Ms. SHERRILL. Thank you so much. And, I was happy to hear the Chairman mention our labs. Certainly, if we are going to continue to attract the best and brightest, we need cutting-edge research facilities.

But, I'd like to talk a little bit about the increased rate and severity of natural disasters. Due to the changing climate, they're impacting our installations, our readiness every year, impacting our national security as a whole.

So, I understand that in the FY24 installation resilience and energy accounts, they were targeted, as we heard from our Ranking Member, as quote, wasteful climate change programs.

And yet, as we've heard in many hearings over the years, including on this Committee, these programs are critical for building both

energy and extreme weather resilience and mission assurance at our domestic installations.

And, developing operational energy programs that increase on-station time and mitigate contested logistic challenges with near peer competitors.

So, first Secretary Chaudhary, then Secretary Jacobson, could you talk about how these cuts could impact readiness?

Secretary CHAUDHARY. Thank you Rep Sherrill. I appreciate it. And, I would say in joint base at your home state of New Jersey, where we are installing and investing in a microgrid, using an energy service performance contract.

At that location, the power demands at a joint base as they have become a joint base, I've experienced it myself, because I was stationed there many, many years ago and flew C-17s out of that location.

But, the partnerships required also required a tremendous amount of understanding of the, of layered power structures within that installation. And, installing a microgrid will allow you to do a number of things.

One, it allows you to add energy storage capability. Should the lights go out due to grid stress, it allows you to have key redundancies that allow you to keep power moving.

Second, it allows you to island from a local community. If a civil unrest is being disrupted by unfriendly adversaries, then you can island from that location and then get the jets out of town.

As you know, C-17s are key to mobility and activating our response in any threat, anytime, anywhere. So, getting those jets out of town is critical.

By having a microgrid, you can get those jets out of town, because you can island from other disruptions, store your power, and then get the jets out of town and then, resume operations.

The other -- and then, once you have that installed, you can train to that standard. You can conduct energy resilience readiness exercises that allow you to find gaps, understand where critical redundancies need work, and evaluate yourself.

And, that all occurs in conjunction with resiliency programs. Not to mention operational energy programs, when if you add small 3D printed microvanes to the side of a C-17, you could save millions and millions of gallons of fuel. And, that builds agility for the fight.

So, all these things in both portfolios add up to the criticality of building resiliency and how those climate funds can benefit our readiness going forward.

Ms. SHERRILL. Thank you so much. Certainly, in a state like New Jersey, which has withstood super storm Sandy, and we see attacks on our pipelines from foreign adversaries. So, you can imagine an attack on our grid.

Having those microgrids and the resiliency they provide, as well as you were suggesting, being able to meet some of the logistics challenges with some of these technologies, is something I hear requested from many of our services.

Ms. Jacobson?

Secretary JACOBSON. Thank you very much for that question. And, just to address also, you were interested in the labs. I know we talked about this last time.

I just wanted to report that in our five-year program, we do have a substantial investment for Picatinny Arsenal. So, I'm glad to report that.

Our investment, which some had tagged as climate change investments, and therefore were reduced from the FY24 budget or eliminated, I should say, they're about readiness. It's about resilience.

Congress has directed us in previous legislation, to maintain ready and resilient installations. And, that's what this is about.

The vulnerabilities to our power, and not just from severe weather, sometimes they're from manmade vulnerabilities. There was a shooting at a substation at Fort Liberty that caused a loss of power to 45 thousand people for several days.

We can't afford to lose power. If we lose power, we lose training. With respect to severe weather, if our bases are inundated with flooding, for example, as was West Point last summer. In this very severe storm where West Point was the epicenter, West Point lost power. There's at this point over \$200 million of damage and counting.

So, this is about keeping our bases resilient and ready to train. Operationally again, this is -- everything we're doing operationally for hybridization and future, potential future electrification of our tactical vehicles.

Not now, it's operation. It's meant to be, right now it's research. It's meant to improve combat efficiency. It's meant to save fuel.

It's meant to make sure that our vehicles of the future are silent, are faster, don't have a heat marker, and make the war fighter more ready. We would never, ever compromise the effectiveness of our mission, ever.

Mr. WALTZ. Thank you, Ms. Sherrill. Mr. Scott?

Mr. SCOTT. Mr. Chaudhary, I represent Moody Air Force base in Valdosta. I also represent Robins Air Force Base in Warner Robins, Georgia.

And, it's one of the three depots. And, as you know, these are extremely important parts of our organic industrial base.

And, my question gets to just the general base infrastructure, these organic industrial bases are aging. And, what is the Air Force doing, from a strategic standpoint, with regard to the basic structure at those depots?

Secretary CHAUDHARY. Thank you for that question, Representative Scott. I really appreciate your question. I was actually stationed at Robins Air Force Base at the depot in my career.

So, I understand the value of what the depots provide. You can't win a war without the type of sustainment capability that our nation provides. And, our three depots provide that.

I was there through the transition wherein the C-5 depot workload came to Warner Robins. And, what a great boon that was. Those incredible hangers that overlay and accommodate overhaul work, and now being operated on C-17s, is absolutely critical.

The amount of work that goes in at our depots is critical to our nation. And so, that's why the Air Force in FY25 is going to be investing roughly \$700 million in infrastructure at our three depots.

I believe the portion that goes to Robins is roughly \$230 million. I can double check and get that to you. But, I had a chance to visit

Robins in the fall. And, looked at some of their industrial capabilities.

One there as it concerned me, was there were a number of boilers there that are at the end of their life. They've been rehabilitated and replaced. Several of them have been replaced, but the replacement did not go as well.

So, I'm going to not check into that. And, look at the health of that, because, I think, it's absolutely crucial going forward.

Mr. SCOTT. I'm going to move onto you Mr. Secretary. You know, as we talk about these military construction projects, even if it's simply the replacement of a boiler, it seems to take us significantly longer than it takes the private sector to get anything done in the DoD.

Not just in the era of construction, but pretty much in anything. I think, it took the Army ten years to pick a pistol out. Is that right? Somewhere around ten years?

And, yet most of the guys, if they have the choice of what they carry, they carry a different one than the Army picked.

Anyway, five years to turn the lights on from start to finish on a construction project. What is the Department of Defense doing to shorten that timeline?

Secretary OWENS. There are a number of initiatives that we have underway. Starting in 2018, I believe, it was the first time when our office started to look at MILCON reform as a significant opportunity to improve on turn time for projects.

That includes re-looking at the way we do cost estimating, re-looking at the way that we do programming, re-looking at the way that we are pushing forward with the Corps and with AFOTEC [Air Force Operational Test & Evaluation Center] to ensure that we are driving on those things.

I'd be happy to come brief you on specific things that our office is doing and to get down to really details.

Mr. SCOTT. Let me ask it another way then. So, in the states, with commercial buildings, sometimes not as big as what we have at DoD, but sometimes they are.

Dorms would be an example of something that a college campus would build, that we sometimes would build. We have hotels at Fort Moore.

Are we looking at the ability to allow the private sector to design, build, and lease back to us? They seem to be able to do it in a much faster, more efficient manner.

Have we looked at allowing the private sector to build and own the building, and lease the facility back from them for a certain period of time?

Secretary OWENS. Sir, I think you've picked two good examples. One, with unaccompanied housing, dorms, barracks. And, one with temporary, with lodging facilities, temporary lodging facilities.

And, the Army has done an excellent job of privatizing their lodging facilities. And, I think that that is a case study in terms of how we can leverage private sector speed and efficiency to deliver those projects.

I think to Ranking Member Garamendi's, and Chairman Waltz's, earlier remarks, his earlier comments about privatization for unaccompanied housing, we are definitely looking at how we can get

after that and decrease the beds, the dollar per bed unit costs that we are experiencing, or have experienced, traditionally.

Mr. SCOTT. All right. My time has expired, Mr. Chairman. Thank you.

Mr. WALTZ. Thank you, Mr. Scott. Mr. Vasquez from the great state of New Mexico.

Mr. VASQUEZ. Thank you, Mr. Chairman. Thank you to all the witnesses for taking the time to be here today. I have the privilege of representing New Mexico's Second District, home to Holloman Air Force Base and White Sands Missile Range.

And, as the only member of New Mexico's delegation to serve on the Armed Services Committee, I have a vested interest in all of New Mexico's installations.

But, today I want to talk about fixing the problem of unexploded ordnance on Tribal lands. In places such as the Pueblo of Isleta, which is in my District, just outside and bordering Kirtland Air Force Base in Albuquerque, our Tribal members have been unable to use over 35 thousand acres of their own sovereign land for decades due to the amount of unexploded ordnance left by the Department of Defense.

Now, this includes lands that the Tribe would like to use for farming purposes, for infrastructure building, for road building.

So, this not only impacts their ability to use their own natural resources and access significant cultural sights on their land, but it poses an economic hindrance to their advancement as a sovereign nation and poses an imminent safety risk to their community.

Now, the Department has taken some steps in the right direction, by creating the Native American Lands Environment Mitigation Program, to clean up UXO [unexploded ordnance] on Tribal lands. But, the Department, and this is what I hear directly from the Tribe, has failed to provide the partnership and the resources necessary to clean up these UXO on Tribal lands.

Mr. Owens, and Mr. Chaudhary, how can the Department do a better job of honoring the American Lands Environmental Mitigation Program and supporting Tribes like the Pueblo of Isleta, to prioritize cleaning up UXO and other contaminants to keep these Tribal communities safe and able to use their own sovereign lands?

Secretary OWENS. Thanks for highlighting this issue. And, I think that one of the things, and for highlighting NALEMP [Native American Lands Environmental Mitigation Program] as a program that we have established to do exactly what you're saying.

Our budget request for environmental cleanup programs this year is \$1.6 billion. I don't have the breakdown of how much of that goes to NLEMA. I'm happy to come back on that and provide that information.

And then, to work specifically on, with the constituents that you're talking with, to be able to make sure that we're resourcing that program and in the place that it is needed.

Mr. VASQUEZ. Thank you, Mr. Owens. And, if possible, I would love to facilitate a meeting directly with Tribal leadership so that we can get some type of timeline for this very last, this very large swath of land that is very critical and important to them, considering how small some of these Tribal territories are.

Secretary OWENS. Absolutely. Thank you.

Mr. VASQUEZ. Mr. Chaudhary?

Secretary CHAUDHARY. The only thing I'll add is you have my commitment to work with Tribal nations to make sure that we're partnering in the right way, we're engaging.

And, I look forward to meeting with you on this topic, as well as visiting, if I need to.

Mr. VASQUEZ. Thank you so much. All right. My other question, and New Mexico has a legacy of both contamination but also because of our nuclear legacy and missile testing, we have not just UXO, but of course, we're dealing with the show of RECA [Radiation Exposure Compensation Act] and uncompensated victims of nuclear testing in places in my District, right around the Trinity site.

But, we're also seeing now today, is increased PFAS contamination. In fact, there's a recent study that just came out that showed PFAS contamination in almost 100 percent of New Mexico's waterways.

And, a lot of this is attributable to Department of Defense activities at places like Kirtland, which had its bulk fuel facility jet fuel leak discovered in 1999. And, we're still trying to figure out how we're going to clean that up today and how we're going to fund that today.

Mr. Owens and Mr. Chaudhary, what is the status of the Air Force's efforts to work with local partners on the ground and agencies and communities to continue to clean up these contaminants?

Secretary OWENS. I'll start generally. And then, I'd ask Dr. Chaudhary to talk specifically to the Air Force piece. But, with the release of the new maximum contaminant limit for PFAS that EPA put out last week, this is a huge change in terms of the way the Department needs to engage around this specific issue.

So, we have been working in the anticipation of this rule coming out for the last eight months, to be postured to be able to understand the scope and scale of the challenge that we now face with these lower MCLs [maximum containment level].

And, we have been working in partnership with the military departments to put together that plan about how we're going to address these in a prioritized way.

And, I think that that is a, it's going to be a significant long-term, decades long-term challenge that we need to get after consistently and in partnership with the military departments. And, working with Congress to get the funding to be able to do that.

Mr. VASQUEZ. Thank you, Mr. Owens. I appreciate that. And, for the record, I'm also asking this Committee to include the reauthorization and expansion of RECA to include New Mexicans in their FY25 NDAA.

Thank you all for your great work and your dedicated service to our country. And, Mr. Chairman, I yield back.

Mr. WALTZ. Thank you, Mr. Vasquez. And, in the interest of time, since votes have been called, without objection, I'd like to change the clock to three minutes.

So, that, I believe, that will get us nine minutes. We've got ten minutes remaining. And then, we can hoof it over there.

Ms. Tokuda.

Ms. TOKUDA. Thank you, Mr. Chair. And, as you know, my District spans all eight of the major Hawaiian Islands, including Maui, which expands the horrific wildfires last August.

The Department of Defense played an essential role in supporting initial relief efforts and ongoing relief efforts. And, I would just like to Mahalo, especially the Army Corps of Engineers and so many who have worked on behalf of our community.

At the same time, the fires have spread a broader awareness of the challenges of pre-disaster mitigation and post-disaster recovery across our communities. And, as one of the largest landowners of Hawaii with significant and local impacts, people are looking at the Department of Defense as an important partner to help the efforts going forward to rebuild and recover.

So, my questions today relate to local opportunities by which the Department may be a helpful partner to our communities, while also improving installation resilience, readiness, and quality of life.

Dr. Chaudhary, as you know, the fire destroyed thousands of homes on Maui, making what is already a tight housing market that was challenging for locals to afford. That is also true for several dozen Department of the Air Force personnel and contractors assigned to the 15th Space Surveillance Squadron on the Island of Maui, tasked with essential space-related missions.

In this worsening housing crisis, we have heard antidotal reports that Maui residents unaffected by the fires, are losing their leases. Given that Department personnel on Maui were known to have challenges with securing housing prior to the fires, I am concerned about their situation after the fires.

Dr. Chaudhary, has the Department of the Air Force considered, or will the Department consider, creative housing solutions, including acquiring and developing government owned housing on Maui, to help provide housing stability for its personnel and contractors on Island, and to not further burden any of the private inventory we have for our residents?

Secretary CHAUDHARY. Rep Tokuda, I thank you for that question. The answer to your question is yes. What, I believe, my team is taking it, for the record, to make sure that we take a look at all the housing options.

We have a number of opportunities and capabilities within our quiver to address housing issues across our Department of the Air Force.

One of the victories that we've had is at Altus Air Force Base, Oklahoma, where we've partnered with the local community, established partnerships, and entered governmental service agreements that will allow us to do that. That doesn't mean that I would rule out a potential government housing opportunity.

But, what I would ask for your assistance with, is to work with your team to better understand what the tailored needs are within that particular market. And then, come up with a solution that works for members that are serving there and doesn't impact the community.

Ms. TOKUDA. Absolutely. I look forward to working with you on that. Just to touch upon one other issue. One of the reasons why the fire in Lahaina was so deadly, was limited road access. Once

blocked, it made it very difficult for entire neighborhoods to evacuate quickly.

And so, I would like to talk about Kolekole Pass, Kolekole Road, situated on Army/Navy property. Kolekole Road cuts through the Waianae Mountain Range and in a hypothetical disaster on the west side, could be a crucial evacuation route for those communities.

However, while there is a standing agreement permitting use of Kolekole in emergency situations, the road is not in proper condition to support a major evacuation. I know I cannot go on further.

But, Ms. Jacobson and Ms. Berger, I hope we can work with your Departments to improve Kolekole Road for maintenance and safety so that we can use this as a way to quickly evacuate our residents in times of need.

Mr. WALTZ. Thank you, Ms. Tokuda. Time has expired. Mr. Veasey?

Mr. VEASEY. Thank you very much. I want to ask some questions about some switching station issues that we've had in Fort Worth.

And, I was hoping that Ms. Berger, that you could answer specifically. Could you first explain why an electrical switching station is critical for base operations and mission readiness?

And, how does it support the overall functionality and security of a military installation?

Secretary BERGER. Yes, Congressman Veasey. Most broadly, energy is going to keep the lights on, keep everything working to make sure that the base can accomplish the mission.

Mr. VEASEY. So, my staff recently visited Naval Air Station Fort Worth. They were in town, some of the D.C. staff were in town recently.

And, the installation commander mentioned the most pressing issue was obtaining a new electrical switching station. The current station's infrastructure is very old and shuts down and causes power outage and water supply issues.

And, I wasn't sure if you were aware of that.

Secretary BERGER. I have become aware. Yes, Congressman.

Mr. VEASEY. Okay. And, given those concerns, can you commit to working with my office and collaborate on some sort of a plan to address those outdated switching station issues?

We could, you know, obviously make sure that nobody's safety is compromised and that the base can do everything that they need to be able to get done to address that?

Secretary BERGER. Absolutely. Yes, sir. And, you create the critical connection that we see, why resilience is so important for our bases.

So, I'm very eager to work with your team and the onsite team to make sure that we are scoping something going forward. And, this is another example of why energy resilience is so important for our installations.

Mr. VEASEY. Yes, absolutely. Thank you very much. I yield back.

Mr. WALTZ. Thank you, Mr. Veasey. Mr. Panetta?

Mr. PANETTA. Thank you, Mr. Chairman and Ranking Member Garamendi. Thank you for allowing me to join you today.

I want to, the three of you, I'm focusing on Ms. Berger right now, so you guys can just kind of zone out. But, just to let you know,

I want to thank Ms. Berger for her help to push forward the new Naval Innovation Center at Navy Post Graduate School in my District, the 19th Congressional District of Monterey, California.

You've worked very closely with the Secretary of the Navy, Secretary Del Toro, on the Naval Innovation Center, the NIC as I call it, which is part of his initiative to propel innovation by transforming how the DoD leverages the private sector and DoD innovation hubs to bring capabilities quickly.

Our adversaries understand that one of our greatest challenges is bringing solutions to the battlefield quickly. And, innovation is deterrence and directly affects the credibility of the United States to forestall China from taking aggressive action against Taiwan, deter Russia from expanding the conflict in Europe, and defending allies in the Middle East from Iranian aggression, as you know well.

The NIC will create innovative solutions by enabling interdisciplinary teams to curate, experiment, and collaborate on cutting edge technologies. Industry and other partners will work side by side with the Navy Post Graduate Schools' 15 hundred plus U.S. and international students to address strategic competition and regular warfare.

Now, Ms. Berger, we appreciate all of your efforts with the Secretary to accelerate the construction of the NIC, including securing the planning and design funds for FY25 and FY26. Prioritizing the completion of the 1391 Form, which outlines the funding and intent of the Center.

Accelerating the environmental assessment review and the Secretary highlighting the Center recently, even at the Reagan National Defense Forum. One quick question, because I have a limited amount of time.

What can I, what can Congress do to support the Center's inclusion in the Navy's FYDP for FY26?

Secretary BERGER. So, Congressman, first we plan, then we go forward. So, as you know, we've got \$25 billion in there for P&D.

And then, from that informed and scoped way forward, we come back, and we make an informed request. And so, first start planning for sure.

But, as you note, under so many assets and benefits that come from our Naval Education Enterprise, specifically at the Naval War College. And so, we learn from the history. We act in the present.

And, we anticipate the future so that we are creating the best war fighters. The same is true of our infrastructure.

And so, as we build forward, we build towards that environment in a resilient, sustainable, using the materials, the water, the energy, all of the things that we want to prioritize as we move forward.

So, you will see the planning that mimics the war fighters that we are trying to create.

Mr. PANETTA. And, in five seconds, anything else that I can be doing to make sure that the Navy stays on track?

Secretary BERGER. We are on track. And, we will make sure staying in close touch with you.

Mr. PANETTA. Outstanding. Thank you. Thank you, Mr. Chairman. I yield back.

Mr. WALTZ. Thank you. Thank you to our witnesses and the preparation that goes into this. I used to be in the Pentagon preparing for these hearings. And, I think it's an incredibly important part of our system that I now have a new appreciation for.

But, thank you. The hearing stands adjourned.

[Whereupon, at 4:13 p.m., the subcommittee was adjourned.]

A P P E N D I X

APRIL 16, 2024

PREPARED STATEMENTS SUBMITTED FOR THE RECORD

APRIL 16, 2024

Thank you to our witnesses for their time and participation in today's hearing to discuss military construction, housing, infrastructure, environmental and energy programs, as well as base and facility accounts. It's a vast hearing, but these issues are important. Getting it right is critical to our overall readiness.

The FY25 budget request included \$17.5 billion and authorizations for more than 120 new construction projects. I look forward to discussing how these new construction efforts help meet our force posture goals and support our operational efforts. However, building the new facilities is only half of the battle. Modernizing and maintaining our existing facilities to meet future requirements must also be prioritized.

I remain concerned about funding for facilities sustainment, restoration, and modernization. Maintenance of existing facilities is chronically neglected to pay for other priorities. Disrepair of military facilities has significant impacts on everything from quality-of-life for our servicemembers to sustainment and innovation.

I won't rehash my previous comments about the unacceptable state of our barracks, but I look forward to further discussion during questions about how the FY25 budget request addresses this critical issue. I'm also interested in the witnesses' perspective on privatized barracks and whether it's a possible solution to some of the barracks issues.

On the operational side, I am very concerned the Department is not as far along as we should be given the threats on the horizon. Contested and challenged environments are the new normal; we must posture accordingly.

We must ensure our installations are not reliant on energy supplied by our adversaries. Recent NDAA's have highlighted the threat posed by our reliance on Russian energy at our EUROM installations. Yet, the Department has dragged its feet on adhering to Congressional mandates.

I remain concerned with this Administration's focus on climate change as a national security priority. I support efforts to increase resiliency, but climate change policies cannot be an end in itself that ignore operational realities. We must remove adversaries, like China, from the supply chain of energy resilience efforts.

**Statement of the Honorable John Garamendi
Chairman, Readiness Subcommittee
“Energy, Installations, and Environment Programs”**

April 16, 2024

Thank you, Chairman Waltz.

This group of witnesses was before us two months ago to testify on the Department’s aging infrastructure. A conversation that will continue as we work through the myriad of issues facing this portfolio. We must ask ourselves whether we have the right balance between COCOM requirements and service priorities. As the subcommittee with oversight over both military construction and the majority of the operations and maintenance budget, we must ensure that service requirements such as new barracks construction, renovating unaccompanied housing, and modernization of our nation’s research, development test and evaluation infrastructure do not continue to be sacrificed to so called higher priorities. Our investments in the Pacific will be worthless if we can’t recruit and retain talent. How can we expect to do that when we continually send the message to our most precious resource, our people, that they are our last priority.

Resiliency is another area where this committee has been focused for years. Whether it be ensuring our installations are resilient to hurricanes, wildfires, ice storms and earthquakes, or building resilience into our installation’s power sources to guarantee that the bases from which we execute critical missions and project

power can perform those missions in the event of a power interruption whether natural or manmade. To date, these efforts have been overwhelmingly bipartisan. Another area of bipartisanship has been the Department's operational energy programs. These programs seek to increase range and on-station time by lowering fuel consumption and provide more survivable weapons systems less dependent on contested logistics lines. We learned that lesson in Iraq and Afghanistan, we're watching it play out in Ukraine, and it will absolutely be a factor in the Pacific.

That is why I was so disappointed that the FY 24 Defense appropriation contained a significant mark against what it characterized as "wasteful climate change projects." Some of my colleagues on the other side of the aisle may welcome this mark on ideological grounds but like most things we do, the devil is in the details. Because the cost avoidance and increased on-station time of our operational energy programs also has the ancillary benefit of lowering greenhouse gas emissions, those programs can be targeted by these cuts. That microgrid that was going to allow your installation to island for 10 days, continuing the installation's critical missions uninterrupted, may be cut too if it happened to update old inefficient diesel generators. Over the years this subcommittee has endeavored to dismantle the false and ultimately dangerous idea that programs can either be good for readiness or good for the climate. These resiliency programs do both. Ultimately, this mark may have scored a political win, but it will be a net

readiness loss, and one that we will have to try to help dig ourselves out of in the FY 25 NDAA.

Finally, I would be remiss if I didn't note the significant continuing investments in the Sentinel ground based strategic deterrent system that are contained in the President's budget request, despite the ongoing Nunn-McCurdy process. It's no secret that I have been skeptical about this program since its inception. However, I find it particularly galling that the President's Budget Request continues to invest billions, including \$700 million in military construction funds, when we are only midway through the statutorily mandated review process tasked with determining the program's very future.

With that, I yield back Chairman Waltz.

HOLD UNTIL RELEASED
BY THE COMMITTEE

Statement of
The Honorable Brendan Owens
Assistant Secretary of Defense
(Energy, Installations & Environment)

Before the House Committee on Armed Services
Subcommittee on Readiness

Department of Defense
Fiscal Year 2025 Request for
Energy, Installations & Environment Programs

April 16, 2024

INTRODUCTION

Chairman Waltz, Ranking Member Garamendi, and distinguished members of the Subcommittee: Thank you for the opportunity to discuss the President's Fiscal Year (FY) 2025 budget request for the Department of Defense's (DoD) energy, installations, and environment programs. Our installations are the foundations of our national security posture, and I look forward to working with this committee in the coming months to continue aligning our policies and resources to support the National Defense Strategy and the safety, productivity, and quality of life of our personnel.

CREATING RESILIENT AND HEALTHY DEFENSE COMMUNITIES

To meet the objectives of the National Defense Strategy, the Department of Defense must recruit and retain a strong, healthy, and resilient military force. More than two million military and civilian personnel live, work, train, raise their children, and spend time with their families on our 538 installations, supported by extensive built and natural infrastructure. This includes more than 850,000 rotational and permanent Unaccompanied Housing (UH) bed spaces; more than 242,000 Family Housing (FH) units for Service members and their families; more than 280,000 buildings and permanent structures, comprised of workspaces, schools, commissaries, hospitals, and other facilities; and 30 million acres of land, including test and training ranges, parks, protected areas, waterways, and other natural features that contribute to local economies and communities.

These spaces are central to our Service members' military experience, affecting their physical and mental health, their ability to carry out their missions, and the overall recruitment and retention of the force. Therefore, it is both a national security imperative and our moral obligation to ensure that they are effective, positive places for current and prospective Service members, their families, and the civilian workforce.

Over the past five years, the Department has invested an average of \$11.4 billion a year to build new facilities, \$15.4 billion a year to maintain and repair infrastructure, and \$2.5 billion a year on environment restoration and conservation efforts. Despite this investment, the Department recognizes that a significant gap persists between installation conditions today and the quality standards that are expected, deserved, and best support Warfighter readiness. The estimated deferred maintenance backlog, which is based on addressing infrastructure condition deficiencies relative to their original specifications, stands at \$134 billion and continues to accrue faster than our pace of investment.

Moreover, this backlog does not account for upgrades needed to accommodate current standards and Service member needs, or ready our infrastructure to be resilient to changing climate and environmental conditions. Over 79% of our installations were established before 1970 and nearly 33% of built assets are more than 50 years old. These assets reflect the needs and policies of the time they were constructed, requiring not just regular upkeep, but potentially significant upgrades or outright replacements to meet evolving requirements and preferences. Additionally, the number of incidents where hurricanes, flooding and wildfire have left billion-plus dollar recovery actions in their wake is increasing at an unsustainable rate (e.g., \$1 billion at Offutt Air

Force Base, \$3 billion at Marine Corps Base Camp Lejeune, and over \$4 billion at Tyndall Air Force Base).

It is clear that we cannot continue down this path. Continued infrastructure challenges or failures negatively impact our ability to project power and prepare forces, as well as quality of life of Service members, their families, and the civilian/contractor workforce. This will, in turn, exacerbate the recruiting, retention, and readiness challenges the Department faces.

Given the magnitude of the infrastructure funding deficit and the profound effect that poor living and working conditions can have on readiness, retention, and morale, it is imperative that we not only invest more but also invest better to achieve our goal of delivering healthy, functional, and resilient spaces. Improving the Department's vast infrastructure footprint will be a significant undertaking and require us to transform how we invest in our installations, with a focus on making them true power projection platforms.

Therefore, the Department is implementing the *Resilient and Healthy Defense Communities Strategy*, which will guide actions that will ensure that these spaces are *healthy*—providing spaces that are safe and comfortable, have exceptional indoor and outdoor environment quality, and offer proximity to open space that contributes to overall well-being; *functional*—enabling the way people want to live and work by offering intuitive, efficient, and user-friendly design and modern amenities and technologies; and *resilient*—delivering continuous service and resilience against climate change, environmental hazards, and other risks that have the potential to disrupt or displace. This strategy follows a three-pronged approach to our infrastructure investments:

1. *Adopt human-centered requirements* that will help us create environments that do not just meet utilitarian needs and compliance standards, but promote purpose, productivity, and camaraderie. This includes developing design and maintenance requirements that emphasize people and their needs, preferences, and experiences to create spaces that support and protect them and investing in technologies to empower users with information and feedback mechanisms about their environment that allow installation managers to monitor their performance and deliver high-quality assets.
2. *Optimize our footprint* to ensure that the scale and scope of our infrastructure footprint is aligned with the needs of our people by consolidating underutilized or underperforming assets and ensuring that new facilities are built to last and are efficient, adaptable, and resilient to evolving demands and conditions. We are also seeking targeted opportunities to upgrade and modernize our existing asset portfolio to increase longevity and reduce operating costs.
3. *Transform how we manage our portfolio* by adopting a sustainment management strategy that improves asset performance by aligning sustainment funding with asset requirements. This will be enabled by deeper partnerships with private industry, local and state governments, and academic and community organizations to leverage their capabilities in infrastructure financing, design, construction, and management; updated internal construction and maintenance processes to enhance infrastructure quality; and improved oversight and accountability mechanisms that support consistent and sustained delivery of high-performance assets.

Underpinning these three efforts are key strategic enablers: clear and measurable outcomes to track our progress; training and skill-building of our infrastructure management workforce to better deliver on these commitments; and continuous engagement with Service personnel and family members to ensure we are capturing and meeting their expectations. Together, these efforts will drive changes across the defense infrastructure enterprise and ensure that it is managed as a strategic asset to promote the well-being of our Total Force.

Adopting Human-Centered Requirements

Every design, land use, and construction decision we make – from the ability to walk to access basic amenities, to how much natural light is available in their homes, to the systems that ensure the cleanliness of their water, to how often they pass through communal spaces that facilitate social interaction – has consequences for our people’s physical and mental health and overall well-being. Similarly, the management and condition of installation lands as well as that of surrounding public and private lands affects air quality, noise pollution, light pollution, fire risk, flood risk, water quality and access to or quality of outdoor education and recreation opportunities. We must therefore put human needs and values at the center of our approach to delivering and maintaining built and natural infrastructure.

A key aspect of this approach is placing “livability” at the heart of our planning and planning principles. We are developing objective and measurable standards of asset performance along four dimensions—health, safety, functionality, and reliability—and integrating them into our policies and Unified Facilities Criteria (UFC). These standards may include: indoor and outdoor environment quality, such as air and water quality and thermal, lighting, and acoustic comfort; availability and reliability of utilities and amenities; walkability and accessibility; prevalence of shared and community-oriented spaces; and proximity to critical services, such as child development centers, school, healthcare facilities, and dining facilities.

We are also working to ensure that installations are equipped with 5G and next-generation communications networks that are responsive to our service members’ needs. This digital infrastructure will not only enable key military applications, such as augmented and virtual reality training, but also allow Service members and families to access a variety of digital tools such as virtual healthcare, remote work and education, smart home technologies, and a range of lifestyle-enhancing applications and services. It will also support our efforts to implement and monitor livability standards as we equip installations with an array of sensors that enable remote equipment diagnostics, preventive and proactive maintenance, and overall better-informed infrastructure investment decisions. These tools will enable installation managers to identify and remediate issues, empower users with information about their environment, and increase overall transparency and accountability for the quality of our installations.

Optimizing Our Footprint

The scale and scope of assets within installations must be aligned to our mission and our people’s needs. Over the years, the combination of new missions, evolving user preferences and tastes, and changing environmental and climate conditions has resulted in a portfolio size and

mix that is not optimized to today's demands. Therefore, we are evaluating opportunities to create a more efficient footprint within installations, build high-quality resilient built and natural infrastructure, and invest in targeted upgrades that add to the longevity of our assets, all in service of meeting our people's needs while reducing the total lifecycle cost of our infrastructure.

As a starting point, we will survey the existing footprint to better align supply with demand, identifying opportunities to consolidate, repurpose, and, where applicable, dispose of excess facilities that are no longer necessary to execute the mission or meet our people's needs. We will do so in ways that are safe and sustainable, relying on long-term planning to preserve structures that can be adapted for reuse in the future. We will further leverage lessons from consolidation projects to better plan for the end-of-life of all assets. To ensure the impacts of these decisions on our personnel and the surrounding communities are fully considered, the Department will conduct user experience assessments to better understand how people are using facilities and amenities on and off-base to inform any decision on reducing the size and scope of our infrastructure footprint.

For new construction or major renovations, we are exploring leading practices for modular, open architecture that can be adapted to a variety of purposes to determine where to incorporate it within our inventory and mission sets while leveraging the latest in infrastructure innovation and high-quality, low impact construction materials to build facilities that will be usable for decades to come. We are seeking opportunities to develop assets that can be shared between military units, other government agencies, and with the broader defense community.

We are continuing to improve our installations' resilience. For example, our ongoing expansion of the DoD Climate Assessment Tool (DCAT) with new predictive models, decision tools, and technologies will improve our installation managers' ability to understand the vulnerabilities facing their installations and help them adapt to or prepare for evolving risks. The Department, in partnership with the private sector, is also focused on improving electrical and water system quality, reliability, and resilience through integration of new technologies and improved operational approaches. We are extending our energy resilience investments, through technologies such as microgrids, beyond our most critical operational facilities to include those facilities that most impact our personnel's day-to-day quality of life, including housing, commissaries, and other priority assets. Similarly, the DoD will continue to maintain and create the natural infrastructure needed for water resilience both on and off installation.

Lastly, resilience also includes ensuring installations have robust incident response, management, and recovery capabilities. The demand on and need for these programs and their capabilities is growing due to the increasing severity of weather events and other climate-related impacts. Policies governing these programs are being updated to incorporate climate considerations and infrastructure modernization into hazard assessment, mitigation, response, and recovery planning actions at installations.

Transforming Portfolio Management

Achieving the ambitious commitments set out in the *Resilient and Healthy Defense Communities Strategy* requires an effective asset management strategy that leverages the suite of government

and external stakeholder capabilities to maximize our return on investment. We must approach design, construction, maintenance, and project development differently, both in terms of seeking new and innovative ways to partner with industry, communities, and other external stakeholders and reforming internal construction processes and maintenance practices.

The Department has implemented various approaches to design, build, and operate our infrastructure, ranging from full government control across all three dimensions to full privatization, and combinations in between. This gives the Department a menu of options that can be optimized for any given project. In many cases, government ownership and operation is best suited to the Department's needs. In others, outsourcing to private partners or leveraging third party financing through privatization or performance contracting may reduce risk and/or provide solutions at similar or better quality on a more cost-effective basis. We can also draw upon our strong and long-established partnerships with other government agencies, state and local governments, academic institutions, and civil society organizations in the communities in which we operate to develop mutually beneficial solutions.

To ensure we have the full range of options available and are applying those that are most appropriate for each situation, the Department is reviewing authorities and exploring opportunities to expand partnerships with industry, other government organizations, and non-government stakeholders. These may include maximizing the use of Intergovernmental Support Agreements (IGSA) with state and local governments to provide, receive, or share installation-support services; expanding partnerships with academic and research institutions on areas such as ecosystem conservation, sustainable design, and climate change risk assessment; and working on natural infrastructure beyond the fence line through programs like the Readiness and Environmental Protection Integration (REPI) program and the Sentinel Landscapes Partnership.

The Department must also develop more timely and flexible processes and organizational structures to enable more agile delivery of infrastructure needs. Under current processes, a military construction or large-scale maintenance project can take five years to be incorporated in a budget request to Congress and once funded, can take potentially another four years to obtain beneficial use.

This can and must be improved. The Department has already issued policies that better align roles and responsibilities of project sponsors, installation managers, and construction agents to deliver better outcomes, such as early involvement by DoD construction agents with project sponsors to inform project scope, cost, and schedule. We are also implementing project management agreements for military construction projects that will ensure requirements and stakeholders are properly aligned to deliver modern, high-quality infrastructure. The Department is pursuing facility prototype projects that not only will demonstrate our ability to build efficient resilient buildings but will also guide our efforts on how to streamline our infrastructure acquisition processes. We are improving guidance and training, developing solutions to expedite time-consuming steps like environmental reviews and permitting, and incorporating strategies to not only minimize environmental impacts, but sustain or improve environmental quality.

The Department must also work to provide more confidence, transparency, and standardization in the development of facilities sustainment, restoration, and modernization (FSRM) budgets to

ensure infrastructure is properly maintained. We are working with the DoD Components to move away from our current portfolio-level approach and toward an asset management approach that will derive sustainment requirements at the individual asset level and incorporate asset age, functionality, and condition as well as building system, component, and subcomponent condition. This will optimize limited FSRM budgets by recommending investments that maximize condition of facilities in a component's portfolio. Further, the Department will set condition goals for different facility categories to ensure that quality of life is not short-changed at the expense of mission needs.

All of these actions must be supported by meaningful oversight and accountability mechanisms as well as accurate cost and performance data to help balance cost, performance, and risk. To that end, the Department is working to establish authoritative cost and performance data sources to continuously evaluate and update our asset management approach. We are updating condition assessment processes to prioritize human-centered requirements, leverage digital diagnostic tools, and deploy expert inspectors. Together, these will enable a common operating picture of our built and natural infrastructure that can guide decision-making and improve transparency.

TAKING CARE OF OUR PEOPLE

Building resilient and health defense communities requires us to be good stewards of the environment and good neighbors and partners with the communities that support our installations. As such, the Department must maintain safe and efficient facilities and improve the quality of life for our military personnel and their families by ensuring access to safe, quality, and affordable housing. The Department must also ensure that it has a robust environmental cleanup program to address the effects of releases of hazardous substances, pollutants, or contaminants into the environment.

Housing

Family and Unaccompanied Housing

While all of the Department's infrastructure affects our Service members' military experience, none is more impactful than their housing. It is both a crucial quality of life issue and a critical mission-enabling asset. However, we recognize that the DoD has, in too many instances, failed to live up to our role in making sure the housing we provide honors the commitment of the personnel that live on our installations and enables them to bring the best versions of themselves to their critical missions. As the Department's Chief Housing Officer, I am committed to ensuring that all Service member housing—whether it is government-owned, government-controlled, or privatized—meets appropriate life, health, and safety requirements and provides a positive living experience for military personnel and their families.

The Military Departments have privatized 99 percent (approximately 202,000 units) of their FH inventory, as well as 4,700 UH apartment units (8,500 bedrooms), on their installations in the U.S. The Department still owns or controls, operates, and maintains approximately 39,000 FH units, most of which are on enduring bases in overseas locations. In addition, the Department's

housing inventory includes more than 846,000 government-owned or -controlled (GovO/C) UH bed spaces worldwide.

Historically, DoD's GovO/C requirements have not competed well for military construction and operations and maintenance funding, leading to significant maintenance backlogs and outdated and deteriorating housing facilities. The Department has begun placing greater priority on funding for its GovO/C housing in recent years, but these investments are challenged by the size of the existing inventory and the cumulative effects of deferred maintenance, insufficient recapitalization funding, and lack resources for oversight. As such, these facilities' rate of degradation is outpacing our ability to address issues despite this increased prioritization. We must therefore place a greater emphasis on bringing the quality of the Department's GovO/C housing to what it needs to be for our Service members and their families to have a positive living experience.

In September 2023, the Government Accountability Office (GAO) released a report titled *Military Barracks: Poor Living Conditions Undermine Quality of Life and Readiness*, documenting poor living conditions in the Department's government-owned and government-controlled unaccompanied housing (i.e., barracks and dormitories). The findings in this report provided even greater clarity to the issues facing our UH portfolio and confirmed that conditions have affected Service member quality of life, recruitment, and retention, as well as military readiness. The report's recommendations have also helped us further refine our ongoing response actions. The Department concurred or partially concurred on all 31 recommendations in the report, and we anticipate implementing 28 of the 31 recommendations in Calendar Year 2024.

The Department's FY 2025 Family Housing budget request includes \$2.0 billion to fund construction, operation, and maintenance of government-owned and leased family housing worldwide; invest in select military family housing privatization projects and provide oversight of privatized housing and lodging projects; and provide housing referral services to assist military members in renting or buying private sector housing. The FY 2025 request sustains our increased focus on ensuring the delivery and maintenance of quality housing for military families, including \$743.9 million for construction to ensure quality family housing for military personnel and their families, to include Army family housing construction projects in Europe (\$164.2 million), two Navy family housing construction projects on Guam (\$197.0 million), and Air Force family housing projects in Europe (\$5.8 million); \$194.0 million for prioritized investments in two Department of the Air Force (DAF) and one Department of the Army (DA) Military Housing Privatization Initiative projects to improve the safety, quality, habitability and/or long-term financial viability of those projects; and \$171.1 million for privatized housing support and oversight, to include the one-time inspections of DoD's privatized housing and government-owned family housing as required by Section 3051 of the FY 2020 National Defense Authorization Act, as amended. The Department's FY 2025 budget request of \$1.2 billion for Family Housing Operation and Maintenance represents a \$86.7 million increase compared to the FY 2024 enacted amount and a will continue to ensure that U.S. military personnel and their families have suitable housing choices.

The Department's FY 2025 budget request includes \$1.093 billion for eleven (11) construction projects that will improve living conditions for unaccompanied personnel. This funding level is

\$623.7 million higher than our FY 2024 budget request (\$469.3 million) and takes the right steps towards honoring our commitment to modernize Unaccompanied Housing to improve privacy, provide greater amenities, and address the findings in the September 2023 GAO final report on Military Barracks. The FY 2025 budget request includes \$854 million for seven active Army barracks projects worldwide; \$81.0 million for two reserve Army projects in Parks Reserve Forces Training Area, CA and Fort Buchanan, PR; and \$158.0 million for a DAF Dormitory project at Joint Base (JB) San Antonio, TX and JB Langley-Eustis, VA.

Going forward, we acknowledge that DoD's current GovO/C housing investment levels are insufficient to stop ongoing facility and quality of life degradation. To overcome these challenges and to improve the quality of DoD's GovO/C housing, we must accelerate our investments and ensure they are appropriately prioritized so they have the greatest impact on the livability of DoD housing.

To that end, the Department has initiated a Tiger Team to address ongoing and urgent improvements in living spaces for Service members, initially prioritizing UH for junior enlisted Service members. The Tiger Team will address the FY 2024 National Defense Authorization Act (NDAA) provisions along with the issues highlighted by the GAO's September 2023 report on Military Barracks. Specific objectives include making immediate, ongoing, and urgent UH improvements; determining new configuration and habitability standards; improving the accessibility, availability, and reliability of UH metrics to drive investment decisions; developing standardized preventative maintenance plans and schedules; and identifying opportunities to improve indoor environmental quality and address facility-related energy resilience objectives.

We are also modernizing how we approach designing UH. The Military Departments have four pilot projects in FY 2024 and FY 2025 to recalibrate UH design to optimize energy use and incorporate sustainable building materials to enhance indoor environmental quality, passive design features to improve resilience and reduce maintenance requirements, and modern facility related control systems to allow for data-driven management and sustainment of these critical facilities. Lessons learned from these pilots, combined with the results of the Tiger Team, will help inform our efforts to ensure future UH projects are resilient and optimized to support our Service members.

We recognize that implementation will require significant and sustained investment, improved oversight and use of management tools, and enhanced housing standards to improve the current posture across all unaccompanied housing. Similar to the Department's reform actions to improve the conditions and oversight of MHPI housing, the Department must commit to long-term, organizational investment of resources, and ensure accountability at all levels, from Senior leaders and headquarters staffs to installation commanders and staffs.

I am absolutely committed to ensuring that the Department remains focused and coordinated on this issue. I meet with my Military Department counterparts bi-weekly to monitor UH conditions and improvements and evaluate investment and progress. In addition, my office is working with the Military Departments to finalize new UH metrics to help the Department measure current conditions and progress improving UH livability.

At an installation level, we are improving the day-to-day management of UH. The Department appreciates the FY 2024 NDAA's directive around professional UH oversight that requires UH managers to be civilian employees or dedicated military personnel. This reform will enable managers to focus solely on their responsibilities of assessing and inspecting UH conditions, managing work orders for repairs, communicating with residents regarding repairs, and ensuring that installation maintenance officials conduct needed emergency and preventive maintenance.

Finally, we are continuing to explore leveraging privatization as a tool to improve UH by evaluating the results of the Services' pilot projects and incorporating the lessons learned from the broader Military Housing Privatization Initiative (MHPI).

Military Housing Privatization Initiative

The Department continues to enhance the MHPI program and improve our oversight of the private sector MHPI companies that own and operate MHPI housing projects. As a result of our collaboration with the MHPI companies, all 18 rights set out in the MHPI Tenant Bill of Rights (TBoR) are fully available at all but three of the nearly 200 installations with privatized housing, representing approximately 97 percent of military families residing in MHPI housing. Based on commitments from the remaining MHPI companies, we expect all 18 Tenant Rights to be available at all of DoD's installations with MHPI housing by the end of CY 2024. We will continue our efforts to educate and engage Service Members and their families to ensure they are aware of and take full advantage of the TBoR.

The Department of Defense is committed to working closely with you and the committee staff to ensure the long-term success of the MHPI program and we will remain diligent in our oversight to ensure DoD's privatized housing projects deliver quality housing and a positive living experience for military personnel and their families.

Defense Environmental Restoration Program

The Department must take deliberate and sustained action to address risks to human health and the environment resulting from past DoD activities. Our environmental cleanup program includes the Installation Restoration Program (IRP) and Military Munitions Response Program (MMRP). The IRP is focused on cleanup of hazardous substances, pollutants, and contaminants, while the MMRP is focused on responding to unexploded ordnance and munition constituents at former military ranges. These programs encompass active installations, Formerly Used Defense Sites (FUDS – sites that DoD transferred to other Federal agencies, states, local governments, or private landowners before October 17, 1986), and sites DoD transferred to other entities as part of its Base Realignment and Closure (BRAC) activities. We are requesting \$1.6 billion for these programs, including \$1.2 billion for environmental restoration on our active installations and FUDS properties and \$448 million for BRAC environmental.

Progress Towards Cleanup Goals

To date, the Department, in cooperation with state agencies and the U.S. Environmental Protection Agency (EPA), has completed cleanup activities at 87 percent of Active and BRAC

IRP and MMRP sites, and FUDS IRP sites, and is now monitoring the results. During FY 2023 alone, the Department completed cleanup at 176 sites. Of the roughly 40,700 restoration sites, 34,300 are now in monitoring status or have completed cleanup.

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

While the Department continues to make progress on completing cleanups, the remaining sites are some of the most complex cleanup sites. Chemicals of Emerging Concern and others like per- and polyfluoroalkyl substances (PFAS) continue to pose challenges for DoD's cleanup programs as new science requires reconsideration of previous decisions and more expensive solutions to protect our Service members, their families, communities, and the environment. Additionally, some complex sites have either no feasible or only inefficient solutions for cleanup and, as a result, the Department is making significant investments in environmental technology to identify new potential remediation methods.

Per- and Polyfluoroalkyl Substances

The presence of PFAS in the environment is a national issue due to its wide-spread use in many industrial and consumer products. The Department recognizes the importance of this issue and is committed to addressing PFAS in a deliberative, holistic, and transparent manner, supported by \$942 million across multiple appropriations. The Department's PFAS Task Force continues to provide strategic leadership and direction on DoD-wide PFAS efforts. To support the Department's commitment to the health and safety of its service members, their families, the DoD civilian workforce, and the communities in which DoD serves, the Task Force's focus areas include:

- Mitigating and eliminating the use of aqueous film forming foam (AFFF);
- Fulfilling our cleanup responsibilities;
- Understanding the impacts of PFAS on human health;
- Expanding PFAS-related public outreach; and
- Supporting PFAS research efforts and ensuring findings are publicly available.

PFAS Cleanup and Drinking Water Mitigation

DoD follows the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the long-standing EPA regulations for all chemicals in our cleanup program, including PFAS. The Defense Environmental Restoration Program statute provides authorities to DoD to perform and fund cleanup actions and requires they be carried out in accordance with CERCLA.

As of December 31, 2023, the Department has completed the initial assessment at 707 (of 715) installations. 133 currently require no further action, while 574 are proceeding to the next step in the CERCLA process. During these initial assessments, DoD evaluates both groundwater and

drinking water. In addition, DoD is taking interim actions at over 30 installations to prevent further PFAS migration off-base and plans to take additional actions as more information becomes available from our ongoing investigations.

For the past several years, DoD's approach has been that if DoD identifies perfluorooctane sulfonate (PFOS) and/or perfluorooctanoic acid (PFOA) from DoD activities in off-base drinking water above 70 parts per trillion (ppt), we quickly took action (i.e., a CERCLA removal action) to provide treatment or an alternative water source. DoD has taken this type of action for drinking water wells surrounding 55 installations. Last week, EPA announced a National Primary Drinking Water Regulation (NPDWR) for six PFAS under the Safe Drinking Water Act. The Department appreciates the clarity the NPDWR provides now that it has been finalized and is evaluating its impact on our efforts to address PFAS in drinking water. The Department has reviewed existing PFAS sampling results, plans to expand existing cleanup investigations, and provide drinking water treatment for impacted off-base wells, on a prioritized basis.

AFFF Replacement Progress

Over the past few years, the Department has undertaken an aggressive initiative to develop and demonstrate fluorine-free alternatives for AFFF. In January 2023, the Navy published a Military Specification for a PFAS-free firefighting product. A number of fluorine-free alternative fire suppression products have been demonstrated to achieve acceptable fire extinguishment performance and DoD has completed evaluations of the shelf life, materials compatibility, and toxicity screening of these formulations. As of February 2024, two products have passed the qualification process and are available for purchase. The Military Departments have begun the transition from AFFF for more than 6,000 mobile assets and approximately 1,500 facilities and are following transition plans that include proposed schedules, estimated costs, and strategies to use fluorine-free products and other available technologies, such as water-only systems. Based on current Military Department schedules, the Department will need to exercise the two NDAA-permissible one-year waivers to extend the Congressional deadline of October 1, 2024 to stop using AFFF to ensure a safe and methodical transition that does not affect mission activities.

PFAS Public Outreach

As the Chair of DoD's PFAS Task Force, I am committed to expanding our outreach efforts as we continue to address PFAS. DoD initiated a robust communication and outreach effort in FY 2023 focused on improving outreach to communities by gathering input from community members and developing communication products that explain DoD's cleanup activities in a comprehensible and transparent manner. The Department has also visited 11 installations and conducted over 100 interviews with community members and other stakeholders. These efforts ensure a cohesive and collaborative approach to communication across DoD, expand public access to information that explains our cleanup progress and initiatives, and build stronger relationships with communities and agency partners.

IMPROVING MISSION RESILIENCE

The National Defense Strategy promotes building a resilient Joint Force and defense ecosystem that can operate in a contested environment at home and abroad. We must work to improve the resilience of our installations and infrastructure to a wide range of challenges, including extreme weather, climate impacts, disruptions to energy or water supplies, and physical or cyber-attacks. The Department requires a multi-faceted approach focused on policy revisions; adjusting how we approach planning, design, and construction; and innovative technologies to counter such a diverse set of threats.

Infrastructure Resilience

The Department is addressing mission resilience at the building and installation level by developing policies that establish aggressive performance goals, reduce waste, and improve quality of life. Further, we are improving energy resilience on our installations through increased energy efficiency measures and electrification of our buildings and supporting infrastructure. My office is working with DoD components to leverage the Department's facility data to assist them in performing building level assessments that will inform infrastructure modernization and recapitalization decisions and institutionalize resilience in all of our investments. We are reviewing and updating Unified Facility Criteria against existing and emerging performance standards for resilience, clean and reliable energy, electrification, indoor environmental quality, and facility related control systems. Finally, the Department is pursuing a comprehensive plan and associated investments to deploy the charging infrastructure essential to transition our non-tactical vehicle fleet to electric power. This effort will enable installations to utilize the storage capacity of electric vehicles and add capability that furthers our investments in micro-grids.

Military Construction

Infrastructure resilience is integrated into the military construction (MilCon) program. The MilCon program also places significant focus on quality of life as well as critical mission requirements and life, health, and safety concerns. We are requesting \$15.6 billion in the budget for MilCon across the Department, an increase of 6% from last year's request, which includes infrastructure requirements for the Pacific Deterrence Initiative (\$1.7 billion), investments in the Shipyard Infrastructure Optimization Program (\$2.0 billion), quality of life facilities (including child development centers, barracks and dining facilities, dormitories, and schools – \$1.83 billion), new aircraft beddown (B-21, KC-46A, F-35, T-7A – \$419 million), European Deterrence Initiative and NATO Security Investment Program (NSIP) (\$559 million), hospital and medical facilities (\$464 million), projects in support of the modernization efforts in support of Sentinel Ground Based Strategic Deterrent program (\$700 million), and construction projects in support of special warfare operators (\$355 million).

This request also includes \$3.733 billion for the Defense-Wide Components, including:

- \$386 million for dependent educational facilities;
- \$273 million for incremental funding of fuel infrastructure;
- \$417 million for recapitalization of National Security Agency facilities;

- \$545 million for Missile Defense Agency projects in support of Defense of Guam and an increment of the Ground Test Facility Infrastructure at Redstone Arsenal;
- \$295 million to address, force structure growth disconnects, and antiquated infrastructure for Special Operations Forces;
- \$262 million for Washington Headquarters Services facilities;
- \$636 million for the Energy Resilience and Conservation Investment Program; and
- \$455 million for exercise related construction, unspecific minor construction, and planning and design for defense-wide future year projects.

In addition, the Defense-Wide request contains \$464 million for medical facility recapitalization including \$78 million for the eighth increment (of a \$695 million project) for the Walter Reed Medical Center Addition/Alteration at Naval Support Activity Bethesda, Maryland; \$97 million for the second increment (of a \$257 million project) for an Ambulatory Care Center at Guantanamo Bay, Cuba, and \$289 million for various other Ambulatory Care Center additions and replacements.

We continue to pursue improvements in project development processes to ensure projects are appropriately scoped and priced for successful execution. The Department's Military Construction Reform initiative is primarily focused on early involvement between project sponsors and the DoD Construction Agents (DCAs) responsible for executing the projects. We are working with the DCAs and industry to incorporate their knowledge and expertise earlier into our project planning and design activities to ensure executable projects. We recently finalized a comprehensive policy associated with the planning and design of military construction projects. The policy ensures that all DoD Components clearly understand the difference between planning activities and design activities to consistently apply the appropriate funding to each task. Additionally, DoD is focused on improving information sharing between key project stakeholders, ensuring that critical details such as project requirements, acquisition timelines, and construction status inform proactive decisions on projects. We are close to issuing policy requiring project management agreements early in the project requirements process that will provide transparency on key project data and change management decision making allowing project stakeholders to manage scope and cost changes to minimize impact to project delivery.

The Department recognizes not only the necessity of, but also the challenges associated with estimating and awarding military construction projects on budget, particularly given the supply chain tightening and significant material price increases over the last few years. We appreciate the additional support Congress has provided over the last few fiscal years to ensure that authorized project costs are better positioned based on market realities. However, the Department acknowledges that it has work to do to ensure that estimates result in executable projects including the recent application of the area cost factor for overseas unspecified minor military construction projects. This year we are further refining our financial risk management processes and policies and will codify our findings in updated policy to ensure that component budget requests reflect known project risks.

Facilities Sustainment, Restoration, and Modernization

The Department's inventory of buildings and structures is the largest within the federal portfolio. Facilities Sustainment provides for the regularly scheduled maintenance, repair, or replacement of facility components and directly influences the condition of our facilities. Investments must be made throughout the service life of a facility to optimize its performance, maintain indoor environmental quality, and support the safety, productivity, and quality of life of our personnel, while also reducing avoidable costs associated with premature deterioration. In addition to facilities sustainment funding, the Department relies upon its Restoration and Modernization program funding to provide ongoing support to reduce our maintenance and repair backlog and to modernize our facilities to support changing missions and functions.

The Department's FY 2025 budget request includes \$13.6 billion of sustainment funding for the Military Services and the major Defense-Wide organizations. This represents a \$619 million increase from the FY 2024 budget request and will achieve an average of 79 percent of the Department's annual requirement for facilities sustainment (excluding the Marine Corps from the overall calculation). We are working with the Marine Corps to pilot a comprehensive model that would optimize FSRM and MilCon facility investments across their real property portfolio.

In addition to facilities sustainment funding, the Department relies upon its Restoration and Modernization (R&M) program funding to provide ongoing support to assigned missions by countering obsolescence and reversing degraded conditions of existing facilities. The FY 2025 budget request includes \$6.3 billion in Operations and Maintenance appropriations for facilities R&M, a \$259 million decrease compared to our FY 2024 budget request.

The Department has traditionally managed the budgeting for sustainment of assets at the portfolio level with a sustainment model that uses basic data from a component's real property inventory and commercial cost models. This model generates aggregate sustainment requirements that treat facilities similarly for investment purposes regardless of age, condition, or maintenance history. Roughly ten years ago, the Department instituted a requirement to use a standardized condition management system, the Sustainment Management System. DoD has continued to mature the tool to track more closely the 13 major systems in a building and will roll out a cloud-based SMS this year for DoD Components to manage the condition of the major system in the Department's buildings. However, knowing the condition of an asset and the systems that comprise that asset is just one aspect of proactive infrastructure management. Improving facility condition data and operationalizing other existing investment data sources, enables resource optimization from the Department-level down to the installation with the ability to assess risk-based investment options using future years defense program (FYDP) funding profiles, mission dependency data, and a variety of DoD Component derived assumptions to array strategic investment options that will inform investment decisions. To that end, the Department is investing \$2 million in FY 2024 to initiate development of a facility investment optimization model that will optimize the allocation of facility repair funding to produce the most benefits regarding the condition of our facilities. The system will provide more confidence, transparency, and standardization in the development of facilities sustainment, restoration, and modernization (FSRM) budgets and allow an asset management approach currently lacking in the Department's infrastructure management processes.

This initiative is guiding our transition into an asset management approach for budgeting and managing the Department's inventory more holistically and provide DoD with better information to target investments to address current and backlog maintenance requirements. It will also provide much-needed data in the building component systems and their maintenance and recapitalization schedules to properly conduct sustainment, which will reduce energy demand. The additional data will also allow the Department to better plan electrification of existing projects, consistent with our energy resilience goals.

We appreciate your support for the \$2 million funding request for optimization model development in the FY 2024 NDAA and the Further Consolidated Appropriations Act, 2024. This funding will allow us to begin development on the technical aspects of the model. The FY 2025 budget request includes \$2 million to continue the maturation of the optimization model.

Energy Resilience

Reliable, flexible, and resilient energy remains essential to military capability and readiness. The Department depends on energy-resilient forces, weapon systems, installations, and infrastructure to achieve missions at home and abroad. In FY 2023, the Department consumed 614,787 billion British Thermal Units (BBtus) of all forms of energy, costing a total of \$16.5 billion, to support operations and training across a worldwide set of installations and power thousands of energy consuming platforms.

While our installations utilize commercial, municipal, and host nation power and energy grids for day-to-day operations, we must also have credible and resilient localized installation energy capabilities to sustain critical missions if these sources of energy are disrupted. Similarly, the Department relies on organic capabilities as well as commercial partners to provide operational energy to train, deploy, operate, and sustain globally deployed forces. Our potential adversaries understand the essential nature of energy, and seek to degrade, delay, or deny the Department's ability to deploy forces by disrupting access to energy to reduce our readiness, and undermine our deterrent posture. Enhancing energy resilience and reducing energy demand are essential to achieving Joint lethality, supporting distributed operations, and reducing risks to sustainment in contested environments.

The FY 2025 President's Budget Request responds to clear direction in statute and the 2022 National Defense Strategy to ensure installations and forces are resilient to all hazards – kinetic, cyber, and natural – and ensure the use of energy promotes the readiness of the armed forces for their military missions. This is reflected in our \$3.46 billion request for operational energy (the energy required for training, moving, and sustaining military forces and weapons platforms for military operations) and \$3.80 billion request for installation energy (the energy used to power permanent installations and non-tactical fleet vehicles).

Operational Energy

The operational energy initiatives in the FY 2025 President's Budget request ensure that the Department is postured to fight and win in contested environments and support the priority focus

on strategic competition with the People's Republic of China. Investments in advanced propulsion for air, sea, and land platforms, the electrification of on-board systems, upgrades that extend time on station, range, and endurance of current equipment, and long-term research and development on breakthrough technologies illustrate the scope and scale of Department efforts to adapt our use of energy in warfighting platforms to a changing operating environment.

In FY 2023, the Department issued a new *Operational Energy Strategy* to meet the requirements of 10 USC 2926(e). To ensure the Joint Force can fight and win in contested environments, the Operational Energy Strategy includes the following lines of effort:

- Energy Demand Reduction
- Energy Substitution and Diversification
- Supply Chain Resilience
- Enterprise-wide Energy Visibility

The Department is also adapting its strategy, policy and decision-making processes to better align with the challenges of contested logistics and distributed, austere operations. To assist with the implementation of this new strategy, the ASD(EI&E) leads the Contested Logistics Operational Energy Working Group (CLOE WG), which was established in FY 2022 in accordance with 10 USC 2926(d). With senior leader representatives from the Services, Joint Staff, and Combatant Commands, the working group is shaping the direction and implementation of the Operational Energy Strategy to inform future planning and programming guidance.

The CLOE WG met in FY 2023 to implement the *Operational Energy Strategy* and begin execution of the near-term (2023-2024) and mid-term (2024-2028) initiatives. In FY 2024, the CLOE WG will meet on a quarterly basis as required by Section 343 of the FY 2024 NDAA and subsequent annual energy reports will use the *Operational Energy Strategy* as the baseline for evaluating initiatives and measuring progress in the implementation of the strategy.

We are also focused on ensuring that requirements and acquisition decision-making reflects challenges of contested environments and the benefits of advancing energy-related technologies and practices. Through the Department's Climate Working Group, the Military Departments adapted policy, processes, and procedures to ensure consideration of energy supportability analyses and evolving operational requirements.

With support from the Assistant Secretary of Defense for Acquisition, my office initiated a pilot program for the application of energy supportability analyses in Integrated Acquisition Portfolio Reviews (IAPRs), starting with one for the Defense of Guam. By focusing on specific groups of platforms, these analyses will better assess overall Joint capabilities, assess any risks related to the provision of energy, and enhance the identification of interdependencies outside of any single portfolio. We will support additional portfolio reviews in FY 2024 and beyond.

Installation Energy

The Department continues to make significant investments to increase the energy resilience of installations and facilities critical to generating, deploying, operating, and sustaining military

capabilities. Our FY 2025 request is focused on adapting military facilities to withstand increasingly challenging conditions and deploying advanced technologies to strengthen the ability to recover from disruptions to critical infrastructure; improving installation energy, mission, and water resilience; and modernizing Department operations to keep pace with industry.

These investments are supported by our recent and continuing efforts to develop or update installation energy policy across the Department. For example, we recently updated our policies for energy resilience planning and metrics at installations to reflect the 10 USC 2920 energy resilience requirements. These updated policies set forth energy availability standards for critical missions; directs the Military Departments to promote the use of multiple and diverse sources of energy in their planning, with prioritization of energy resources originating on the installation; encourages the use of microgrids; and favors the use of full-time, installed energy sources rather than emergency generation in their energy resilience solutions.

We are also working to harmonize the planning and assessment processes for critical missions across the Department. Approximately 430 Installation Energy Plans (IEP) are expected to be completed by the end of this fiscal year with 92% of IEPs expected to be completed by the end of FY 2025. Currently, these plans establish the basis for planning energy performance projects and provide a roadmap for integrating appropriated and public-private partnership authorities to close energy resilience gaps. Going forward, the IEPs will also document critical load requirements, lessons learned from black start exercises, and the ability of installations to withstand a 14-day energy disruption.

Black start exercises (BSE) are an important component of the Department's approach to risk assessment and for identifying gaps in our installations' electrical infrastructure. BSEs identify previously unknown interdependencies between various systems, so that we can mitigate vulnerabilities to installation critical missions and best prioritize our resilience resources. The Department is actively executing planned exercises in accordance with 10 USC 2920. To date, the Department has executed 45 exercises with over 30 BSEs planned to be completed by the end of FY 2025.

The Energy Resilience and Conservation Investment Program (ERCIP) is the backbone of the Department's energy and water resilience investments. The FY 2025 budget request includes \$732.2 million (\$636 million in construction projects and \$96.2 million in planning and design funds) to prioritize projects that support energy resilience for critical mission requirements. The Department focuses on investments in microgrids, backup generation, and energy storage. In addition, ERCIP will continue to support a range of technologies and efforts, including clean renewable energy, energy storage systems, advanced geothermal and advanced nuclear technologies, accelerated deployment of air and ground source heat pumps, and infrastructure projects directly supporting distribution infrastructure for electrical vehicle charging stations. The Department appreciates the support Congress has provided to ERCIP as it has evolved from a conservation-focused program to one that emphasizes resilience.

Another significant part of our efforts to enhance energy resilience is improving energy efficiency and increasing the amount of carbon pollution-free electricity (CFE). Energy efficiency bolsters installation energy resilience by helping reduce the energy demand from distributed energy production resources during commercial grid disruptions. DoD and the

Federal enterprise will leverage its scale and assets to spur new CFE development and spearhead the deployment of innovative CFE technologies at scale to accelerate grid decarbonization. Additionally, DoD is currently developing onsite resilient pilot projects for emerging low-carbon technologies, including advanced nuclear energy (small modular and micro-reactors) and advanced geothermal projects to demonstrate both commercial and resilience benefits. These efforts are supported by an array of contracting mechanisms such as energy performance contracts (i.e., ESPCs and UESCs), alternative financing and power purchase agreements, enhanced use leases, and appropriated funding.

The FY 2025 request includes funding to deploy charging infrastructure that supports a transition of the Department's non-tactical vehicle fleet to zero-emission vehicles (ZEVs). The transition to ZEVs is both a response to market forces and a strategy to enhance resilience of the Department's installations and the Defense Industrial Base. While we recognize that China dominates the supply chain lithium-ion batteries—batteries that many of our critical defense systems rely upon—we are working with our partners investing in on-shoring and friend-shoring of key supply chain capabilities to evolve this paradigm and ensure our ability to access these critical batteries.

Innovation

Making the right investments in energy and environment innovation expands the Department's operational energy capabilities, reduces fuel burden in an era of contested logistics, keeps trust with the American people, and preserves vital training lands. The Department runs four energy and environment innovation programs which set the technical direction for the Department of Defense by funding the development and demonstration of mission-critical energy and environment capabilities and helping them through the acquisition process. The innovation programs focus on prototyping ahead of transition into Service programs of record and work hand-in-hand with our policy teams to ensure the DoD's defense ecosystem both supports and informs DoD initiatives at the leading edge of technology.

The Strategic Environmental Research and Development Program (SERDP) is requesting \$58.8 million, and the Environmental Security Technology Certification Program (ESTCP) is requesting \$136.5 million for needed investments in land and species conservation to preserve access to training areas, remediating past hazards such as munitions and PFAS, addressing supply chain resilience for key materials, and developing infrastructure adaptation and energy resilience solutions for DoD installations.

The Operational Energy Capability Improvement Fund (OECIF) and the Operational Energy Prototyping Fund (OEPF) are the Department's only joint research efforts dedicated to developing operational energy solutions for the joint force. OECIF and OEPF focus on requirements in all domains, including space, and continue to lead the nation by solving some of the most difficult problems underlying power for future Directed Energy applications, innovating to use what was once considered waste for power and energy at forward locations, investigating next-generation fuel and power sources and distribution methods for autonomous platforms and dismounted warfighters, and enabling maneuver in space.

Our \$166.9 million request for OECIF and \$53.6 million request for OEPPF will allow these programs to continue multi-year investments in a range of critical technologies, from hybrid electric tactical vehicles that provide silent overwatch and low heat-signature capabilities, to highly efficient solar cells for extending the operational reach of crewed and uncrewed systems.

Responsible and Resilient Chemical Management

Responsible chemical management is critical to the health of our personnel and the resilience of our weapon systems and infrastructure. As such, DoD seeks to adopt innovative approaches to chemical management that result in purposeful selection of chemicals which are less persistent, bio accumulative, and toxic. We are preparing to integrate these approaches throughout the life cycle of chemical use: from the early stages of research and development to the maintenance, operation, and disposal/reuse of our weapon systems.

While we ramp up efforts to optimize the use of alternatives, we must simultaneously ensure existing critical uses are met in the interim. For example, some PFAS compounds are critical to the safe and effective operation of a range of military items from radars to missile guidance systems, medical devices, and jet engines. To understand the challenges to PFAS transitions, we are establishing policies that require improved chemical transparency in our weapon systems, researching and transitioning to safer alternatives wherever possible, engaging with the defense industrial base to understand and manage supply chain vulnerabilities, and responsibly managing the use and disposal of chemicals while seeking orderly transitions to alternatives. Potential impacts from the loss of access to mission-critical chemicals are not yet fully known, but could be both costly to address and potentially leave the Department dependent on supplies from foreign sources (e.g., India and China). We also continue to build on past successes by working with regulatory agencies and private industry to develop strategies to address these concerns, starting with actions such as identifying PFAS-containing products critical to national security and mitigating risk from their obsolescence and foreign dependency.

Environmental Resilience

The reality of a changing climate poses a range of risks to Department readiness and threatens installation resilience through dangerous heat, flooding, drought, wildland fire, and extreme weather. These conditions adversely impact training, soldier welfare, equipment performance, infrastructure performance and reliability, and place added strain on the Department's resources. The 2022 National Security Strategy recognizes climate change as a strategic challenge that is transforming the context in which the Department operates. Using the DoD Climate Assessment Tool, as required in multiple NDAA's, we identify actions needed to ensure the continuity of missions at (or deploying from) our installations and incorporate those actions into installation master plans, installation resilience plans, installation energy and water plans, and construction projects. This helps us ensure, for example, that new buildings are not being located in known floodplains, that energy resilience projects account for increasing heat, that wildfire management is incorporated in facility planning, and that drought-prone installations improve their water resilience to support their missions. These assessment processes have now expanded to inform Department operational planning considerations for forces and equipment and wargaming

scenarios. Additionally, DoD's approach to extreme weather and climate risk assessment has been shared with, and is being utilized by Federal interagency partners, as well as allied nations.

The Department is undertaking a range of measures that reduce risk in contested environments, improve and expand operational capabilities and flexibility, and improve installation resilience, while reducing energy demand and use. These efforts include a range of efficiency measures that reduce energy demand for operational platforms and installations such as winglets on large aircraft and highly efficient heat pumps in buildings. Specific attention is being given to deploying installation-scale micro-grids and tactical micro-grids at the operational level to add resilience to key mission requirements and enhance mission assurance. The Department, in concert with other agencies such as DOE, continues to invest in researching new technologies that promise to reduce vulnerabilities, expand environmental protections, add operational capabilities, and reduce GHG emissions.

Environmental Conservation and Compatible Development

DoD lands contain significant resources supporting our nation's natural and cultural heritage, including resources important to American Indian, Alaskan Native, Native Hawaiian Organizations, and other Indigenous Peoples. DoD lands provide habitats for over 550 plant and animal species that are federally protected under the Endangered Species Act, contain over 130,000 recorded archaeological sites, and 41 National Historic Landmarks. We are requesting \$703.7 million in conservation funding, which will allow us to manage these resources in compliance with applicable Federal statutes to create healthy and resilient natural landscapes that reduce climate risks such as flooding and wildfire.

The condition of the lands and waters on and off installation affects test and training access, while also impacting numerous mission-essential considerations, including flight hazards, wildland fire resilience, drought resilience, flooding, and water quality and quantity. The lands and waters that enable and support military readiness, the Department's natural infrastructure, are changing rapidly due to changing development patterns and climate change. Without sustained strategic investment and management, DoD natural infrastructure can be degraded or eliminated, resulting in loss of mission-essential support. To address these challenges, the Department is developing a Resilient Natural Infrastructure Strategy which will build on current successes and guide its actions to ensure that the DoD can identify and reduce threats to mission-essential natural infrastructure. Through integrated on and off-installation land management, conservation, and restoration the Department will ensure the natural infrastructure needed for military readiness while optimizing outcomes to create numerous co-benefits including climate mitigation and livable, healthy and resilient defense communities.

The DoD Legacy Resource Management Program, or Legacy Program, plays an integral role supporting the conservation and resilience of the lands and resources under the Department's stewardship. It supports the military's combat readiness mission by ensuring continued access to the 26.9 million acres of military land, air, and water resources needed to accomplish vital testing, training, and operational activities. Since its establishment in 1991, the Legacy Program has funded over 3,300 projects, totaling more than \$400 million, and benefiting over 300 military installations, worldwide.

The Legacy Program works in close coordination with the Military Services, as well as in partnership with other Federal and state agencies, non-governmental organizations and academia, to identify the most pressing conservation challenges. These interactions allow the Legacy Program to strategically invest in targeted projects to support military mission readiness, more efficiently meet regulatory requirements, and improve the effectiveness of DoD conservation programs.

One such partnership is the Recovery and Sustainment Partnership (RASP) with the Department of the Interior (DOI) and the U.S. Fish and Wildlife Service (FWS). Through this partnership, DoD and FWS have identified priority species and conservation actions, resulting in significant improvements to species recovery and conservation, regulatory efficiencies, and mission flexibility. These investments in conservation are making significant progress towards alleviating existing or potential mission restrictions by promoting species recovery. In FY 2023, six endangered species were declared recovered and de-listed from the Endangered Species Act due to the conservation efforts of DoD and its partners. To build on and broaden the numerous successes and innovations achieved to date in enhancing species conservation and recovery while sustaining military readiness, DoD and DOI renewed our Memorandum of Understanding on February 2, 2024 to support the continued partnership and collaboration under the RASP.

The Department has a similar track record as stewards of our nation's cultural heritage. The National Historic Preservation Act (NHPA) requires that any Federal agency "ensure that historic property under the jurisdiction or control of the agency is identified, evaluated, and nominated to the National Register of Historic Places (NRHP)". To date, DoD has surveyed 49% of its land (approximately 10 million acres) and 71% of its real property assets over fifty years of age (approximately 95,000 assets). Additionally, in the next two decades, approximately 80% of the current DoD building inventory will reach 50 years of age and need to be evaluated for listing on the National Register of Historic Places. To reduce this backlog, DoD launched the Nationwide Approach to NHPA Section 110 Surveys Program in FY 2023 to increase the DoD surveyed land portfolio and meet NHPA requirements. The DoD's Cultural Resources Program, with funding provided by the Legacy Program, has established a partnership with the National Preservation Institute (NPI) to provide funding for a nation-wide effort to identify and evaluate historic properties. This program represents a substantial investment by DoD, with the Legacy Program allocating up to \$13.5M over five years. As a result, DoD will be able to survey high priority real property assets and archaeological sites to substantially improve regulatory processes, enable necessary infrastructure improvements, and support mission readiness.

Continued investments in conservation will maximize our flexibility to use our land, water, and airspace for military purposes and to address incompatible land uses beyond our fence lines and will ensure that our military and civilian personnel have the access they need to conduct mission-essential activities. Strategies to address these conservation and climate adaptation priorities can be most effective through 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 (REPI) Program

The REPI Program safeguards military missions by improving installation resilience to extreme weather events and climactic changes, promoting compatible land use, and preserving critical habitats and natural resources near DoD installations and ranges. REPI is uniquely positioned to support DoD's ability to operate seamlessly across domains by stimulating mutually beneficial and cost-effective partnerships between local communities, Federal and state agencies, and non-governmental organizations.

Our FY 2025 budget request for REPI is \$177.3 million, which remains consistent with the budget for the past two fiscal years. In addition to projects, this year's budget request includes funding for additional capacity to support strategic priorities in the Indo-Pacific Region, focused on partnerships with the governments of Hawai'i and Guam and local partnerships with counties, non-governmental organizations, and native organizations.

From FY 2003 through FY 2023, the REPI Program has secured over \$1.4 billion in DoD funding with nearly \$1.3 billion in non-Department partner contributions to protect over 1.2 million acres of land at 124 locations across 37 states and territories to preserve key operational assets, infrastructure, and capabilities. In FY 2023 alone, DoD secured nearly \$165.8 million in non-Department partner contributions to protect nearly 395,490 acres, including over \$12.3 million from state and local governments and conservation organizations to preserve key mission capabilities across Hawai'i, Guam, and Alaska. The combination of REPI Program funding and non-Department partner contributions helped expand project planning capacity and execution in the Indo-Pacific region to improve installation resilience, expand innovative partnerships that support mission capabilities, and enhance resource conservation and community benefits. For example, on the island of Kaua'i in Hawai'i, Pacific Missile Range Facility Barking Sands received over \$5.1 million in REPI funding in FY 2023 to mitigate upland flood potential, soil erosion, and wildfire potential while restoring habitat for endangered seabirds. In addition, the restoration and protection of native forests helps to increase Pacific Missile Range Facility Barking Sands' water supply.

The REPI Program also continues to support the interagency Sentinel Landscapes Partnership between DoD, the U.S. Department of Agriculture (USDA), and the DOI. The Partnership promotes shared land use priorities and works to advance conservation outcomes in landscapes across the country where national defense, sustainable agriculture and forestry, and community resilience to climate change intersect. From the inception of the partnership in FY 2012 through FY 2022, projects across sentinel landscapes have attracted nearly \$233.2 million in DoD funds, matched by nearly \$938 million in funds from other Federal agencies, state and local governments, and private entities. These contributions have permanently protected over 677,000 acres of land through FY 2022 and enrolled 1,196,244 acres of land in financial and technical assistance programs in FY 2022 alone. In FY 2023, the Sentinel Landscapes Partnership achieved a significant milestone, celebrating its 10-year anniversary and the designation of three new sentinel landscapes: the South Carolina Lowcountry and the Virginia Security Corridor, which is comprised of the Potomac and Tidewater Sentinel Landscapes.

The REPI Program serves as one of the key tools the Department is using to meet strategic objectives outlined in the DoD Climate Adaptation Plan, including creating resilient natural infrastructure solutions near installations and enhancing climate adaptation through collaboration. The REPI Program helps accelerate the development of nature-based solutions through multiple funding avenues, including programs administered by the National Fish and Wildlife Foundation (NFWF). Through NFWF's National Coastal Resilience Fund and the America the Beautiful Challenge, the REPI Program has dedicated over \$43.6 million in funding from FY 2020 through FY 2023 to projects benefitting DoD installations and ranges, neighboring defense communities, and habitats for fish and wildlife.

The REPI Program has seen significant success in expanding relationships with partners at all levels of government, particularly at the local level. This year, the REPI Program worked closely with state and local governments and organizations, such as the National Association of Counties, the Association of Defense Communities, and the National Association of Conservation Districts to build stronger local partnerships with defense communities to advance climate resilience, quality of life, and community engagement objectives that directly support military readiness.

OTHER PROGRAMS AND INITIATIVES

Retention of Critical Training Land in Hawai'i

The relationship between the U.S. Military and Hawai'i has been a critical piece of U.S. military and diplomatic strategy for over 125 years. Hawai'i's strategic location in the Pacific, unique training and port areas, and support for critical defense missions make it a cornerstone of our posture in the Indo-Pacific region. In support of this indispensable defense mission, the Military Departments lease approximately 53,000 acres of land across five islands in the chain. These lands, primarily adjacent to U.S.-owned installations, provide ideal locations for specialized defense capabilities, multi-domain operating areas to generate future force readiness, and training ranges that our Joint Force leverages with allies and partners.

The Department recognizes that past incidents, particularly the fuel and concentrated Aqueous Film Forming Foam (AFFF) spills at the Red Hill Bulk Fuel Storage Facility (RHBFSF) and the diesel spill at the Maui Space Surveillance Complex, have resulted in a severe and worsening loss of public trust between the DoD and Hawai'i's people. This situation presents exceptionally challenging conditions for DoD negotiations with the State to retain the use of these critical training land. Senior leaders are working to engage consistently, respectfully, and transparently to repair relationships and build trust.

As a testament to the Department's commitment to the people of Hawai'i, in December 2023, the Department safely completed the removal of over 104 million gallons of bulk fuel from the Red Hill storage tanks and began the process of removing the remaining fuel from the pipelines and closing the RHBFSF. While there is still a long way to go with removing the residual fuel, tank cleaning, closure, and ultimate decommissioning of Red Hill, the Department is committed to the

long-term continued environmental recovery and revitalization of the Red Hill Drinking Water Shaft to ensure safe drinking water at Joint Base Pearl Harbor Hickam.

Additionally, in 2023, in partnership with the Governor of Hawai'i, the Department awarded a \$3.2 million capacity-building grant to the State of Hawai'i. Awarded through the Office of Local Defense Community Cooperation, this effort will aid the State in increasing its capacity to work with the DoD on a range of issues, to include the compatibility of the Department's land retention efforts relative to Hawaiian land use concerns and economic needs.

In January 2024, the Deputy Secretary took measures to enhance our collaboration with the people of Hawai'i to protect and preserve the Hawaiian lands on which we operate and to build and maintain trust with the people of Hawai'i. At her direction, the Department is establishing a Hawai'i Coordination Cell for Energy, Installations, and Environment, which will be dedicated to synchronizing communication and engagements with state and local officials and the public on matters related to DoD's use of the lands in Hawai'i. The Hawai'i Coordination Cell will be integral to strengthening partnerships and relationships that enable the continuation of the critical military missions in Hawai'i, which are vital to the U.S. military strategy in the Pacific and our national strategy to promote stability in the region.

Of the approximately 53,000 acres of land leased by the Military Departments, about 44,000 acres will expire within seven years. The Military Departments are seeking to negotiate new property agreements for 22 separate parcels, including training areas, main cantonments, support areas, and easements (including ocean area), before their expiration in 2028, 2029, and 2030. The Department is committed to being comprehensive and open with the public as the Military Departments negotiate land acquisitions. On October 27, 2023, the Army provided in-person testimony to the Board of Land and Natural Resources on the Army's proposed training land retention on the islands of O'ahu and Hawai'i. The Navy and Air Force have also begun public outreach for their land retention requirements. The expected timeline for reaching new property agreements is 5-7 years because of the lengthy and robust environmental compliance and real estate due diligence requirements. Through consistent public actions that support and benefit the State of Hawai'i and the military, the Department will continue building relationships and set the conditions today to enable productive negotiations.

Construction on Guam

The Department has several upcoming key posture actions in Guam that will require historic levels of military construction, including the relocation of Marines from Okinawa, the Integrated Air and Missile Defense of Guam, and Polaris Point expansion. This massive construction surge for posture initiatives includes repair requirements due to damage sustained from Typhoon Mawar. The rise in military construction requirements, complicated by labor and material constraints and the tyranny of distance, drove the Department to take a holistic look at its approach to supporting construction in Guam.

In the past year, the Department completed a construction capacity assessment examining limitations imposed by workforce, port capacity, and utility constraints, among many other factors. Through the effort the Department determined that sufficient capacity exists to support

several billion dollars of construction at any given time. This capacity to execute mission-essential construction was only possible with the help of Congress passing the FY 2024 NDAA provision that provided DoD construction contractors with a stable H-2B visa workforce through December 31, 2029.

The Department is now working towards integrating and synchronizing the Military Department, Defense Agency, and DoD Field Activity military construction to ensure the Department is delivering the right capabilities and quality of life improvements to the warfighter on time. The goal is to have an adaptable tool that identifies mission need dates, mission dependencies, programming and design requirements, environmental considerations, climate, and other requirements to inform the Department's future infrastructure investments.

The Department has additionally made great strides in codifying its oversight structure for all things energy, installations, and environment in Guam. In December 2023, the Deputy Secretary appointed the Under Secretary of the Navy as the senior defense official for Guam and co-chair, with the Under Secretary of Defense for Acquisition and Sustainment, of the Guam Synchronization Oversight Council (GSOC). The GSOC provides the strategic direction and alignment for the various strategic efforts underway in Guam. One of the main tasks assigned to the GSOC by the Deputy Secretary is the oversight of the military construction program on Guam, which the Department's construction synchronization effort will inform.

The Office of Local Defense Community Cooperation

The Office of Local Defense Community Cooperation (OLDCC), in coordination with the other Federal agencies, delivers a program of technical and financial assistance to enable states, territories, and communities to plan and carry out civilian responses to workforce, business, and community needs arising from Defense actions; cooperate with their military installations and leverage public and private capabilities to deliver public infrastructure and services to enhance the military mission; achieve facility and infrastructure savings, as well as reduced operating costs; increase military, civilian, and industrial readiness and resilience; and support military families.

OLDCC's program portfolio is presently comprised of 250 grants, exceeding \$1.5 billion, and represents partnerships between the Department and most states, territories, and communities, supporting over 260 Department of Defense installations.

The OLDCC Installation Resilience Program assists states, territories, and communities in identifying man-made or natural threats alongside their installations as "one community" and assessing the public and private infrastructure and services necessary to sustain our installations and communities, including housing, education, critical infrastructure, and healthcare. For housing, this program looks at its resilience for Service members and their dependents through targeted business-case studies and planning activities. This effort also includes tabletop exercises to gauge civilian and uniformed first responders' ability to respond to disasters and catastrophic events. In FY 2023, OLDCC enabled 17 of these locally-led exercises. Once an installation-community team performs these assessments, they can collectively identify opportunities for future projects to preserve and enhance mission resilience and assurance. Moving forward, these

tabletop exercises will better incorporate federal partners and installations to help identify and prioritize critical infrastructure needs.

The Department is requesting \$50 million for the Defense Community Infrastructure Program (DCIP), which aims to enhance military value, cadet training at covered educational institutions, installation resilience, and military family quality of life by responding to deficiencies in community infrastructure around military installations. DCIP also incorporated the consideration of Defense Critical Infrastructure (DCI) starting in FY 2024. Between FY 2020 and FY 2023, OLDCC awarded 65 projects representing \$300 million in federal funding and \$251.7 million in non-federal funding through this program.

OLDCC has also been an active partner with the State of Hawai'i, Territory of Guam, and the Commonwealth of the Northern Mariana Islands (CNMI).

In Hawai'i, programs of assistance include redeveloping twelve public schools on the Island of O'ahu through the Public Schools on Military Installations program; coordinated planning on climate-related resiliency and energy availability through an Installation Resilience project for Marine Corp Base Hawai'i and its surrounding community; and two DCIP infrastructure projects on the Island of Hawai'i in support of emergency response and preparedness for the community and in support of Pōhakuloa Training Area.

In Guam, OLDCC works closely with the Territory to seek funding for infrastructure upgrades directly and indirectly associated with the Department's basing needs. This includes identifying and jointly undertaking further enhancements as requirements evolve, and Federal investments in Guam's other socio-economic needs. To date, OLDCC has funded \$490.1 million in Guam civilian infrastructure projects supporting improvements to the Territory's road network, upgrades to Guam's wastewater treatment facility and systems, construction of a cultural repository to curate artifacts unearthed as a result of DoD activities, and the pending construction of a level 2/3 bio-security testing facility, providing the capability on the Territory to test samples and ensuring the health, safety, and general welfare of the Territories military and civilian population.

OLDCC has also partnered with the CNMI to collaboratively address, resource, and sustain direct and indirect support that enables the Commonwealth, its citizens, and our military to prosper and respond to tactics deployed by the People's Republic of China. Since 2016, OLDCC has provided programs of assistance to the Commonwealth Office of the Governor, totaling over \$18 million in grant assistance. This includes over \$4.2 million last year to support efforts to formulate methods to secure, bolster, and enhance the Commonwealth's Information Technology infrastructure; initiate a structured economic analysis and decision-making methodology to enhance and ensure the Department's resilience in the Indo-Pacific; and enhance capacity of the Commonwealth Office of the Governor that supports, facilitates, and sustains effective and responsive communications.

OLDCC is currently working with the Commonwealth to provide technical assistance to conduct comprehensive needs assessments for infrastructure on Saipan, Rota, and Tinian, with specific focus on seaports, airports and power plants; implement a resilient and secure IT infrastructure;

and support whole-of-government collaboration to enhance intermodal transit within the Commonwealth.

Finally, in working with communities across the country, the Department believes there is more that can be done to support the modernization needs of the local defense industrial base and installations. The Department stands ready to work with Congress to find ways to address this need to not only support communities that contribute greatly to defense missions on installations, but also to enhance the capabilities and resilience of the defense industrial base and the defense industrial workforce.

Military Aviation and Installation Assurance Siting Clearinghouse

The Military Aviation and Installation Assurance Siting Clearinghouse continues to protect the Department's ability to train, test, and operate as the nation expands its renewable and other commercial energy and power transmission capacity. Among these energy projects, commercial wind development typically poses the greatest compatibility challenge to DoD due to physical obstruction of low-level flight routes and electromagnetic interference with DoD radar systems. DoD resolves project concerns through collaboration between the Clearinghouse, the Military Departments, local communities, states, and energy developers, thereby maintaining the Department's ability to train, test, and operate while enabling development of alternative energy resources. The Clearinghouse negotiates Mitigation Agreements with wind energy developers to minimize the impacts from proposed projects on DoD missions.

The Department works with the DOI, the Bureau of Ocean Energy Management (BOEM) and states to create plans that support aggressive new offshore energy development goals. The Department works with its Federal, state and industry partners at every stage of planning, permitting, and development. DoD is an active partner in the search for compatible leasing off the Central Atlantic Coast, including a new round of leasing just getting underway in 2024. As part of this effort, the Clearinghouse has initiated studies of offshore wind impacts. DoD has also collaborated in offshore development planning throughout the Atlantic, Pacific, and Gulf of Mexico. In each case, the Department collaborates to protect national security while allowing compatible development.

The Department is actively implementing new approaches to protect DoD missions. The Clearinghouse intensified efforts to advocate for state-level legislation to protect military installations and operations from incompatible wind energy development. Although DoD and developers have had success resolving issues related to incompatible energy development, state support is invaluable in the rare cases where developers choose not to voluntarily coordinate with DoD. The Clearinghouse is developing geographic areas of concern that will alert industry to areas of extreme military compatibility challenges.

Native American Lands Environmental Mitigation Program

The Native American Lands Environmental Mitigation Program (NALEMP), codified under the FY 2021 NDAA, addresses environmental effects of Department actions on Indian lands and other locations where the Department, an Indian Tribe, and the current landowner agree that such

mitigation is appropriate. NALEMP is requesting \$20 million to mitigate these environmental effects, which are typically associated with hazardous materials, munitions debris, underground fuel storage tanks, unsafe buildings, lead-based paint, asbestos, and abandoned equipment. Most Indian lands are located in rural and remote areas with low population densities; thus, they might not qualify as high priority sites under the Department's more limited environmental restoration programs. NALEMP seeks to bridge the gap between Tribal needs and these traditional risk-based environmental restoration programs and incorporate Tribal priorities to address potential impacts to Indian lands.

To date, over one-hundred sites in the continental 48 states and Alaska have been fully mitigated. Ninety-five percent of the 1,160 potential Tribal impacts reported to the Department have been assessed and 161 have been found eligible for NALEMP and 128 impacts are under review. In FY 2023, the Department executed a total of 14 NALEMP cooperative agreements (CA), of which nine CAs were with Alaska Native Tribes and five with American Indian tribes in the continental 48. By the end of FY 2024, the Department will execute an additional 14 CAs, of which 12 will be with Alaska Native tribes and five American Indian Tribes in the continental 48 states.

Environmental Justice

The Department of Defense (DoD) supports the Administration's efforts to take a more active federal role to address Environmental Justice (EJ). We have long recognized that in order to sustain the defense mission, we must build trust and community resilience through partnerships that safeguard healthy, secure, and vibrant natural and human environments for our neighbors, our Service members, and their families.

With the issuance of EO 14008 Tackling the Climate Crisis at Home and Abroad and EO 14096 Revitalizing Our Nation's Commitment to Environmental Justice for All, the Military Services have been proactive in revising their policies and guidance to improve early engagement with disadvantaged communities and Tribal Nations affected by Federal actions. In partnership with the Council on Environmental Quality and other Federal agencies, we have developed tools that will enhance our mapping and analysis of climate change impacts to communities and developed a strategic framework for achieving climate change adaptation and resilience that address 5 lines of effort, including EJ. The DoD will take into account equality in our investments in military families and communities, implement training for service members and civilian specialist in EJ literacy, strengthen Government-to-Government relations with Tribal Nations, and leverage existing public-private partnerships to support infrastructure and environmental enhancements in communities adjacent to the Department's installations.

CONCLUSION

Thank you for the opportunity to discuss DoD's Fiscal Year 2025 budget request supporting our energy, installations, and environment programs. We appreciate Congress' continued support for our enterprise and look forward to working with you.



Brendan Owens

Assistant Secretary of Defense for
Energy, Installations, and Environment
Chief Sustainability Officer

The Honorable Brendan Owens was sworn in as Assistant Secretary of Defense for Energy, Installations, and Environment on January 26, 2023. In this role, he is the principal advisor to the Under Secretary of Defense for Acquisition and Sustainment for all matters relating to operational and facility energy; installations real property planning, operations, and sustainment; environment protection, compliance, and restoration; natural, historical and cultural resources; and accompanied and unaccompanied military housing. He oversees the Department of Defense's real property portfolio encompassing millions of acres and over 500,000 buildings and structures at more than 500 installations, and additionally serves as the Chief Sustainability Officer and Chief Housing Officer for the Department of Defense.



Prior to his appointment, Mr. Owens served as Principal of Black Vest Strategy, a consultancy focused on the intersection of health, equity, and climate issues in the built environment. He was also a co-founder of Ecountabl, Inc., a technology platform seeking to democratize access to corporate environmental, social, and governance information.

Previously, Mr. Owens had a 19-year career with the U.S. Green Building Council (USGBC). At USGBC, Mr. Owens supported the technical development of USGBC's LEED Green Building Rating System, as well as the creation of numerous other building sector standards and codes for high performance, zero energy and grid interactive buildings. He has experience across supply and demand sectors of the energy industry, buildings, and infrastructure with a focus on integrative technology and inclusive policy to optimize outcomes.

Prior to his work at USGBC, Mr. Owens was the energy manager at U.S. Army's Fort Belvoir, where he participated in source selection, implementation, and measurement and verification of what was the largest energy savings performance contract in Department of Defense history.

Mr. Owens is an engineering graduate from Purdue University, where he served on the Dean's Advisory Council for the University's Honor's College. He is a Virginia-registered Professional Engineer and was honored as a LEED Fellow in 2012. He grew up Coast Guard, but considers Old Town Alexandria, Virginia, where he lives with his family, home.

RECORD VERSION

STATEMENT BY

THE HONORABLE RACHEL JACOBSON
ASSISTANT SECRETARY OF THE ARMY
(INSTALLATIONS, ENERGY AND ENVIRONMENT)

BEFORE THE

SUBCOMMITTEE ON READINESS
COMMITTEE ON ARMED SERVICES
UNITED STATES HOUSE OF REPRESENTATIVES

SECOND SESSION, 118TH CONGRESS

FISCAL YEAR 2025 DEPARTMENT OF THE ARMY BUDGET REQUEST FOR
ENERGY, INSTALLATIONS, AND ENVIRONMENT PROGRAMS

APRIL 16, 2024

NOT FOR PUBLICATION UNTIL RELEASED BY THE
COMMITTEE ON ARMED SERVICES

Introduction

Chair Waltz, Ranking Member Garamendi, and distinguished members of the subcommittee, thank you for this opportunity to present the Army's Fiscal Year (FY) 2025 budget request for energy, installations, and environmental programs, and for your continued support and commitment to the Army's Soldiers, Families, Civilians, and Soldiers for Life. This last year, the Army has made meaningful progress building the resiliency of our installations. But more needs to be done to fulfil our commitments to our soldiers, particularly in the areas of barracks and housing. Working with the Congress, we will continue to build on our efforts in 2025.

With ongoing and emerging threats around the world, building resiliency in our force, infrastructure, and industrial base is a strategic imperative. First, we must ensure our installations adequately support our soldiers and their families around the globe. Second, we must invest in advantages over our adversaries—including modernizing our operational energy capacities. Lastly, we must continue to improve the management of all assets on our installations to ensure the Army's focus can be mission oriented. The FY 2025 budget request will help the Army make these strategic investments while we continue to remove obstacles to success. To build the Army of tomorrow, we must make deliberate investments in our installations today.

Facilities Budget Request

The Army's FY 2025 Military Construction (MILCON) budget request across all components is \$3.9 billion, which covers 45 projects. Additionally, the Army is requesting \$7 billion in Facility Sustainment, Restoration, and Modernization (FSRM). A vast majority of this funding will be used to address critical inadequacies in housing and other quality of life issues on our installations. Of that request, \$2.3 billion is for the Regular Army, \$362 million is for the Army National Guard, and \$255 million is for the Army Reserve. The remainder of the MILCON request is \$752 million for Army Family Housing and \$213 million for Base Realignment and Closure Accounts.

For the Regular Army, \$1 billion of the \$2.3 billion is dedicated to projects supporting soldier quality of life—including investments in barracks and childcare facilities. Another

\$772 million is for twelve major construction projects supporting various readiness functions, including: \$114 million for live fire ranges and training facilities, \$112 million for upgrades of Army power projection assets, \$262 million for unit equipment maintenance facilities, \$276 million to modernize the Army's aging Industrial Base infrastructure, and \$8 million for a land purchase. Planning and Design funding for \$325 million and Unspecified Minor Military Construction for \$186 million rounds out the Regular Army MILCON request.

The Army National Guard's MILCON request totals \$362 million, including \$202 million for five National Guard Readiness Centers to improve training proficiency, increase unit readiness, and enhance the quality of soldiers' work environments. The National Guard is requesting to improve readiness with four vehicle maintenance facility projects totaling \$72 million, a live fire training range for \$18 million, \$26 million for planning and Design, and \$45 million for minor construction projects.

The \$255 million Army Reserve MILCON request includes \$81 million for two barracks. The remaining four projects for the Army Reserve support unit and training readiness include two vehicle maintenance facilities for \$45 million, an Army Reserve Center for \$78 million and a Vertical Construction Skills Training Facility for \$16 million. Planning and design for \$31 million and minor construction for \$4 million complete the Army Reserve request.

Unaccompanied Housing - Barracks

Our first and highest priority is to ensure our soldiers have safe, high-quality living and working conditions. Training healthy and ready soldiers starts with quality housing. The challenge we face is a substantial backlog of deferred maintenance and the deteriorating quality of a portion of our housing portfolio—as highlighted in last year's Government Accountability Office Report. These conditions were built up over many years. The Army is proactively building a multiyear plan to address these challenges responsibly over the next few years. However, in situations where the living conditions are unacceptable, the Army is taking immediate action to ensure all soldiers are adequately housed as quickly as possible.

In the last few years, with the help of the Congress, the Army's investment in permanent party barracks has grown from \$718 million in FY 2021 to over \$1.5 billion in the FY 2025 budget request. Across all components, our requested barracks funding is now \$2.5 billion. As part of that funding, the Army is requesting 100 percent of the barracks sustainment requirement in the operations and maintenance account to ensure our good and adequate barracks do not degrade into the poor or failing category. The requested \$935 million for nine MILCON barracks projects—seven for the Active Army and two for the Army Reserve—will help expand our barracks capacity. In addition, the Army plans to dedicate a large portion of the requested Restoration and Modernization funding—also provided in the Operations and Maintenance Account—to barracks recapitalization.

We are grateful to Congress for recognizing the Army's need for additional MILCON and FSRM funding in FY 2024 and look forward to building upon that investment. Our 2025 budget request is part of a multi-year, systematic approach to address deferred maintenance, and to sustain the quality of our barracks once the issues have been resolved.

Modernizing our design and management for new and renovated barracks remains a priority for the Army. The six permanent party barracks projects in the MILCON request will provide 996 beds. These projects will use the Army's current configuration and privacy standards which include single occupancy rooms and a shared bathroom in a four-bedroom, two-bathroom suite format. Additionally, the Army is actively assessing the potential to privatize barracks where it makes sense to do so. The Office of Management and Budget (OMB) is currently reviewing options to privatize barracks at Fort Irwin, California, where a Life Cycle Cost Analysis shows that it can be more cost-effective to have a private company build and manage the barracks than building government-controlled barracks. The Army currently has four other locations with privatized barracks.

Looking to the future, the Army is aggressively addressing Congress' concerns to deliver the highest quality barracks possible for our soldiers. The Army will continue to look for ways to improve soldiers' quality of life when updating our barracks, including

adding security camera capability in every new and renovated barracks. In 2025, the Army is planning to hire 75 civilian barracks managers across 56 installations—one for each housing office—that will be principally responsible for barracks maintenance, as required by the FY 2024 National Defense Authorization Act (NDAA). The Army is exploring options to expand this program. Having full time civilian personnel supervising barracks maintenance will help to ensure we maintain our barracks investments made in the FY 2025 request while allowing our soldiers to focus on their primary mission. Additionally, the Army is finalizing a total inventory of the work required to fix our poor and failing barracks to provide the Congress with an accurate estimate of the Army's needed funding for barracks going forward. Lastly, we are building a program to use the new Repair by Replacement authority in the FY 2024 NDAA to fully replace poor and failing barracks where estimated repair costs exceed 75 percent of the replacement costs.

Army Family Housing

The Army continues to make significant progress to provide high quality family housing for our soldiers and their families—both government controlled and privatized family housing.

For Army Family Housing worldwide, the FY 2025 budget requests \$752 million for operations, maintenance, leasing, privatization oversight, and construction. This includes investments in the Army controlled family housing. The Army remains committed to effectively maintaining our government-controlled housing, which is mainly located overseas. In FY 2025, the Army is requesting three construction projects for government-controlled housing, including 84 new housing units in Chievres, Belgium; replacement construction of 54 units in Baumholder, Germany; and renovation of another 35 units at Camp Zama, Japan.

In addition to ensuring high-quality government-controlled housing, the Army has made significant progress in improving the quality of privatized housing. Over the next three years, private housing providers will invest over \$2 billion in new construction, renovations, and other development work. Over the last two years, the Army has

implemented several oversight reforms to better hold private housing providers accountable for maintaining the high-quality privatized housing our soldiers deserve. These efforts have included strengthening and clarifying enforcement language in ground leases, conducting house-by-house inspections, implementing quality assurance of construction and renovations, developing a standardized quality assurance maintenance program that will be applicable to all private housing companies doing business with the Army, and conditioning incentive payments based on quality assurance inspections.

This last year, we conducted 100 percent house-by-house third-party inspections at Fort Eisenhower. The Army is taking quick, substantive actions when our inspections reveal deficiencies in work performed by the private housing providers. In the FY 2025 budget request, the Army has requested \$34 million to continue these third-party inspections and has targeted completion of the entire housing inventory by the end of FY 2026.

As part of the Army's commitment to providing quality housing, we continually look for feedback from our soldiers and private housing providers. Annually, the Assistant Secretary of the Army (Installations, Energy and Environment) and the Commanding General of Army Materiel Command meet with private housing providers and senior Army leaders to assess the portfolio's status and develop solutions to address prevailing challenges. Additionally, the Commanding General, Installation Management Command, continues to hold weekly meetings with privatized housing providers and stakeholders throughout the installation community to review the physical conditions of privatized housing and to receive an update on the status of displaced families.

Other Facilities

The Army's inventory includes a wide variety of facilities beyond housing, from equipment maintenance shops to unit headquarter office buildings. We must maintain and improve Army facilities to enable our mission. With guidance from the Congress, Army senior leaders continue to prioritize investment of limited resources and provide the Congress with a list of unfunded priorities. With construction cost growth continuing to outpace core inflation by 2 to 3 percent, Army MILCON project costs sometimes end up being greater than amounts authorized and appropriated. In FY 2023, the Army re

programmed over \$364 million to on-going construction and previously authorized project awards, displacing other funding priorities. We continue to look for cost savings in every project to minimize the need to submit requests for additional funding in the future. The Army is also improving our business practices. Working with the Army Corps, we will apply rigorous analysis in our cost estimates by ensuring design is sufficiently complete and costs are more predictable before requesting funding for MILCON projects. We look forward to working with Congress on options for accounting for project cost growth in our original MILCON requests to minimize these cost-to-complete requests in the future.

Childcare

The resiliency of our force is dependent on more than just housing. Our soldiers and their families need access to safe childcare so that they can focus on their missions. To assist our families finding safe childcare, the Army has a robust Child Care Fee Assistance Program that subsidizes the cost of community childcare for approximately 10,000 children per day when a family has limited access to installation childcare or a family's duty station is off an installation.

For many Army families, Child Development Centers (CDCs) provide important childcare in many places where access may be limited. As the Army is looking to add and improve CDCs and other childcare centers over the next 10 years, the FY 2025 MILCON Budget request includes \$174 million for three CDCs and one Youth Center.

Safety and Occupational Health

The safety of our soldiers and civilians remains at the forefront of our efforts to maintain a resilient force. The Army is undertaking a major evolutionary step forward implementing the Army Safety and Occupational Health Management System, which will move us from a reactive approach to safety and occupational health, where planning was primarily based on historic trends, to a proactive approach. We appreciate Congress' guidance as we move out on a pilot program that will install data recorders on tactical vehicles. These recorders provide critical data to support mishap investigations and give us the capability to proactively improve driver and passenger

safety by identifying hazards for mitigation. The recorders will also provide the potential for daily monitoring of each vehicle to provide individual feedback for improving driver confidence and performance.

Additionally, the Army continues to review the potential risks of blast overpressure on our warfighters and civilians. The Army conducts health hazard assessments for equipment, to include weapons systems, as part of design, testing, and new equipment training. The Army utilizes scientific collection and measurement methods to develop and publish standardized training procedures providing leaders and soldiers guidance on proper use, required mitigation steps, and potential risks related to blast overpressure. When new scientific methods or tools are developed or monitoring indicates emerging injury trends, the Army reassesses and publishes updated training guidance.

Installation Resiliency

Ensuring our installations can sustain and protect our soldiers, their families, and our operational capacity through any situation remains a top priority for Army senior leaders. Threats to our installations are more pervasive now than ever in history. From securing the land around our training areas from encroachment to mitigating against more frequent and severe weather events, the Army must protect our installations from more than just physical threats, we must protect our cyber capabilities, energy infrastructure, and water resources through deliberate investments. For the Army of tomorrow to be able to project force around the world, we must invest in resilient installations today.

To assess extreme weather and related risks to our installations, the Army has completed initial Installation Energy and Water Plans (IEWPs) for almost every installation, and we have started developing Installation Climate Resiliency Plans (ICRPs). These assessments are valuable tools to inform installation leaders, planners, and senior leaders about short- and long-term risks and vulnerabilities to our infrastructure and other assets on our physical installations. To help mitigate risks to our installations' water and energy, the Army has completed 180 of the 189 IEWPs; we are on track to complete the remaining IEWPs in FY 2024. Additionally, ICRPs help inform how our installations and facilities will specifically mitigate or adapt to the effects of

climate change. Since my last update, the Army completed ICRPs for USAG Alaska, Anniston Army Depot, Fort Bliss, Fort Carson, Fort Cavazos, Fort Liberty, and Fort Stewart. In addition, two new ICRPs are underway at Fort Detrick and USAG Poland. Significantly, we are working with partners in neighboring communities and academia to share essential regional data in determining risks from climate change. The Army, working with the Congress, will be ready to use these plans to prioritize investments that address our most critical climate, water, and energy vulnerabilities.

To test our resiliency, Army installations conduct Black Start Exercises assessing installations' ability to respond to an electric grid outage. These exercises have been completed at ten installations and planning is underway to execute these exercises at seven additional locations in FY 2024.

The Army continues to explore a wide array of technologies to bolster our installation resilience. Specifically, the Army invests directly in our infrastructure resiliency by using the authorities Congress has given us. We also enter into private-public-partnerships to bring private sector capital and expertise onto installations. For example, there are 33 active technology demonstration projects underway at 28 Army installations as part of the Department of Defense's Environmental Security Technology Certification Program. Working across the government, the Army leverages expertise of other Federal agencies, such as our four geothermal energy pilot projects with the Department of Energy. Congressional funding for Army research labs has also increased installations' ability to test and leverage resilient technologies. In February 2024, a ribbon cutting was held for a new microgrid at Fort Cavazos, Texas, which will support 43 facilities and was made possible, in part, by \$9 million in congressional research funding provided to the U.S. Army Corps of Engineers' Engineering Research Development Center.

Microgrids are a central feature of the Army's resilience planning. They can include on-site power generation, controllable distribution systems, and energy storage. Microgrids promote resilience by islanding on-base power in the event of an off-base power interruption. The carbon neutral energy that they can provide for our installations also supports the Army's Climate Strategy goal to be net zero by 2050. To date, the Army has 29 operational microgrids, with 9 in construction, 29 in design, and over 50 in early

stages of planning. To continue this effort, the FY 2025 MILCON budget request includes \$248 million to invest in these types of energy resilience projects.

Installation resiliency is about more than just fortifying our energy and water supply and distribution. The buildings we construct must last longer and use less energy over the long term. This is especially important for the Army which has more buildings on our installations than the other military services combined. These buildings are the source of the vast majority of Army's greenhouse gas emissions. Recently, the Army released guidance for installations to design and construct more resilient buildings. That guidance follows guidance from OSD and the Biden Administration to transition to all-electric technologies for building operations. The investment in higher quality, more efficient building materials, coupled with efficient design considerations, will reduce building operational costs, while creating more durable and higher quality facilities that are better able to withstand severe weather events.

Industrial Base and Supply Chains

The security of our defense and industrial base is critical to support our soldiers on the front lines. The Army's FY 2025 MILCON request includes \$276 million to invest in improvements to our organic industrial base. These investments will pay dividends for years to come, increasing the Army's capacity to meet every size and type of mission.

Beyond our Organic Industrial Base, the Congress and Administration have taken many steps to ensure our supply chains supporting resilient energy projects are protected from our adversaries. Being able to look beyond just the end-product to the source of our raw materials allows the Army to assess any potential long-term risks to our missions. In the near term, we are working with like-minded allies to achieve mutually beneficial supply chains to safeguard our investment in resilient energy. The Army's efforts to "Buy American" and standardize batteries across our partners will help to ensure we do not trade a dependence on overseas fossil fuels for other overseas dependencies.

Competitive Advantage

To build the Army of tomorrow, we must look to modernize our infrastructure and equipment today. The Army's operational fuel consumption requirement poses operational limitations, supply chain vulnerabilities, and logistical constraints. The Army is looking at new energy technologies and how we might be able to apply them to our operational environment.

The Army is engineering and testing technologies to reduce the demand for fuel, services, and other classes of supply through: 1) vehicle hybridization, 2) electrification of unmanned aircraft systems (UAS), and 3) sustainable ground-based power systems for our expeditionary contingency bases. All these efforts give our Army a competitive advantage, increasing capability, lethality, survivability, and overall combat effectiveness while also reducing greenhouse gas emissions.

First, the Army is looking to extend the range of tactical vehicles, while reducing resupply rates. The Army recently completed testing and demonstration of two Bradley Hybrid-Electric Vehicle Prototypes to assess the operational benefits of integrating a hybrid electric drive into a combat platform. Beginning in 2025, the Army is developing electric Light Reconnaissance vehicle prototypes. These vehicles provide a substantial competitive advantage through reduction in acoustic, thermal signature, silent mobility, increased dash speed, extended range, and increased reliability compared to traditional combustion vehicles. Second, the Army is looking to technology that can extend intelligence, surveillance, and reconnaissance (ISR) to support our warfighters and improve communication coverage. To that end, the Army is evaluating electrification in aviation systems and is developing a multi-fuel capable hybrid electric UAS propulsion. The Army is also experimenting with solar-powered UAS that can operate for extended periods. Lastly, the Army is looking to improve power storage and supply on the front lines compared to the current use of small diesel generators that have limited capacity and have significant resupply requirements. The Army is concurrently working on multiple programs that achieve that objective, including the Small Tactical Electric Power (STEP), the Hybrid Augmentation System (HAS), Advanced Medium Mobile Power Source (AMMPS) Generators. The combination of these systems in a tactical

microgrid has the potential to deliver power in a tactical environment with up to 65 percent less in fuel consumption.

The Army continues to follow the Congress's lead in exploring the viability of nuclear energy as a stable and reliable source of energy for our mission critical operations. The FY 2019 NDAA directed the Department to undertake a pilot program for a small modular advanced nuclear reactor, which is being led by the Department of the Air Force. The Army continues to monitor the progress of that pilot program and consider whether the technology would be viable to supply power to critical missions on our installations.

Installation Management Innovation

The Army continues to improve and innovate to efficiently manage the financial and physical resources entrusted to us by the American people. Beyond using the existing authorities provided by the Congress to improve management of housing, the Army is exploring how geospatial information technology and analysis can optimize our use of land. These innovative tools and methods, as authorized in the FY 2021 NDAA, provides us detailed insights about how we are occupying our property, and where we are not fully occupied, allowing the Army to advertise available land for use by other agencies.

In addition to making efficient use of land, the Army is actively reducing our holdings, when appropriate. During FY 2023, the Army disposed of over 9,000 acres of surplus property. We have completed transferring all surplus acres at Fort Gillem, completed a long-awaited transfer at Fort Ord, California to the Bureau of Land Management, and are close to completing an Economic Development Conveyance that will transfer 5,400 acres at Pueblo Chemical Depot, Colorado. This month, the Army completed a major real estate transaction at Stratford Army Engine Plant, Connecticut and Riverbank Army Ammunition Plant, California.

The Army is proud of local community redevelopment efforts at previously transferred properties. Fort McPherson, Georgia has a thriving movie studio and production complex; Fort Monmouth, New Jersey is on the cusp of a massive redevelopment deal;

Sunflower Army Ammunition Plant, Kansas will soon be producing electric vehicle batteries; Walter Reed Army Medical Center now has hundreds of new housing units, a Whole Foods, and Children's National Medical Center has invested over \$200M into a world-class medical research campus. Fort Gillem, Georgia has more jobs today than when it was an Army installation, built millions of square feet of new distribution space, and has a movie studio opening soon.

The Army continues to work towards a resolution on the Army and Navy Hospital Complex in Hot Springs, Arkansas. We appreciate the Congress elevating the issue and we continue to work with the State to come to a resolution.

Beyond land planning considerations, the Army continues to look for new and innovative ways to reduce installations operation costs, leverage public private partnerships to finance conservation efforts, and reinvest savings into our installations. These efforts reduce cost for our installations and the American taxpayer, while freeing up Army resources to other strategic investments.

In addition to reducing operating costs, the Army's active energy and water conservation efforts help to build resiliency by reducing the amount of energy and water that needs to be sourced for our installations. In FY 2023, Army installations used slightly over 29.5 billion gallons of potable water, a reduction of 100 million gallons from previous years. In FY 2023, the Army captured, treated, and re-utilized nearly 695 million gallons of water from alternative sources such as rainwater harvesting systems. At Fort Leonard Wood, Missouri, the Army re-treated wash water and at Fort Irwin, California, recycled and treated wastewater resulted in an annual decrease of 3.6 million gallons of potable water use. Our efforts to reduce our installations water usage is especially important in communities that are suffering from severe water shortages and insecurity, such as areas of the Southwest and island communities.

The Army's use of Energy Savings Performance Contracts (ESPCs), Utility Energy Savings Contracts (UESC), and Intergovernmental Service Agreements (IGSAs) continue to improve installation efficiency and lower facility operational costs across all utilities and services. In FY 2023, the Army awarded two ESPCs and four UESC

projects totaling \$156 million, delivering the Army 3.5 megawatts of onsite carbon-free energy generation with 7.5 megawatt hours of battery energy storage. The Army is working to award nine ESPCs and UESCs totaling \$354 million in FY 2024, with more to follow in FY 2025 and FY 2026. The Army's 160 IGSAAs include agreements for environmental services, waste management and dozens of other community partnerships. On April 10, 2024, Army signed an IGSA with Sourcewell, a service co-op of the Minnesota state government, for blanket Purchasing for Municipal Supplies and Services. This exciting approach to obtaining goods and services is anticipated to initially save the Army approximately \$3.75 million per year.

Going forward, we continue to increase our use of ESPCs, UESCs, and IGSAAs to reduce the long-term cost of our facilities. Recently, the Army announced a fence-to-fence ESPC at Fort Drum. Combining multiple energy saving projects into one ESPC reduces overall administrative burdens while achieving the same operational savings. Additionally, the Army continues to reward innovations on our installations that promote energy efficiency. The Resilient Energy Funding for Readiness and Modernization program, authorized by the Congress in the FY 2006 NDAA, provides savings back to installations to reinvest in energy and quality of life programs. Since the inception of the program, the Army provided over \$174 million in energy cost savings back to installations.

Historic Housing

The Army has a growing inventory of historic housing—which will grow from 30,000 to over 100,000 in the next few years as more homes reach fifty years of age. We have worked with the Advisory Council on Historic Preservation (ACHP) to develop programmatic solutions known as Program Comments with renovation guidelines for some of the historic housing—with one more currently being considered by the ACHP. These guidelines have allowed the Army to use appropriate substitute building materials to maintain the historical nature of the homes, while increasing usability and reducing costs. At Fort Belvoir, historic homes have benefited from new windows that improve occupant comfort and decrease utility costs, while at the same time keep exterior historic characteristics of the home. At Fort Leavenworth, the housing provider

estimates they will save over \$14 million by using these types of substitute building materials. We look forward to ACHP's approval of our proposed Program Comment for pre-1919 homes. Following that approval, we will be able to use an efficient, balanced approach that allows for renovations and modernization, while preserving the history of 99 percent of our current historic housing inventory.

The Army has a distinct culture of respecting and honoring our history. From unit heritage to our historic facilities, the Army looks to our past to inform our future. However, while preserving our history we must balance the readiness of tomorrow's Army. Our current agreements with the ACHP only cover historic homes, but not the hundreds of thousands of other historic facilities that are located on Army installations. We must develop a long-term solution to be able to renovate all historic buildings in a way that is not cost prohibitive. We look forward to working with the Congress for these solutions.

Natural Resources Stewardship and Restoration

Preserving and restoring natural resources enables the Army to provide realistic training environments and recreational areas for our soldiers and families, while at the same time protecting natural resources and endangered species entrusted to our care.

Through the Army's Readiness and Environmental Protection Integration Program (REPI), we have preserved over 760,000 acres in 29 states. The Army and its partners have invested over \$1.2 billion to support the protection of natural resources.

The Army is also taking responsibility for our past actions that caused releases of hazardous substances, pollutants, or contaminants to the environment. We must continue to invest in these remediation efforts, because the environmental issues will not go away on their own and the cost to clean up these releases only continues to grow.

The Army also recognizes that exposure to unacceptable levels of per- and polyfluoroalkyl substances (PFAS) poses a risk to our soldiers and surrounding communities. While PFAS was used in many industrial and consumer products around the country, the Army is evaluating the extent to which its prior use of PFAS containing materials has impacted soils and ground water. The Army has been taking action to

address PFAS in a transparent manner by testing for and mitigating risks from PFAS in drinking water, characterizing and remediating past releases, and transitioning to the use of PFAS-free alternatives from aqueous film-forming foam (AFFF).

We continue to test our Army-owned drinking water systems for PFAS regularly and take action where necessary. To date, 17 Army-owned on-installation drinking water systems have required some combination of increased testing, providing bottled water, shutting down wells, connecting to municipal water, or installing treatment systems. The Army stands ready to comply with EPA's April 10, 2024, PFAS regulation under the Safe Drinking Water Act.

Conclusion

The importance of building high quality facilities and developing resilient installations is more evident now than ever. In Europe, the operational readiness training complex at Grafenwoehr supports soldier and ally training. In the Arctic, deterring aggression and protecting Alaska is a priority. In the Pacific, Hawaii, Guam, and Kwajalein are geostrategic footholds not just for the Army, but the entire Department of Defense. Ensuring we have resilient installations at these locations—and around the globe—helps ensure our operational advantage. Thank you for your time today and we look forward to your questions.



The Honorable Rachel Jacobson

Assistant Secretary of the United States Army
Installations, Energy and Environment



Ms. Rachel Jacobson was confirmed by the U.S. Senate on March 15, 2022, and sworn in as the 17th Assistant Secretary of the U.S. Army for Installations, Energy and Environment (ASA(IE&E)) on April 4, 2022.

As ASA (IE&E), she is the primary advisor to the Secretary of the Army and Chief of Staff of the Army for all matters related to Army installation policy and oversight, and coordination of energy security and management. In addition, she is responsible for policy and oversight of sustainability and environmental initiatives; resource management, including design, military construction, operations and maintenance; Base Realignment and Closure (BRAC); privatization of the Army real estate portfolio and installation Safety and Occupational Health programs.

Ms. Jacobson is an experienced environmental lawyer, having previously served at the Department of Defense during the Obama-Biden Administration as the Deputy General Counsel for Environment, Energy and Installations. Prior to joining DoD, Ms. Jacobson served as a political appointee at the Department of the Interior, first as Principal Deputy Solicitor and then as Acting Assistant Secretary for Fish and Wildlife and Parks.

Ms. Jacobson, who came to the Army position following five years in private practice at the law firm Wilmer Hale in Washington, D.C., spent the majority of her career as a trial lawyer and supervisor at the U.S. Department of Justice in the Environment and Natural Resources Division. She also ran a conservation program at the National Fish and Wildlife Foundation before joining the Obama-Biden Administration.

Ms. Jacobson is a member of the bars of Illinois, D.C. and Massachusetts, and the American College of Environmental Lawyers. She received an undergraduate degree in economics from Washington University in St. Louis, and a law degree from Boston University School of Law. A native of Chicago, Ms. Jacobson resides in Washington, D.C.

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HOUSE COMMITTEE ON ARMED SERVICES
SUBCOMMITTEE ON READINESS

STATEMENT OF
HONORABLE MEREDITH BERGER
ASSISTANT SECRETARY OF THE NAVY
(ENERGY, INSTALLATIONS, AND ENVIRONMENT)

BEFORE THE

HOUSE COMMITTEE ON ARMED SERVICES

SUBCOMMITTEE ON READINESS

APRIL 16, 2024

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THE HOUSE COMMITTEE ON ARMED SERVICES
SUBCOMMITTEE ON READINESS

improving processes and oversight of our resident's experiences. For barracks, this request includes \$1.2 billion over the FYDP for barracks construction and renovations and \$144 million for housing sustainment and management. The Marine Corps is now in its second year of using the Capital Planning Tool (formerly the Readiness Maximization Tool) to leverage a tiered and targeted approach to facility lifecycle management. This tool has enabled the reduction of the facility footprint while prioritizing investments where they will have the most impact on the portfolio, and we believe that this is a tool that can and should be more widely applied to FSRM funding approaches.

We continue to work with sister services and OSD on implementation of the NDAA and recent GAO recommendations. The Marine Corps' *Barracks 2030* initiative lays out an ambitious plan to improve the Marine Corps management of barracks, modernize the inventory, and update the refresh rate of material. In February, the Marine Corps announced a 100% wall-to-wall Environmental, Health, and Safety inspection of every barracks room to establish the baseline conditions of habitability. In March, they completed that review and overall, more than 50% of the rooms inspected had deficiencies requiring corrective actions that the Marine Corps is addressing. The deficiencies found are in line with the September 2023 GAO report and underscore the importance of addressing the problem now. In other environments, we recognize we will be requesting waivers to ensure we are prioritizing QoL, and we will be requesting time to come brief on these requests in the coming weeks. For example, to ensure mental health and wellbeing, the Navy has established that no Sailors reside on-ship during maintenance availabilities and that berthing barges are available for duty section personnel.

Military Housing Privatization Initiative Family Housing

For the Military Housing Privatization Initiative (MHPI), we are reinforcing DON oversight and exercising active leadership to ensure that the families who live in privatized housing have the tools and support they need. FY 25 includes requests for \$245 million in construction as well as \$377 million for operations, including the management, services, furnishings, utilities, maintenance, leasing, and privatization support, in support of our family housing program. Since their inclusion starting in the 2020 NDAA, the DON Housing team implemented many oversight and QoL initiatives including full implementation of the Tenant Bill of Rights, universal lease, completion of the third-party inspection of homes, increased

resident advocates and home inspectors, and other NDAA and audit recommendations. We continue to improve the tools to perform better analyses of our processes, policies, and the overall program to ensure higher levels of service and satisfaction for our Sailors, Marines, and their families.

Government-Owned Family Housing

The DON's government-controlled inventory of over 8,500 homes is primarily located in overseas locations, areas such as Japan, Guam and Cuba, except for a few locations in the United States. The DON continues to fund the operations, oversight and sustainment, and modernization of these homes while bringing 186 additional homes to Guam in 2022 and 2023 with additional new construction planned for this year. We have seen the efforts and self-improvement techniques, for example, increased communication with the service members, their families and third-party inspections, utilized in privatized housing, work for Government-owned housing oversight and service member engagement.

Government-Owned Unaccompanied Housing

UH supports Navy and Marine Corps Readiness by providing eligible unaccompanied Sailors and Marines with housing and related services in support of the DON's mission and readiness. The DON is focusing on targeted investments and policy changes to improve the condition of inadequate UH and identification of a sustainable, optimized UH program to ensure safe, reliable housing for all Sailors and Marines. The DON's current government owned UH inventory consists of approximately, 268,329 beds in 1,347 UH buildings (Navy has 689; USMC has 658) throughout the DON's installations. At the end of Fiscal Year (FY) 2022, 60% of Navy UH and 84% of Marine Corps UH have a Condition Index (CI) of less than 80. We have prioritized our effort in this part of the portfolio. The Navy and Marine Corps increased investment in the UH program as part of their FY 25 submission.

Privatized Unaccompanied Housing

Using the authority provided by Congress to pilot privatized UH, the Navy has observed QoL success with the two pilot program privatized UH projects. The first pilot in San Diego consisting of 6,080 beds was privatized in 2006 and continues to score the highest of all

privatized efforts inside the DON's privatized housing portfolio. The second privatized UH project was established in 2007 in the Hampton Roads fleet concentration area and is also a QoL success. We were pleased to see the results in the recent GAO report on Military Unaccompanied Housing that noted that service members living in privatized barracks consistently stated that they were satisfied with the condition of their housing, and that this led to Quality of Life improvements. The Navy intends to maximize use of the current pilot authority for additional privatized UH in San Diego and Norfolk, and looks forward to working with Congress to evaluate expanding the authority to be able to create privatized UH in other DON installations.

Communities

Wherever the Navy and Marine Corps have an installation, facility, base or station, our Sailors, Marines, and families call that defense community home. We build relationships with residents and businesses in these communities, and we continually examine opportunities to strengthen the resources and resilience for the entire community.

Tribal & Indigenous Affairs

The Department of the Navy has created enduring relationships with federally recognized Tribal Nations, Native Hawaiian Organizations, and Indigenous Communities. These communities have traditionally occupied and relied upon the lands and waters for subsistence and cultural practices where the Navy and Marine Corps have installations and train to ensure mission readiness. In October 2023, the DON hired the first Director of Tribal and Indigenous Affairs, to develop a comprehensive program throughout the Navy and Marine Corps to ensure continued transparency in our consultations with Tribal Nations and Indigenous Communities.

As we work to execute our modernization at the Fallon Range Training Complex in Nevada, we continue to appreciate your support for this critical capability, which will ensure that Naval Aviators and Navy SEALs have training ranges and facilities that provide them a realistic environment to train like they fight. The Department of the Navy will increase the readiness of our warfighters while also prioritizing the stewardship and safety of the sacred environmental and cultural resources, and the health of the local economy. After a diligent, committed process with the Tribal Nations to ensure their concerns were addressed, the Navy is reviewing the final

range access Memorandum of Agreement which will be signed at a formal ceremony within weeks. The DON will continue to meet its obligations as part of the community and stewards of the environment, while enabling the warfighting mission.

Environment and Mission Readiness

The DON is actively pursuing a broad portfolio of environmental stewardship actions at our installations and ranges across the world to protect the environment, an asset that supports our National Defense. Our FY 25 budget request includes more than \$1 billion to fund compliance with environmental laws and regulations; conserve and manage natural, cultural, and marine resources on our installations and ranges; and conduct environmental planning and environmental consultation and permitting. This allows us to continue investigations and cleanup on installations; implement the DoD ongoing per-and polyfluoroalkyl substances (PFAS) response strategy at our installations; sustainably manage and modernize our ranges and mitigate compatibility risks; and build environmental resiliency into our planning, operations, acquisitions, and installation management. The DON will continue to seek opportunities to partner through programs such as the Readiness and Environmental protection Integration Program to advance the National Defense Strategy, protect investments in critical infrastructure, and to build installation resilience.

Readiness and Environmental Protection Integration Program

The DoD Readiness and Environmental Protection Integration (REPI) program is a key instrument to address encroachment that limits or restricts military training, testing, and operations. The DON continues to benefit from the REPI program and the authorities Congress has provided. Our partnerships with local governmental and non-governmental organizations enables us to leverage our shared resources towards achieving sustainable communities and mission readiness. In FY 23, the DON received \$54 million in REPI program funding which was executed across 27 installations and ranges, including more than \$15 million to protect vital assets at Department of the Navy installations in the Indo-Pacific region. These projects contribute to warfighter readiness by preventing incompatible development, contributing to the recovery of threatened, endangered and at-risk species, improving water quality and security, building coastal resilience, and protecting installations from catastrophic wildfires. The DON is

working to obligate approximately \$55 million in FY 24. As an example, in FY 24, the Navy has secured easements for approximately 1,200 acres of land to prevent incompatible development, conserve at-risk species, and preserve test and training missions at Naval Air Station Patuxent River and Atlantic Test Range.

Per- and Polyfluoroalkyl Substances Response

The presence of PFAS in the environment is a long-standing issue due to its wide-spread use in many commercial and industrial products. OSD has the Department of Defense (DoD) lead for PFAS, and the DON participates as part of the PFAS working group for this effort. In line with OSD policy, DON's management response continues to include protocols such as ensuring safe drinking water on DON installations in accordance with the Safe Drinking Water Act; eliminating exposure from DON sources of PFAS to off-installation public and private drinking water; transition from Aqueous Film-Forming Foam (AFFF) to PFAS-free firefighting solutions (shipboard use is currently exempt); and work closely and collaboratively with the public and key stakeholders in our defense communities.

Through the DoD working group, we reviewed EPA's recently finalized National Primary Drinking Water Regulation for six PFAS under the Safe Drinking Water Act, and DON continues to examine our existing data to determine what actions will need to be taken for our drinking water test protocols, drinking water systems, and in our environmental cleanup program, to include impacts to off-base drinking water.

In January 2023, the Navy published a fluorine-free foam (F3) Military Specification and has qualified three products to replace AFFF on installations. The Navy and Marine Corps are developing AFFF replacement plans that include detailed information on the locations and amounts of AFFF that will need to be replaced in facilities and mobile assets. The AFFF replacement plans include proposed schedules, estimated cost, and procedures to use products free of intentionally added PFAS products and other available technologies, such as water-only systems. The plans also include information on disposal of AFFF that has been installed in systems. Stockpiled AFFF will be used for Navy ocean-going vessels.

Climate Action

As scientists continue to indicate that this is a decisive decade for climate action – we continue to see that this is a decisive decade for our military as well. These two threats are coming at us together: we face the pacing challenge of China and the dangerous transboundary threat of climate change. Climate change makes the world a more volatile place: it brings extreme weather events, more humanitarian crises, and heightened friction around essential natural resources. A more volatile world calls on the United States Navy and Marine Corps. These calls increase demands on our forces while simultaneously impacting the capacity to respond to those demands. This threat impacts not only where they are needed, but how and what drives the demand for operations. It is impacting the way our Sailors and Marines train, equip, and deter aggression. If they are called to do so, it will change how they fight and win. At the same time, as allies and partners around the world begin to feel the very real impacts of this transboundary threat, support and partnership that we can offer to those geographies and populations that are vulnerable and affected are meaningful on the global stage.

Climate Action 2030

For the Navy and Marine Corps, climate readiness is mission readiness. The DON is operating under Climate Action 2030 to create a force that can operate and succeed in any environment. We are focused on building resilience and reducing the national security threat of climate change, and we view climate readiness as a tactical, operational, and strategic enabler for our Sailors and Marines. To create a warfighting advantage, we are increasing the resilience of our bases and making our logistics chains, structures, power grids, fuel distribution systems and water lines more survivable. We are also leveraging science to seek innovative solutions, partnering with industry and other government entities, and investing responsibly to achieve mission readiness, jointly with our partners in Congress. As we consider competition, we modernize, electrify, hybridize, and move to alternate sources of energy to stay agile, quiet, reduce our vulnerability, shorten our logistics tail and increase time on station. As we collaborate with allied militaries, we see these practices are necessary to ensure interoperability and resilience as our partner naval services and militaries do the same. As the Chief Sustainability Officer for the Department, I have issued five memoranda on infrastructure, water security, nature-based resilience, sustainable acquisition and procurement, and shore energy

goals. These memoranda direct the Navy and Marine Corps to make tangible progress on these key components of our climate strategy, important enablers of resilience. We are also engaging with allies and partners around the world as climate change is top of mind for many key partners in the INDOPACOM and SOUTHCOM Areas of Responsibility who face stark climate adaptation challenges.

In June, I will be hosting two DON-led table-top exercises that will test us in key partner environments, looking at the impact of climate change on mission and operational environment and diversification of energy supplies in contested environments. *Climate Action 2030 TTX III (Climate Action III)* the Department's third climate strategy-related tabletop exercise. This exercise will be focused on the challenges posed by climate change throughout the Caribbean, and how we can work with and support key regional partners on topics including health and safety, data and tech transfer, and resilient infrastructure. Also of note, I am hosting an operational energy tabletop exercise starting at the end of this month aimed at energy resilience in the Philippines. The objective of this tabletop exercise is to bring together commercial industry with government partners to inform both the integrated deterrence implications of allied energy infrastructure as well as inform opportunities for positive regional engagement on energy and climate issues. I look forward to sharing the outcomes of both exercises with you.

Installation Resilience

Navy and Marine Corps installations are constantly challenged by natural hazards like extreme rainfall, drought, and coastal erosion. As directed by the FY 2020 National Defense Authorization Act, the Navy and Marine Corps have added a resilience component to the master plans of major installations, leveraging the lessons learned from Parris Island and San Diego. The DON has also completed resilience studies on smaller installations such as the United States Naval Academy, where impacts from storm surges and high-tide flooding affect daily operations through closures of flooded roads, sidewalks, and building entry points. In February, NSA Annapolis released a Request for Information to gather insight, expertise, and potential solutions from industry experts to evaluate renewable energy generation at the Naval Academy Dairy Farm that will help meet DoD's Carbon Free Electricity goals. As part of the DoD's proactive approach to achieving a more sustainable and secure energy future, the Navy

has committed to achieving net-zero carbon emissions from its shore installations by 2045 through investment in clean energy sources.

As many naval installations are coastal by the nature of our service, sea level rise and extreme weather events have a direct and forceful impact on Navy and Marine Corps infrastructure and installation operations. We are focused on applying updated standards in the Unified Facilities Criteria to our infrastructure, implementing the guidance of the CSO memos, conducting training exercises and planning processes that harden and support quick recovery for our installations and facilities extreme weather events and energy disruptions. The DON's FY 25 budget request will increase the energy resilience of our installations by modernizing energy infrastructure, deploying microgrids, supporting electrification and the transition to zero-emission vehicles, increasing third-party financing capabilities, and making energy systems cyber-secure. The Navy and Marine Corps continue to leverage the Title 10 authorities granted by Congress to increase the energy and water reliability and resilience of our installations. We currently have \$3.97B in awarded third-party financing contracts and ongoing efforts to replace and modernize failing critical infrastructure through third-party financing. By investing in state-of-the-art systems and modern infrastructure, the DON is positioning our installations – our power projection platforms – to prevent, recover, and survive a prolonged loss of electrical service from natural or manmade events. We continue to test the energy security of our installations through Energy Resilience Readiness Exercises (ERREs), with twelve conducted in 2023 at NAS Meridian, Marine Corps Air Ground Combat Center 29 Palms, NAS Key West, and Naval Support Activity Hampton Roads. Our FY 25 budget includes funding to conduct 16 EREEs at installations across the world.

Contested Logistics

Operating in a contested environment requires our shore installations and logistics enterprise to be completely integrated into the fight: a battlespace with persistent, agile, and flexible naval combatants. The Marine Corps' *Installation and Logistics 2030* initiative is looking at sustaining the force in the 21st century, recognizing that the operating environment is contested across all domains and at global scale every day. The Marine Corps is making changes across the tactical, operational, and strategic levels, and we are also making installations ready for the contested environment with a focus on energy, utility, and climate

resiliency, and the ability to recover rapidly after attack. The Navy continues to employ the principles of the Navy Global Strategy Ashore to enable and improve Fleet readiness, to transform logistics to better sustain the Fleet, and to sustain the momentum for evolving wartime support across the sustainment kill-chain, from the industrial base, and to the point of highest impact.

Energy.

Energy security is critical to mission success, the DON's ability to provide global presence and ensure stability, deter adversaries, respond to crises, and, if necessary, fight and win our Nation's wars, and we have requested \$1 billion across the DON portfolio in this year's budget to ensure we are ready and reliable. It addresses how we operate in a contested logistics environment, as well as the increasing demand for clean and reliable energy to support electrification and power Artificial Intelligence, directed-energy weapons, autonomous vehicles, and future technologies. In recent years, the DON has begun development of the Next Generation-Medium Tactical Truck (NG-MTT) to reduce bulk fuel logistics burdens and improve fuel economy. The DON has also developed and patented a safety mitigation container solution to enable the fielding of battery-powered ground vehicles, the first step toward hybridization efforts for Navy ships. Of note, the contribution to the joint force is decreased man hours required for the support of this capability—enabling energy storage technology and increased safety around its use. Additionally, the Department continues to invest in analytic assessments to support decision-making to meet fuel metering and monitoring requirements.

Operational Energy.

FY 25 invests \$639 million in initiatives, building on last year's investment, prioritizing investments to sustain operations in contested logistic environments to include energy storage, power controls, and distribution; mobile fuels distribution assets, platform upgrades for sea and air; synthetic fuels certification and power sources, metering and monitoring, and platform thermal management. Reflecting the challenges of contested logistics and guidance from the National Defense Strategy, the DON will ensure rigorous energy-informed requirements for new capabilities and then sustain those requirements throughout our acquisition decision-making. To

make our operational forces more lethal and more effective, we are focused on extending the operational reach of current and future weapons systems through more-effective use of energy; reducing energy consumption and external energy logistics requirements to forward deployed strike groups and expeditionary units; increasing energy resilience of forward bases, supply depots, and cooperative security locations; increasing the effective use, conversion, storage, distribution, and control of energy of our of future weapons and sensors onto platforms; and fostering an energy culture in our Sailors and Marines through policy, training, and education.

DON's budget request invests more than \$100 million on improving the energy efficiency of our existing operational platforms and propulsion systems, and this funding is targeted to gain capability and reduce logistics supply requirements for deployed forces through digital flight planning tools, aircraft drag reduction technologies and hybrid propulsion. We are also upgrading the fuel efficiency of the Marine Corps Medium Tactical Vehicle Replacement (MTVR) fleet, which will produce significant cost savings over the life of the MTVRs and improve combat effectiveness by reducing logistics requirements, increasing expeditionary capability and extending operational range. The FY25 budget request also funds efforts to improve integration of weather and ocean forecasts into ship routing, ship response and propulsion efficiency planning, and Refueling at Sea logistics planning, as well as prediction of hazardous and extreme weather events and trends for climate adaptation, resilience, and mitigation. With an eye towards future operations, our FY 25 request supports the advanced mobility fuels program, which is responsible for the development and sustainment of qualification protocols, fuel testing, analysis and coordination between Navy, other DoD entities, industry, and international partners to qualify the use of Low Carbon Tactical Fuels for Navy aircraft and ships. This effort will position the Navy to procure low carbon tactical fuels, ensure operational flexibility, and take advantage of reductions in life-cycle greenhouse gas emissions without impacting platform performance or durability. The Navy is also funding the assessment, development, maturation, and transition of batteries and fuel cells, thermal management, and engine and airframe efficiency technologies to increase the mission capability of Naval aircraft; increasing range and payload capacity of unmanned aerial vehicles (UAVs), significantly reduce time and cost to optimize power and thermal solutions to current aircraft, increase emergency capability, reduce total ownership costs and future non-recurring engineering costs for aircraft batteries, and increase aircraft range and time on station.

Introduction

Chairman Waltz, Ranking Member Garamendi, and distinguished members of the Subcommittee, thank you for the opportunity to testify on the Department of the Navy's (DON) Fiscal Year (FY) 2025 budget request. We submit a request that invests in critical readiness enablers of the DON's Energy, Installations, and Environment portfolio, which is foundational to making sure that our Sailors, Marines, and Civilians have what they need in order to do all the Nation asks them to do.

Current Context

A ready Navy and Marine Corps responds whenever the Nation calls. Around the globe, around the clock, the Navy and Marine Corps are where they need to be, when they need to be there, able to do all that we ask of them because of the critical readiness enablers across the EI&E portfolio. Over the last year, the Navy and Marine Corps have made significant progress across the portfolio and that progress has occurred because of the support of Congress, partnerships across the Federal family, with state and local partners, Tribal Nations, and all who are a part of the communities where we train, work, and live.

On behalf of the Department of the Navy, the people who serve in our Marine Corps and Navy, I thank this Subcommittee for your unwavering support and attention to the importance of safe, healthy, reliable homes and facilities, and for your prioritization of Quality of Life for all members and their families who reside on our installations. Since 2019, the DON has made steady improvements in oversight processes, customer service, staffing, operations, and maintenance and continues to prioritize improvement for housing of all types. DON Leaders at all levels of the Navy, Marine Corps, and the Department remain steadfast and focused on improving Unaccompanied Housing (UH) for service members on the installations and we will not lose sight of the importance of continuing to improve the Military Housing Privatization Initiative (MHPI) that supports housing the accompanied Sailors, Marines, and their families.

The Department of the Navy works to provide every single Sailor and Marine living in military housing with a safe and reliable living space. This is assured through the support of military and department leadership, with high-quality services provided throughout the entire residency process. Department leadership is aligning policy and programming through focused programs like the Marine Corps' *Barracks 2030* plan and the Navy's *Infrastructure Investment*

Shore Energy

The DON invests in shore energy initiatives to ensure that our installations remain the power projection platforms from which we man, train, and equip our Sailors and Marines and that installations are resilient to a broad spectrum of interrelated and interdependent threats that cross both domains and dimensions. The FY 25 budget request invests \$365.2 million for Shore Energy to address the increase in power demanded by missions at our installations. In addition, the investment will improve energy resilience and reliability through investments in clean energy solutions which are necessary to implement electrification initiatives, and to support the high energy demand from data centers, directed-energy weapons, and autonomous vehicles. The FY 25 request invests in energy resilience technologies such as cyber-secure microgrids that will be implemented at all DON installations where Task Critical Assets and DoD Critical Assets reside. Additionally, the DON will invest in battery energy storage systems to complement investments in on-site carbon pollution-free energy, and the planned addition of more than 3,000 electric vehicle charging facilities (EVCF) in FY 25, most of which are commercial-grade Level 2 chargers. We are also partnering with communities and state entities to reduce our climate impact and make our installations more resilient and survivable. For example, since signing an Intergovernmental Service Agreement with the Port of San Diego in September 2022, we have generated \$12.5 million with our first of-its-kind partnership to support further electrification efforts for both Naval Base San Diego and the Port of San Diego, which also improves air quality and public health on and around the San Diego Bay Working Waterfront. We will be adding two more ports, Naval Base Point Loma and Naval Base Coronado, in California this year. The Navy and Marine Corps will continue to look for more opportunities to collaborate and work together to enhance our energy resilience as one community in all of our defense communities.

Nature-Based Solutions and Sustainability

Together with new technology, we recognize the opportunity for nature-based solutions to enhance our resilience and mission readiness for training and operations. Our FY 25 budget request supports the development, planning, design, and execution of future environmental resilience projects including shoreline stabilization and erosion mitigations. As we pursue natural resources-based solutions to increase carbon sequestration, we are looking to address

erosion and sea level rise through riverine and coastal shoreline restoration, to decrease wildland fire through habitat management and fuels reduction; and to increase water retention through vegetation enhancement/restoration and soil management conservation. We have worked in partnership with the U.S. Army Corps of Engineers, Engineering With Nature Program to conduct 15 workshops at DON installations across the Southeast, Southwest, and Hawai'i. These workshops have involved interagency experts as well as state, industry, and non-profit partners with the goal of developing nature-based solutions that reduce the risk of threats from flooding, drought, sea level rise, wildfire, and other hazards and build resilience on the installation and surrounding communities. These sessions have produced assessments of nature-based resilience opportunities, and led to the scoping and design of 17 projects between the Navy and Marine Corps, while building a pipeline of many more opportunities. The DON is also supporting the development of offshore wind energy, and we are committed finding solutions that support clean, efficient energy development for the community in a manner that is compatible with national defense requirements. The DON continues close collaboration with Bureau of Ocean Energy Management and industry to advance offshore wind leases in support of renewable energy generation.

The Fiscal Year 2022 National Defense Authorization Act section 2861 directed the military departments to execute a pilot project to evaluate the use of sustainable building materials in military construction. The DON selected a Child Development Center project at Joint Expeditionary Base Little Creek, Virginia for this pilot, and that project is currently under design, with a focus on using mass timber as one of the main structural components, in addition to testing and evaluating multiple other sustainable materials. Information gained from this pilot project will be used to influence future designs as we move towards a more sustainable building portfolio.

The DON is also executing a net-zero carbon emissions pilot project to test and evaluate new construction materials and systems designed to create facilities with zero scope 1 carbon emissions. The DON selected a Child Development Center project at Naval Support Activity Norfolk, Virginia for this pilot project. That project is being executed utilizing Other Transaction Authority, and we are grateful for the authority to use this alternative procurement method to drive forward on this important mission imperative. A second net-zero emissions pilot project, the F-35 Sustainment Center at MCAS Cherry Point, is also in development and is

included in the FY 2025 budget submission. We have partnered with our sister services to develop consistent program criteria and evaluate state-of-the-art sustainable building material technologies and approaches for their implementation. We remain committed to achieving the best value for the taxpayer and see the use of sustainable building materials as a pathway to maximize resilience and cost-effectiveness.

Conclusion

Thank you for your steadfast commitment to our Sailors, Marines, Civilians and their families and for your purposeful focus on our FY 2025 budget request. I look forward to our continued partnership and dialogue as we work together to ensure the Navy and Marine Corps remain the world's greatest maritime fighting force, ready to meet both today's operational demands and the warfighting needs of the future.



Meredith Berger

Assistant Secretary of the Navy (Energy, Installations, and Environment)/Chief Sustainability Officer



The Honorable Meredith Berger assumed the responsibilities of the Assistant Secretary of the Navy for Energy, Installations & Environment on July 28, 2021. She is responsible for providing oversight and policy for Navy and Marine Corps energy and climate resilience; infrastructure sustainment, restoration and modernization; military construction; acquisition, utilization and disposal of real property and facilities; environmental protection, planning, restoration and natural resources conservation; and safety and occupational health.

Ms. Berger has served in a variety of policy and senior leadership positions in both federal and state government and the private sector. Before her nomination, Ms. Berger was a senior manager for the Defending Democracy Project

at Microsoft Corporation. She was a Fellow with the Harvard Kennedy School's Belfer Center for Science and International Affairs.

Ms. Berger was Deputy Chief of Staff to Secretary of the Navy Ray Mabus, advising the Secretary on the formulation and execution of Department-wide strategy, policies, plans, and standards.

Ms. Berger also served as a Department of Defense Fellow. Prior to her tenure with the Department of the Navy, Ms. Berger held policy positions with the Environmental Protection Agency and the Office of the State of Florida Chief Financial Officer.

Ms. Berger holds a master's degree in Public Administration from the Harvard Kennedy School, a Juris Doctor from Nova Southeastern University, and a Bachelor of Arts in American Studies and Spanish from Vanderbilt University. She has earned the Secretary of the Navy Distinguished Civilian Service Medal, Secretary of Defense Medal for Exceptional Public Service, and the EPA Gold Medal for Exceptional Service.

Plan. The DON is continuing to focus on housing through leadership emphasis and advocacy, providing rigorous oversight of the privatized housing program by implementing reforms; and we are seeing results from our efforts to bolster our installation housing offices. We also will continue to work with the Department of Defense and our sister services as we implement NDAA provisions that came out of the important work completed from last year's GAO report on Unaccompanied Housing.

The Navy and Marine Corps infrastructure portfolio continues to age. A significant number of facilities across the enterprise have exceeded their planned useful life, and deferred maintenance and sustainment have compounded risk in this critical portfolio. To fight and win the Department of the Navy requires ready, reliable, and resilient installations, and that includes the buildings, systems, and assets that comprise them. We are redoubling our efforts not only to prevent, remediate, and mitigate the risks resulting from vulnerabilities in the shore portfolio, but also to restore and sustain our infrastructure, including housing, core utility infrastructure, and operational facilities, such as our four public shipyards through the Shipyard Infrastructure Optimization Program. The Navy and Marine Corps are taking steps to improve how we resource these critical requirements, through their Installation Investment Plan (IIP) and the Facilities Investment Strategy (FIS), respectively. These efforts inform the development of the DON's 30-year infrastructure plan, which examines the interdependencies among projects through mission assurance in order to prioritize and sequence necessary investments in the infrastructure that keep our people safe and project power around the globe.

As we focus on the infrastructure that supports our critical missions, we remain engaged with our defense communities that create homes and care for our Sailors, Marines, and their families. When I last testified on the DON's budget request, the Secretary of Defense had directed the stand-up of the Red Hill Joint Task Force (JTF) to oversee the defueling of the Red Hill Bulk Fuel Storage Facility and charged the DON with the safe and expeditious closure of the facility. As of last month, the JTF has completed its mission to remove the fuel reserves from the facility and on March 28, 2024, the JTF conducted a transfer of authority ceremony, putting the Navy Closure Task Force-Red Hill (NCTF-RH) in charge of all activities at Red Hill. The mission of the NCTF-RH is the permanent closure of Red Hill and long-term environmental remediation, requiring coordination with state and Federal stakeholders in order to protect public health and the environment.

The DON remains focused on improving the reliability and resilience of our potable water utility systems and implementing watershed-based approaches on our Navy and Marine Corps installations and surrounding communities in Hawaii. On Oahu, the DON is engaged in series of projects to reduce water use intensity and improve water security through infrastructure repairs, leak detection studies, and holistic watershed management planning that help ensure the long-term health of Hawai'i's ecosystem.

The end of March 2024 also marked the conclusion of two years of long-term drinking water monitoring at Red Hill, during which the DON conducted testing of more than 8,100 samples demonstrating the drinking water continued to meet all Federal and state standards. Additionally, the Navy has extended the long-term drinking water monitoring program for an additional 12 months. This is the right thing to do for the community, and goes beyond Environmental Protection Agency and Hawaii Department of Health requirements. NCTF-RH's motto is "Safe, Deliberate, Engaged, Committed." NCTF-RH and the DON are working to ensure continued access to safe drinking water at Red Hill, and with every action, we are prioritizing the health and safety of the people, environment, and communities of Hawai'i. We look forward to continuing productive and collaborative relationships with all stakeholders.

Strategic Priorities

Secretary Del Toro set forth guiding principles for the DON to strengthen maritime dominance, build a culture of warfighting excellence, and enhance our strategic partnerships. These objectives support our National Defense Strategy and drive DON action. In my capacity as the Assistant Secretary of the Navy for Energy, Installations, and Environment, I support Secretary Del Toro's guidance by focusing on three cross-cutting areas: Critical Infrastructure, Communities, and Climate Action. As the DON's Designated Agency Safety and Health Official, I am driving safety as a foundation for our work. As the Chief Sustainability Officer for the Department of the Navy, I am providing guidance for the DON to make choices and investments that ensure that future Sailors, Marines, and Civilians have the same or enhanced access to natural and built resources that their present-day peers have. Critical infrastructure includes not only our power projection platforms, but also includes essential warfighting, readiness, and the Quality of Life (QoL) support that naval facilities provide. Our communities are the places that we come together to live, train, work, and includes the environment and

natural resources that surround these places. For Climate Action, climate readiness is mission readiness. The DON is implementing *Climate Action 2030* to create a force that can operate and succeed in any environment through the guidance of my Chief Sustainability Officer memorandum series. This includes the infrastructure we rely on to fight and win, which is vulnerable to threats such as extreme weather events and sea level rise. We are focused on building resilience and reducing the national security threat of climate change, and we view climate readiness as a tactical, operational, and strategic enabler for our Sailors and Marines.

Safety is Foundational

Safety is a critical component of our Navy and our Marine Corps foundation and a key indicator of professionalism and discipline, directly contributing to the combat readiness of our Fleet and our Force. Safety is a combination of conditions and compliance, and the Department of the Navy is focused on driving down mishaps, and cultivating a culture of safety that prioritizes proactive behavior, continues to move left of near-misses, and applies lessons learned at every available opportunity.

The Department of the Navy re-established the Deputy Assistant Secretary of the Navy (Safety) position as a Tier 3 SES, elevating the DON's Safety portfolio commensurate with the importance we place on safety. Through the DON Shore Policy Board, the DON evaluates infrastructure through a safety lens. In addition, the Navy Executive Safety Board, chaired by the Vice Chief of Naval Operations, was reinitiated in 2024 and prioritizes action on systemic issues noted by the Naval Safety Command (e.g., DDG Wave Incursion Hazards, Shore Fire Protection Systems, Enterprise Safety Management System, and the LCS Small Boat Launch and Recovery System). The Marine Corps has prioritized a General Officer billet to lead Marine Corps safety with more senior attention and oversight.

As we transition to the Risk Management Information system, we continue to improve our analytic capability to facilitate identification of units which may be at risk of a potential mishap, and we are working with OSD, the Joint Safety Council, and our sister services to share what we are learning. We continue to refine the identification of occupational exposures like chemicals, noise, and blast overpressure, to better understand the effects of these exposures through science and improve methods to limit exposure. Creating and maintaining a culture of

safety within the DON ensures our warfighting readiness, and we remain committed to prioritizing safety education and promulgation.

Critical Infrastructure

Navy and Marine Corps installations are power projection platforms from which naval forces train, deploy, and maintain forward presence to enable geographic Combatant Commanders to meet operational requirements. Historically, the DON has accepted a significant level of risk in the resourcing of our installations; as a result, the DON infrastructure portfolio carries known, aggregated risk from many years of underinvestment in the sustainment and recapitalization of our facilities, structures, and utilities infrastructure. We will not be successful without substantial, consistent investments in the infrastructure that comprises our installations and enables readiness. Additionally, the DON is reviewing our critical infrastructure to fully address the gaps in modernization and recapitalization. The DON's Critical Infrastructure Synchronization Forum continues to work through the challenges of infrastructure resilience to address the threats to most critical facilities and utilities infrastructure.

To fight and win, the DON requires ready, reliable, and resilient systems and assets. The DON is leading action to not only prevent, remediate, or mitigate the risks resulting from vulnerabilities of our infrastructure, but also to restore and sustain core utility infrastructure including water, electricity, and telecommunications. We have programmed \$137 million for cyber hardening using hardware and software modernization. Holistic recapitalization of our infrastructure and demolition of excess, failing infrastructure will ensure that our forces, systems, and facilities can continue to operate in expected future environments.

Facilities Sustainment, Restoration, and Modernization

The DON FY 25 budget request includes \$4.6 billion in Facilities Sustainment, Restoration, and Modernization (FSRM) funding for the Navy and \$1.35 billion for the Marine Corps to maintain the working order of our facilities and utility systems and to prevent the premature degradation of mission-critical assets. The Navy budget request targets key shore capability areas such as utility systems, Unaccompanied Housing, airfield operations, waterfront operations, depot maintenance, and ordnance facilities, as well as continued demolition funding to address excess facility footprint. The request also increases sustainment

funding to 100% of the modeled requirement for Nuclear Deterrence Facilities, infrastructure in support of Navy CSISR missions related to Naval Operational Architecture, Unaccompanied Housing, and fitness centers. The Marine Corps budget request continues efforts to eliminate poor and failing facilities and improve Quality of Life through *Force Design 2030* initiatives. Our FY 25 budget request includes targeted FSRM investments to repair poor and failing facilities at Naval Air Station (NAS) Lemoore, NAS Oceana, Joint Base Pearl Harbor-Hickam, Naval Support Activity (NSA) Bahrain, Submarine Base Kings Bay, Naval Base Kitsap, Marine Corps Base (MCB) Camp Lejeune, Marine Corps Recruit Depot (MCRD) Parris Island, and MCB Quantico.

Shipyards Infrastructure Optimization Program

To keep our Nuclear Fleet ready, we continue to modernize our four public shipyards through the Shipyard Infrastructure Optimization Program (SIOP). As we continue to acquire the submarines and aircraft carriers we need today and invest in the development of the next generation of platforms and capabilities for the fight of tomorrow, we will not be successful without substantial, consistent investments in the infrastructure that enables these platforms, and we are grateful for Congress' shared focus on this national security priority. Over the past year, SIOP completed renovations of Dry Dock 4 at Norfolk Naval Shipyard and the Navy also made quick, urgent upgrades and repairs to ensure compliance with seismic requirements at Puget Sound Naval Shipyard.

SIOP construction projects comply with the Administration's objectives for informed action around environmental stewardship, climate change, and energy resiliency, as well as Navy criteria and industry standards. Specific examples include utility modernization; building new facilities to align with DoD inundation models; incorporating low impact, sustainable features to aid in environmental preservation and protection; and electrification of cranes and use of electric vehicles to minimize the carbon footprint. FY 2025 funding will support ongoing work for the replacement of Dry Dock 3 at Pearl Harbor Naval Shipyard, utilities upgrades at Norfolk Naval Shipyard, a Multi-mission Dry Dock at Portsmouth Naval Shipyard, and modernization of Dry Dock 3 at Norfolk Naval Shipyard. Through infrastructure optimization, we will also improve the Quality of Service (QoS) for more than more than 37,000 civil servants – engineers, artisans, and our Sailors whose platforms are undergoing maintenance and modernization at the

shipyards. As the Navy executes its largest-ever facility projects through SIOP, we continue to identify and apply cost-estimating and management lessons for infrastructure projects on these historically large projects to properly account for risk and uncertainty.

Military Construction

The DON's FY 25 budget request includes \$4.6 billion for Military Construction (MILCON) to optimize Navy and Marine Corps installations to enable global logistics, warfighter development, and employment from the shore. The Navy requested \$3.4 billion, including \$2.0 billion for SIOP. The Marine Corps requested \$1.2 billion, and continues to support the Commandant's *Force Design 2030* strategy and the Defense Policy Review Initiative (DPRI). Additionally, there is \$291 million for new mission platforms supporting *Columbia Class* and D5 Life Extension Program 2 QoL, infrastructure improvements in Darwin, Australia, to support Marine Corps Forces, procurement of additional land to support the Fallon Range Training Complex Modernization in Nevada, and the replacement of aging infrastructure.

Demolition

The DON is taking steps to reduce excess inventory. The FY 25 budget request includes \$166 million (Navy) and \$108 million (USMC) in demolition funding to reduce the current footprint, allowing the DON to better prioritize existing facilities sustainment resources across our most critical facilities. The Marine Corps has identified multiple excess barracks facilities, and, as part of their *Barracks 2030* initiative, will demolish those barracks in the poorest shape and focus recapitalization efforts on the remaining facilities. The Marine Corps will maintain this effort across future budgets to ensure that we right-size the current facility inventory. In addition to funding allocated for this purpose under FSRM, the DON will use the new authority granted in the FY 2024 NDAA to use Unspecified Minor Military Construction (UMC) funds.

Focus on the Indo-Pacific Region

As we continue to strengthen our international partnerships, we are also focused on relationships in our defense communities. We are deeply committed to the government and citizens of Guam. We will begin the relocation of Marine Corps personnel from Okinawa to Guam in support of the Defense Policy Review Initiative, by December 2024. As we face an

unprecedented pace of our mission growth on Guam, infrastructure and facilities are required to support the expansion of our on-island infrastructure footprint. We greatly appreciate Congress' approval of an extension of the H2B visa program through 2029, which will provide measures to offset workforce capacity challenges in support of our missions on Guam. The Deputy Secretary of Defense has appointed the Under Secretary of the Navy to serve as the Senior Defense Official for Guam (SDOG). In this role, Under Secretary Raven will serve as the DoD's senior representative when meeting with key leadership and stakeholders in Guam. We are committed to working with our government partners and stakeholders in Guam, as well as our partners across the DoD, to ensure the success of the transition of our personnel, and we appreciate this committee's support as we carry out this process in a methodical and sustainable manner that will enhance the readiness of our forces throughout the Indo-Pacific.

Quality of Life Investments

DON is committed to investment prioritization in a way that clearly values, links, and acknowledges the essential Warfighting, Readiness, and QoL support that naval facilities provide. Building on FY 24, this budget request provides \$415 million to execute major renovations of 10 Unaccompanied Housing barracks across the DON. It also provides \$570 million to operate and maintain Child Development Centers and Child Youth programs. Additionally, this budget request includes a \$377 million Family Housing Operations budget request to maintain and operate over 3,500 government owned family housing units, over 62,000 privatized units, and over 1,650 leased family units worldwide. This request supports construction of 93 family housing units on Guam, as well as funds the renovation of 64 family homes in Iwakuni, Japan. We have already begun investing in the most pressing infrastructure problems, including essential utilities, barracks, energy security, and Wi-Fi. The Navy has established a pilot program to provide free Wi-Fi in 12 barracks in the Norfolk area, and Marine Corps is establishing a pilot program to provide free Wi-Fi in select barracks at one West Coast installation and one East Coast installation.

Housing for our Sailors, Marines and Families

The DON remains committed to the health and safety of our Sailors, Marines, and their families. We are focused on the early identification and resolution of housing issues, as well as

DEPARTMENT OF THE AIR FORCE STATEMENT
TO THE HOUSE ARMED SERVICES COMMITTEE
SUBCOMMITTEE ON READINESS
UNITED STATES HOUSE OF REPRESENTATIVES

SUBJECT:

STATEMENT OF:

HONORABLE RAVI L CHAUDHARY
ASSISTANT SECRETARY OF THE AIR FORCE
ENERGY, INSTALLATIONS, AND ENVIRONMENT
DEPARTMENT OF THE AIR FORCE

NOT FOR PUBLICATION UNTIL RELEASED
BY THE COMMITTEE ON ARMED SERVICES
UNITED STATES HOUSE OF REPRESENTATIVES

APRIL 16, 2024

PAIRS CASE 2024-C-0387**Introduction**

Chairman Waltz, Ranking Member Garamendi, and distinguished members of the subcommittee, thank you for the opportunity to discuss Department of the Air Force (DAF) energy, installations, and environment programs and our budget for Fiscal Year (FY) 2025.

The Department's budget addresses National Defense Strategy priorities and invests in our installations to deliver combat power for the nation. Our Airmen and Guardians depend on ready and resilient installation infrastructure to defend the homeland, deter strategic attacks, and deter aggression from our pacing challenge, the People's Republic of China, among other potential threats. The 2025 budget request strengthens our position as the Department optimizes for strategic competition. Every facet of the Department, from our infrastructure to our operational units, plays a crucial role in steering and supporting the nation through this pivotal decade. To enhance our competitive edge the Department is concentrated on four primary areas: Developing People, Generating Readiness, Projecting Power, and Developing Capabilities. To ensure decisiveness in each of these areas, our installations will remain the critical foundation of our success throughout every stage of conflict. Installations will continue to provide the bedrock of our readiness and quality of life, while also being required to respond swiftly, even in the face of attack. Our forces will need to fight through challenges and quickly recover, making our installations the linchpin to success in both crisis and conflict.

In order to meet these challenges, the DAF Military Construction (MILCON) program continues to prioritize nuclear enterprise modernization and combatant command infrastructure support with an emphasis on the Pacific and European theaters. Our Facilities Sustainment, Restoration, and Modernization (FSRM) portfolio is dedicated to strategically investing in our infrastructure. This commitment ensures we can adapt to emerging challenges and efficiently

build and sustain our combat capabilities. Additionally, the Department is prioritizing the well-being and quality of life of our service members and their families by requesting \$1.1 billion in FY25 to invest in housing, dormitories, and Child Development Centers (CDCs). We also allocate resources to high-impact operational energy initiatives that enhance our readiness and provide more combat capability for every gallon of fuel consumed. We are grateful for the continued partnership with Congress to ensure Air and Space Forces are postured to compete, deter, and win, anytime and anywhere.

Installation Infrastructure and Resilience

The Department's 2019 Infrastructure Investment Strategy kickstarted efforts to restore the readiness of our power projection platforms by guiding investment decisions at the enterprise and installation levels. We are taking the lessons learned from this strategy and building an Installation infrastructure Action Plan to ensure our installations are ruggedized and resilient Against all hazard risks.

As previously stated, the DAF's MILCON and FSRM programs serve as the foundation of sustainable and ready installations. Yet, solely relying on direct investment at the currently budgeted levels is insufficient to reverse the longstanding trend of deteriorating facilities and infrastructure. Our installation portfolio of 179 installations, 69 thousand facilities, and 183 million square yards of airfield pavement is too large and expensive to maintain in the current budgetary environment. In response, we're scaling up our demolition investments fivefold to \$136 million per year for the next five years, targeting the removal of excess and severely degraded infrastructure.

The DAF is also pursuing innovative approaches to infrastructure management, such as privatization, third-party investments, and community partnerships, to reduce the Department's financial liability. A prime example is at Fairchild AFB, where the local county government constructed a facility designed to accommodate training sessions for both local law enforcement and Fairchild AFB security forces, fostering enhanced collaboration and preparedness. Additionally, the Department of Energy's (DoE) Federal Energy Management Program (FEMP) recently recognized Kadena Air Base for its energy and water savings project, which includes a microgrid and utility upgrades that increase energy resilience while saving over \$6.5 million a year.

Military Construction

The FY25 President's Budget requests a total DAF MILCON investment of \$3.45 billion. This FY25 request is \$371 million more than the FY24 requested amount and \$404.3 million less than the FY24 enacted amount of \$3.85 billion. We are grateful for the generosity of the various congressional committees and the additional funds and authorities provided to the DAF in FY24. The DAF seeks to support the National Defense Strategy's investment priorities by focusing on our pacing challenge in the Indo-Pacific theater, the acute threat posed by Russia, as well as new weapon system beddowns, and taking care of our Airmen, Guardians, and their families, caregivers, and survivors.

We also partnered with the Defense Innovation Unit to execute the MILCON process in innovative ways using Other Transaction Authority (OTA). The collaboration between the Defense Innovation Unit (DIU) and the DAF signifies a strategic alliance dedicated to propelling forward the NetZero MILCON initiative. This initiative leverages OTA to rapidly prototype and

acquire cutting-edge solutions to design, construct, and/or renovate of major building projects for net-zero emissions and, where feasible, net-zero water and waste utilizing modern design and construction techniques and materials. This streamlined approach seamlessly blends the expertise and resources of both organizations and fosters agile and adaptable partnerships, which is crucial for navigating the complexities of achieving NetZero MILCON objectives. Moreover, the skills and tools cultivated through this OTA partnership seamlessly blends the expertise and resources of both organizations to tackle the urgent need for sustainable infrastructure within the military. This scalability broadens the impact of the NetZero MILCON initiative, enriching the fabric of our national infrastructure with resilience and sustainability.

Approximately 20 percent of the program, \$681.7 million directly, supports Combatant Commanders and their most critical requirements and builds a more lethal force while directly prioritizing preparedness for war. These funds will be used for airfield upgrades in Micronesia, an aircraft maintenance facility in Japan, pre-postured equipment storage in Denmark, and weapons generation facilities in South Dakota and Montana.

Approximately 41 percent, \$1.42 billion, supports the beddown of new weapons systems or new missions to ensure the DAF remains the world's premier Air Force and Space Force. These systems and missions include the Sentinel Ground Based Strategic Deterrent (recognizing the on-going Nunn-McCurdy Act breach process), B-21 bomber, F-35 and F-16 fighters, T-7A training aircraft, E-11A Battlefield Airborne Communications Node, C-130J cargo aircraft, Combat Rescue Helicopter, the Long-Range Standoff missile, advanced radar systems, and a space control center. We also appreciate the extension provided in the FY24 NDAA to continue

use of H2B visas in support of construction in Guam and the Commonwealth of the Northern Marianas Islands (CNMI).

Balanced with combatant command priorities and new mission beddowns, our MILCON program also includes facilities to enhance current mission capabilities and quality-of-life. Our program also recapitalizes facilities that have outlived their useful life or no longer meet mission requirements. Approximately 21 percent of the request, \$719 million, funds current mission projects, focusing on the most critical recapitalization and current mission requirements – including a CDC at Mountain Home Air Force Base (AFB) and dormitories at Joint Base Langley-Eustis (JBLE) and Joint Base San Antonio-Fort Sam Houston (JBSA-FSH).

Finally, 18 percent, \$621.8 million, funds program support to include Planning and Design (P&D) and Unspecified Minor Military Construction (UMMC). The FY25 budget request continues to target high-value designs for our large dollar programs and is based on identified requirements. The DAF's total force FY25 budget request of \$451.3 million for P&D is based on our FY26 – FY29 programmed construction with some flexibility to address emergent design requirements. The Active United States Air Force (USAF) component request is \$355 million and includes \$173.4 million for baseline P&D, \$181.6 million supporting B-21, Over the Horizon Radar, Sentinel, Next Generation Air Dominance and other programs. It also includes \$84.9 million for the United States Space Force (USSF), \$10.8 million for Air National Guard (ANG), and \$600,000 for the Air Force Reserves.

Our FY25 strategy continues to pursue fully funded designs over incremental designs to reduce timelines and costs for packages. We aim to fund projects further out into the Future Years Defense Program (FYDP) to increase executability in the year of appropriation and

maintain adequate P&D funding to support high-priority emergent requirements. The DAF request includes \$170.5 million UMMC projects to allow us to address lower-cost projects and emergent requirements. We appreciate the permanent increase of the 10 U.S.C. § 2805 threshold to \$9 million and adjustable to \$14 million. We also appreciate the expanded use of area cost factor adjustments worldwide. This helps ensure our program has equal buying power across the enterprise and gives our Combatant Commanders additional flexibility to address smaller infrastructure requirements.

Facility Sustainment, Restoration, and Modernization

The FSRM program provides a non-MILCON pathway to repair facilities and infrastructure, maximizing their lifespan. The DAF requested \$5.4 billion for FSRM in FY24 and Congress appropriated \$5.71 billion. The FY25 budget includes \$5.4 billion for FSRM, with \$482 million designated for the Space Force. Due to fiscal constraints resulting from the Fiscal Responsibility Act, the USAF was unable to reduce the \$46.8 billion of deferred maintenance and repair backlog. This level of funding, coupled with inflation and increased costs due to supply chain issues and labor shortages, will lead to increased degradation and continued growth of our deferred maintenance and repair backlog.

Our focus within the FSRM program remains on maintaining our current infrastructure, with a heightened commitment to quality-of-life initiatives, such as upgrading dormitories and CDCs in alignment with Congressional focus. To maximize the near-term impact of current funding levels, the Air Force and Space Force continue to assess mission threat vulnerabilities and prioritize infrastructure repair requirements which are mission-aligned to ensure combat capability across the Department of the Air Force to prevail in a great power competition.

Sentinel Program

The Minuteman III Intercontinental Ballistic Missile (ICBM), first deployed in 1970, is the world's oldest land-based strategic missile system. The need remains to recapitalize the over 50-year-old ICBM system to maintain this critical part of our nuclear triad that is safe, secure, and reliable for the foreseeable future. We are investing in facilities supporting 450 missile launch facilities and supporting infrastructure across three wings in five states. The transition from the legacy Minuteman III to a modern land-based ICBM must occur on a precise timeline to maintain the operational readiness of the nuclear deterrent and deliver full operational capability to the warfighter in the 2030s. The FY25 budget request continues to support the Sentinel program to ensure construction remains aligned with weapons system deployment milestones. The request includes \$700 million in funding for projects and land acquisition costs at F.E. Warren AFB, Wyoming, a gate project at Malmstrom AFB, Montana, and re-entry vehicle and training facilities at Vandenberg Space Force Base, California.

In January 2024, the DAF notified Congress that Sentinel program cost growth exceeded the thresholds established by the Nunn-McCurdy Act. The Office of the Secretary of Defense is conducting a root cause analysis to determine what factors caused the growth, whether to recertify the program.

Installation Resilience

In our current era of Great Power Competition, ruggedizing DAF installations and reducing our dependency on energy from pacing threats is critical to projecting power and assuring mission success. The DAF is requesting \$1.48 billion in FY25 to directly invest in installation and energy resilience projects and initiatives.

The DAF is modernizing with third-party financing and innovative partnerships with industry that modernize our utilities and drastically reduce system outages at our bases. Additionally, we are reevaluating the privatization of utilities at strategic installations where enhancing resilience is paramount. To date, the DAF has privatized 25 percent of our utility systems and plans to reinvigorate the program, looking at the viability, costs, and benefits of additional systems at several bases, and we are targeting a 15 percent increase in utilities privatization in FY25. These vital investments will deliver improved utility infrastructure, redundant systems, and greater installation energy resiliency. Examples of installation and energy resilience investments include:

- \$324 million for payments towards existing Utilities Privatization payments. Nine installations are currently being considered for system privatization.
- \$112 million for payments on over 50 existing Energy Savings Performance Contracts (ESPCs) and Utility Energy Service Contracts (UESCs) from the last 20 years.
- Future projects include ESPC/UESCs developing microgrids, redundant power sources and energy storage. Examples of microgrid projects in development include:
 - Yokota Air Base's Combined Heat and Power (CHP) plant linked to a full base microgrid;
 - Misawa Air Base's solar generation and liquid natural gas plant; and
 - Aviano Air Base's on-site solar generation. Aviano's design will be enhanced with ERCIP funding that will improve the financial viability of a larger, multi-mission microgrid.
- \$18 million for renewable generation and battery energy storage systems such as solar photovoltaics at Tinker AFB and energy storage in the Arctic.

Additionally, the DAF is driving critical resilience investments through innovation. In FY25, \$29.6 million in Research, Development, Test, and Evaluation (RDT&E) funds will support pathfinder pilots to demonstrate new technologies and creative pathways.

Energy and Water Resilient Infrastructure

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 needs based on resilience, cost considerations, and opportunities to leverage clean and sustainable sources.

Since FY20, we have been conducting 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 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. The DAF has been leading the Department of Defense in executing ERREs and has programmed resources to meet the requirements in 10 U.S.C. § 2920 through FY27. In 2023, we accomplished ERREs at six locations, including the first overseas location, to bring the total number of ERREs to 19 by the end of 2023. By the end of FY27, we are on track to complete 46 ERREs, exceeding statutory requirements. In addition to the ERRE program, we are launching a Water Resilience Readiness Tabletop Exercise initiative, aimed at testing and teaching installations how to prioritize personnel, operations, and resources effectively during a simulated extended water disruption.

Additionally, the DAF is implementing innovative solutions to build energy-efficient and resilient systems to improve energy security and mission assurance. These efforts include:

- Pilots to accomplish 100 percent carbon-pollution free electricity and 100 percent zero-emission non-tactical vehicle acquisitions by fiscal years 2030 and 2035, respectively.
- Exploring alternative energy opportunities through nuclear, geothermal, battery energy storage, offshore wind, and solar energy.
- Pursuing installation microgrids to enhance energy independence and changing the overall DAF approach for future energy initiatives.
- Pilot projects utilizing new or non-traditional design and construction practices, including passive heating and cooling, super-efficient HVAC systems, air and ground source heat pumps, and tight and efficient building envelopes. These initiatives will reduce energy consumption and free up resources for operational imperatives. To this end, in FY25 the DAF is investing \$117 million in MILCON funds to advance two pilot projects that will explore the potential benefits of non-traditional design and construction practices and materials. This includes using mass timber in a new \$40 million CDC at Mountain Home AFB, Idaho and net-zero emissions concrete in a new dormitory at the Joint Base San Antonio-Fort Sam Houston Medical Education and Training Complex (METC).

We identified Eielson AFB, Alaska, as the installation for our first nuclear micro-reactor pilot site due to the base's existing infrastructure, Arctic location, and critical mission resilience requirement. We are working with Defense Logistics Agency (DLA)-Energy Office to execute a firm-fixed-price power purchase agreement under 10 U.S.C. § 2922a with a third-party developer. The developer will own, operate, and maintain the microreactor and deliver zero-

emission electricity on Air Force property in exchange for long-term purchase of the generated energy. Once operational, the first-of-its-kind micro-reactor at Eielson AFB is expected to produce both electrical and thermal energy to supplement the installation's current energy sources and provide a redundant resilience measure,

We also partnered with the Defense Innovation Unit to execute \$5 million prototype agreements with non-traditional defense contractors to demonstrate innovative geothermal energy and validate on-site resilient baseload power delivery at Joint Base San Antonio (JBSA) in Southcentral Texas and Mountain Home AFB in Southwest Idaho. An additional 3.5-megawatt geothermal plant at F.E. Warren AFB, Wyoming, will be the first plant in the Department of Defense.

Finally, with more than 60,000 non-tactical vehicles across installations, we are taking a measured approach to ensure continued access to the tools and equipment to support our mission. As industry transitions to electric vehicles, fleet electrification is an opportunity to improve resiliency, decrease operation and maintenance costs, and embrace cutting edge technologies. In partnership with the DIU, we are leveraging private sector technology to ensure both personal and government vehicles can charge on our bases. In 2021, Joint Base Andrews and Joint Base McGuire-Dix-Lakehurst were selected as the initial non-tactical vehicle fleet electrification pilot sites. We used lessons learned to build a framework for installations to follow when planning for charging infrastructure requirements. Following the framework ensures installations use existing data to make resilient and data-informed investments, in accordance with DAF policy. We currently have 50 installations in various stages of infrastructure development. This measured approach will ensure the DAF is ready to meet any transition timeline.

Community Partnerships and Innovation

We have already seen success through our existing community partnerships and plan to expand these efforts in the future. A highlight of these partnerships is the joint effort between Spokane County and Fairchild AFB that culminated in the construction of a regional law enforcement training center. The County built the facility to host both local law enforcement and Fairchild AFB security forces training, as well as housing Fairchild's Combat Arms Training unit where Airmen will train and complete weapons qualification. Additionally, Cannon Air Force Base has a projected deficit in unaccompanied housing bedspaces and the DAF is working multiple lines of effort, including an off-base apartment lease and an Intergovernmental Support Agreement (IGSA) with Eastern New Mexico University (ENMU). Further, collaboration with the Oklahoma Department of Commerce, City of Altus, Chamber of Commerce resulted in the community building 135 new housing units near Altus Air Force Base, sized and priced affordably for military personnel. The city is also planning its own housing development that includes real estate, streets, and utilities with a developer in place to build 112 rental townhomes. These are examples of how the DAF leverages all available tools and authorities to collaborate with community partners on solutions.

Innovative approaches exist throughout our construction programs, and the \$3 billion rebuild of Tyndall AFB, Florida following the devastating effects of Hurricane Michael in 2018, is a prime example. It is being rebuilt as the Installation of the Future, which incorporates lessons learned from the storm by implementing South Florida hurricane design standards and sea level rise projections. The final result will be resilient, efficient, and innovative to serve as a model for future construction.

The DAF will continue to identify and pursue innovative and collaborative solutions to ensure our Airmen, Guardians, and their families have the safe and sustainable infrastructure needed to prevail in Great Power Competition.

Housing, Dormitories, and Child Development Centers

In FY25, the DAF requested \$1.1 billion for housing, dormitories, and CDCs to ensure high quality of life for our service members and our families. This includes \$198 million in MILCON, \$350 million in FSRM, \$326 million in Family Housing Operations and Maintenance, and \$222 million in Family Housing Construction. As a former Air Force Officer, I have had the honor of raising a family on DAF installations, to include residing in both government and privatized housing. I have witnessed first-hand how housing can impact the quality of life of our personnel, and its corresponding impacts on the readiness of our force.

Dormitories /Unaccompanied Housing

From FY22 through FY26, the DAF plans \$1.1 billion in FSRM investments in permanent party dorms, with \$300 million in FY25. We are on track to meet the FY22 NDAA requirements for permanent party dorms. This is nearly triple the investment over the previous five years ending FY21 and is the largest dorm investment in over a decade. Further, we have exceeded Office of the Secretary of Defense (OSD) performance goals for dorm conditions since the inception of the metric in FY13. In FY22 through FY23, we funded 67 projects totaling \$341 million to repair and renovate dorms. The DAF plans to spend approximately \$216 million in FY24 FSRM funds to execute 31 projects at 23 installations to renovate rooms, perform HVAC repairs, roof repairs, etc. We are planning to execute \$300 million in FY25 FSRM to

continue our efforts to repair facilities, their systems, renovate rooms, and improve quality of life for our most junior Airmen and Guardians.

The DAF's overall strategy focuses on restoring and modernizing dorms in their existing configurations with FSRM funds and addressing capacity shortfalls and facility recapitalization with MILCON funds. The DAF Dormitory Master Plan (DMP) guides this effort by providing the comprehensive forecasts, estimates, and recommendations required to strategically execute dormitory projects both when and where we need them the most.

The DAF unaccompanied housing (UH) inventory includes over 57,000 permanent party and over 48,000 training beds. As of today, 99.3 percent of permanent party beds were assessed as "adequate" against OSD standards, thereby exceeding the OSD goal of 90 percent. Despite this relatively positive condition rating, we recognize that 35 percent of our dorms are ready for repairs or replacement of major systems. We will continue to use the DMP process to identify our most urgent FSRM investment and MILCON needs.

The FY25 budget includes MILCON to address UH deficits or replace dorms which need to be recapitalized while also requesting P&D funds to prepare future dormitory requirements. The FY25 budget request includes \$81 million for a new dorm at JBLE and \$77 million for the first increment to replace one of five failing dormitories at the Joint Base San Antonio's METC. The FY25-29 FYDP includes five additional dorms at Barksdale, AFB, Louisiana (\$73 million), Cannon AFB, New Mexico (\$90 million), Goodfellow AFB, Texas (\$82 million), Ellsworth AFB, South Dakota (\$75 million), and Ascension Island (\$95 million).

Training dorms are another key component of our military service members' growth and development. Currently our analytics show that 100 percent of training dorms assess as "adequate" with only 15 percent ready for some level of repair. The DAF executed 4 projects for

\$39 million in FY23 and is funding 5 projects for \$37 million in FY24. As mentioned above, the DAF is leading the way by replacing the first of five failing Military Service dormitories at the METC located on JBSA. The project will also be the DAF's Net Zero pilot project using Other Transaction Authority, as required by the FY22 NDAA.

Command Empowerment

Installation leadership involvement and daily engagement at the unit level have been crucial for the success of our dorm program. Our commanders and enlisted leaders are committed to ensuring junior personnel reside in safe, adequate, and well-maintained facilities. The DAF has utilized an Airmen Dorm Leader (ADL) program for quite some time. These Airmen are screened, specifically selected, receive dedicated training at the Air Force Institute of Technology, and receive a new career field identifier when they formally become ADLs. Furthermore, ADLs, along with our Senior Non-Commissioned Officer Dormitory Superintendents and Civilian Dorm Managers inspect 10% of the dormitory room inventories each month and report facility discrepancies or conditions that might pose life, health and safety concerns to the Military Housing Office Manager.

GAO Report on Military Barracks Condition

In September 2023, the Government Accountability Office (GAO) published a report on the condition and quality of Department of Defense barracks. The GAO visited two DAF installations, Joint Base Andrews, Maryland and JBSA, Texas. The DAF remains committed to addressing the GAO's 31 recommendations and has made significant progress toward addressing the five recommendations directed at the DAF. We are nearly complete with updating our barracks assignment policy and will ensure senior leaders have awareness of dormitory MILCON requirements at an enterprise level moving forward. We are also updating our policies

to ensure dormitories reflect the Department of Defense guidance on health, safety, and privacy requirements and are evaluating our dormitory oversight positions, personnel training, and their organizational structure. Additionally, we are supporting OSD and our sister Services on addressing recommendations GAO made for the Department of Defense enterprise at-large.

Housing, Construction, Operation and Maintenance

The FY25 DAF Budget requests \$548 million for housing construction, planning and design, and Operations and Maintenance (O&M) while focusing 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 privatized housing projects.

The \$222 million family housing construction request includes \$6.6 million for planning studies and design for future construction projects. It allocates \$65 million for two separate projects at Yokota Air Base, Japan, to improve more than 50 homes for Senior Non-Commissioned Officers, Company Grade Officers, and Field Grade Officers. \$5.7 million is designated to construct two deficit General Officer Quarters and replace five garages at Ramstein Air Base, Germany. Additionally, our request supports \$144 million for restructures of privatized housing at Joint Base Elmendorf-Richardson (JBER), phase III, and Joint Base San Antonio-Lackland (JBSA-L).

Our military family housing O&M request of \$326 million 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.

Privatized Family Housing

The DAF Military Housing Privatization Initiative (MHPI) inventory contains over 52,000 privatized end state unit homes spanning 31 projects across 63 installations. As discussed above, the Department is requesting \$144 million in financial restructures for projects to address inventory sustainment and reinvestment shortfalls. This includes \$120 million for JBER phase III and \$24 million for JBSA-L. FY22-FY24 restructures total over \$500 million and we estimate future planned restructures at \$466 million.

The DAF continues to implement a rigorous oversight program and we are seeing gains in all areas – to include holding project owners accountable through coordinated watch lists, performance improvement plans, and incorporating tenant feedback into performance incentive evaluations. For example:

- Project owners at Barksdale AFB and Keesler AFB completed community action plans to address issues with resident feedback, maintenance, operations, and commander evaluations.
- Project owners were held accountable for \$58 million in costs to address mold remediation at Keesler AFB. As of December 14, 2023, 569 units have been completed, with 456 units planned for continuing remediation efforts.
- DAF incorporated the Tenant Satisfaction Surveys (TSS) results into performance incentive fee (PIF) agreements at 59 installations. As a result of this effort, the DAF is increasing accountability of project owners at installations that have low TSS scores.

- DAF leveraged NDAA provisions to enforce payments to address life health safety projects: \$31 million in 2023 and an estimated \$33.3 million in 2024.

Child Development Centers

We strive to provide a high quality of life for our members and their families, and 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. In FY24, we are spending \$46 million in centralized FSRM funds to address CDC facility condition requirements and \$50 million in FY25.

In FY24, the DAF requested and Congress appropriated \$37 million in MILCON for a CDC at Hanscom AFB and \$20 million to complete the CDC at JBSA-L. In FY25, we are requesting \$40 million for a CDC at Mountain Home AFB, which will also be a mass timber pilot project. Generous congressional support in recent FYs funded all CDC MILCON projects currently at an executable design stage, and the DAF is actively working on 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, 11 have been authorized and appropriated, adding approximately 1,700 spaces, one was funded with O&M, 11 are in active design adding another 940 spaces, and the remaining 12 are in planning to validate requirements.

Environmental Stewardship

The safety and health of the servicemen and women who work and live on our installations, their families, and the surrounding communities remain our highest priorities. We appreciate the support of Congress in our efforts to address Per- and Polyfluoroalkyl Substances (PFAS) and further progress in our Environmental Restoration Program.

Our proactive approach to addressing PFAS is yielding results, but there is more work to be done. The DAF requests \$362 million in FY25 to accelerate our PFAS efforts. This includes \$106 million for PFAS investigation and cleanup and \$256 million for Aqueous Film Forming Foam (AFFF) replacement, on-base drinking water monitoring, and RDT&E. This is nearly double the \$188 million requested for PFAS efforts in FY24. We successfully completed lockout/tagout of hangars that utilize AFFF, which contains PFAS, at 539 out of 541 facilities. These facilities will utilize water-only fire suppression systems going forward. Our FY25 investments also include procurement of a Fluorine-Free Foam (F3) for use in hangars and fire fighting vehicles. Working in partnership with state and local leaders in Michigan, we are installing ground water treatment systems at three sites near the former Wurtsmith AFB to remove PFAS from the environment at the Alert Aircraft Area site, Defense Reutilization and Marketing Office and Landfill 030/031 sites, and Wastewater Treatment Plant and Three Pipes ditch areas, and we are dedicated to continuing that progress. We have championed cooperative agreements with the City of Portsmouth, the New Hampshire Department of Environmental Services, the Pease Development Authority, and the US EPA at the former Pease AFB, New Hampshire, and brought two treatment systems online to help protect the community's drinking water supply. DAF is also piloting the soil washing process to address PFAS impacted soil at

Eielson AFB, Alaska. The DAF remains focused on working with local communities to address impacts throughout the cleanup process.

Environmental Restoration

We are focused on being good stewards of the environment while also meeting our cleanup obligations under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and the Resource Conservation and Recovery Act (RCRA). 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 the approximately 15,000 restoration sites at our active and closed installations. Much of our restoration program focuses on the DAF PFAS response.

The DAF PFAS response framework is built on the following lines of effort: (1) protecting human health and the environment; (2) fulfilling our cleanup obligations; (3) proactively communicating and collaborating with stakeholders (local communities, states, Federal agencies, and Congress); and (4) mitigating and eliminating AFFF use in accordance with NDAA requirements.

As of September 30, 2023, we have spent \$2.1 billion to address PFAS releases through identification, investigation, prevention, and response. Drinking water response actions are complete at nine (9) Base Realignment and Closure (BRAC) installations and 27 Active, Reserve, and ANG installations. Response actions for addressing PFAS-impacted water will include providing bottled water, installing point-of-use filtration or whole-house filtration systems, or connecting residents to municipal water supplies.

The generous FY23 appropriations provided \$216.4 million above the budget request, of which \$68 million is allotted to address PFAS at BRAC installations. FY24 appropriations

provided an additional \$5 million for PFAS, \$15 million for PFAS Destruction Technologies, and \$23 million for PFAS at BRAC installations. As of January 2024, we completed 100 percent (204 installations) of our CERCLA Preliminary Assessments and Site Inspections and initiated 68 percent of our Remedial Investigations at 191 identified DAF installations. We are investigating the potential for other non-AFFF PFAS sources in the cleanup process. We have leaned forward to take prompt actions under CERCLA by implementing interim remedial actions at 23 installations and mitigate further PFAS plume migration or ongoing impacts to groundwater

The FY24 enacted budget includes \$259 million to continue to identify, investigate, mitigate, and respond to PFAS releases across our Active, Reserve, Guard, and BRAC installations and we received an additional \$26 million to transition from AFFF to the new F3. FY25 budget requests include \$362 million to further that effort. The U.S. Environmental Protection Agency (EPA) recently finalized national primary drinking water regulations, or Maximum Contaminant Level (MCL), that address six PFAS in drinking water, individually or as part of mixture. We are still evaluating EPA's final rule and its impact on DAF operations but we expect the rule will significantly increase DAF cleanup responsibilities and liabilities, and the resultant "cost to complete," forecasted to be billions of dollars. With the finalization of the EPA's MCLs, the number of private residential wells requiring DAF action under CERCLA to address PFAS impacts will dramatically increase.

In the meantime, we continue to proactively engage with community members concerned about the possible environmental and health effects of PFAS and collaborate with our local Restoration Advisory Boards (RABs) as we constantly strive to improve our community outreach programs to be more inclusive and responsive.

Environmental Quality

As trustee for more than 8.3 million acres of land, including forests, prairies, deserts, wetlands, and coastal habitats, we understand the important role natural resources play in maintaining our mission capability and readiness. We remain firmly committed to a robust program of integrated conservation management covering a full suite of environmental, natural, and cultural resources. Environmental quality funding has allowed us to invest in compliance, natural and cultural resource activities on and around our installations and training ranges that directly support mission readiness. The environmental quality program FY24 budget request of \$518 million and the FY25 budget of \$498 million funds mission sustainment and environmental stewardship through compliance with applicable regulations across several media areas to include natural and cultural resources, environmental planning, hazardous waste storage and disposal, hazardous materials management, and complete funded Air National Guard clean-up. Additionally, the request supports ongoing habitat and species management for 123 threatened and endangered species found across 54 DAF installations and provides for continued cooperation and collaboration with the other military Services, Federal government agencies such as the United States Fish and Wildlife Service, and applicable state fish and game agencies.

Base Realignment and Closure Sites

BRAC received a generous \$23 million plus-up for PFAS in FY24, which will facilitate the execution of interim remedial actions to remove or treat PFAS and prevent its migration. The FY25 budget request of \$122 million for BRAC cleanup and property transfer will facilitate environmental restoration and property transfer activities at 34 former DAF installations closed through prior BRAC law and keep us on-track to transfer the remaining four former installations by 2027.

United States Space Force

As partners, the USAF and USSF remain mission-focused, by ensuring infrastructure, logistics, security, medical services, and a host of other support functions needs are met at every Space Force installation. Formal agreements, directives, and instructions codify stakeholder roles and responsibilities for support to the mission, and to the Guardians, Airmen, Civilians, and their families who work and live on Space Force installations.

Most of the combat-ready space forces that we field are employed-in-place, meaning they execute combatant command missions from their home station. Mission-ready, resilient installations and facilities are absolutely integral to our readiness and effectiveness. Both the Space Force MILCON and FSRM programs prioritize power resiliency within the FYDP. Additionally, assured access to space procures launch services and delivers on-orbit capabilities used by joint warfighters, combatant commands, intelligence agencies, civilian services, and the commercial space industry.

Our Spaceport of the Future (SOTF) program is an all-encompassing initiative for which the Space Force is taking a comprehensive approach to look at all factors contributing to range costs and launch throughput. SOTF invests over a billion dollars into our aging launch infrastructure to guarantee the DoD's ability to provide world-class launch capability to public and private partners. The FY25 budget requests \$77 million in MILCON, primarily for P&D, and \$84 million in O&M to support SOTF.

Since FY22, the Space Force receives, prioritizes, and obligates an independent appropriation for FSRM funding. The Space Force has shown a commitment to resourcing infrastructure requirements by identifying those projects that directly impact the performance of

weapons systems and prioritizing them for funding consideration. The DAF provides an allotment of MILCON funding to the Space Force based on the Space Force's portion of the total plant replacement value. This approach provides flexibility to resolve resource challenges due to the Space Force's prioritization of requirements as an independent Service. We are also investing in several energy resiliency projects, to include emergency power for Cape Canaveral's main command center responsible for all missile and space launches from the Kennedy Space Center facilities, tracking space vehicles and missile tests and monitoring their performance. Additionally, the FY25 request replaces antiquated generators and switchgear that provide power for many of the launch pads supporting National Security Space Launches.

Operational Energy

The DAF is the largest consumer of fuel in the Department of Defense. We have implemented a full range of techniques to increase our operational agility—decreasing fuel consumption increases loiter time for intelligence, surveillance and reconnaissance assets, and drag-reduction techniques on our aircraft increase payload range (e.g. microvanes, winglets, fairings). Once fully implemented, we project annual fuel savings of 75 million gallons, valued at roughly \$300 million. Examples include:

- An innovative Blended Wing Body prototype aircraft. In 2023, the DAF partnered with the DIU to prototype an improved body 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 lower fuel consumption by 30 percent.

- The Mission Execution Excellence Program (MEEP), which incentivizes cultural change among Airmen to optimize use of aviation fuel in preparation for future conflict in a fuel-constrained environment (i.e. INDOPACOM). Since May 2022, MEEP has saved over 5 million gallons of aviation fuel valued at \$20 million. Once fully implemented, we expect it to save approximately \$80 million per year.
- Improved tools and software, which impact warfighting operations – leading to more battlefield effectiveness. For example, the tanker planning application Jigsaw, deployed to the Air Operations Center at Al Udeid in 2018, decreased planning time for air refueling support of combat operations by roughly 10 hours. Mission analysis showed the tanker schedule was also 3.6 percent more effective, increasing support for receivers or allowing redeployment of two tankers per day. Automation now deployed will increase this to almost 15 percent.
- Engine optimization technologies, like those currently deployed by commercial airlines, reduce fuel burn and increase engine performance, reliability, and time on wing for DAF aircraft. This includes a blade coating, which if implemented across the C-17 and KC-135 fleets, we expect an estimated \$30 million in fuel and maintenance savings annually (based on FY23 fuel prices). Additionally, engine detergent and foam washes can restore efficiency and power and reduces fuel consumption by 0.5 to 1.15%. Initial analysis of washing engines on wing with nucleated foam shows significant maintenance benefits, increased time on wing, and overall engine performance benefits compared to current water wash procedures. DAF expanded testing of the nucleated foam wash on the KC-135 platform in early FY23. A total of 28 engines have been washed, showing an average fuel flow improvement of 1.16 percent.

- Drag reduction technology, currently used by commercial airlines and foreign militaries, reduces fuel consumption, and improves operational range and capability of the current fleet of AMC aircraft. In partnership with DIU, we are implementing legacy aircraft drag reduction technology, which has the potential to decrease drag and increase fuel efficiency by 5-7% on our existing fleet.

Conclusion

Our budget for FY25 balances risk between maintaining readiness in support of Combatant Commanders, while investing in the force infrastructure needed to compete in today's era of great power competition. As we confront the realities of a shifting global landscape, our commitment remains steadfast in ensuring resilient, optimized installations and operational energy to execute missions effectively in an evolving operational environment. While our capabilities are robust, we recognize the imperative of collaboration. We must operate as one team—within our Department, across the Joint Force and interagency, and in close coordination with our allies and partners. Only through genuine partnerships can we effectively compete, deter, and, if necessary, triumph in the strategic competition against the pacing challenge posed by the People's Republic of China and the acute threat presented by Russia. With congressional support, I am confident we can preserve the platforms necessary to enable and project combat power in air and space; deliver right-sized and sustainable built and natural infrastructure; and provide resilient installations.

Thank you for the opportunity to discuss our FY25 budget and the programs supporting energy, installations, and environment. We appreciate Congress' continued support for our enterprise and look forward to working with you.

2/5/24, 10:08 AM

DR. RAVI I. CHAUDHARY



DR. RAVI I. CHAUDHARY

Dr. Ravi I. Chaudhary is the Assistant Secretary of the Air Force for Energy, Installations, and Environment, Department of the Air Force, the Pentagon, Arlington, Virginia. Dr. Chaudhary is responsible for the formulation, review and execution of plans, policies, programs, and budgets to meet Air Force energy, installations, environment, safety, and occupational health objectives.

Dr. Chaudhary most recently served as the acting Deputy Assistant Secretary of the Navy for Energy. Prior to this role, he served as the Director of Advanced Programs and Innovation, Office of Commercial Space Transportation, at the Federal Aviation Administration. He provided technical leadership and oversight for the commercial space industry, to include research and development activities to support Department of Transportation and White House National Space Council initiatives.

Prior to this role, he served as Executive Director, Regions and Center Operations, at the FAA. In this role, he was responsible for leadership, integration and execution of aviation operations in nine regions nationwide. Dr. Chaudhary served as second in command to the Deputy Assistant Administrator and was responsible for providing Department of Transportation and FAA-wide services in the areas of operations, safety, policy, congressional outreach and emergency readiness for the National Aerospace System.

Dr. Chaudhary commissioned in the Air Force in 1993 upon graduation from the United States Air Force Academy. He completed 21 years of service in a variety of command, flying, engineering and senior staff assignments in the Air Force. As a C-17 pilot, he conducted global flight operations, including numerous combat missions in Afghanistan and Iraq, as well as a ground deployment as Director of the Personnel Recovery Center, Multi-National Corps, Iraq. As a flight test engineer, he was responsible for flight certification of military avionics and hardware for Air Force modernization programs supporting flight safety and mishap prevention. Earlier in his career, he supported space launch operations for the Global Positioning System and led third stage and flight safety activities to ensure full-operational capability of the first GPS constellation. As a systems engineer, he supported NASA's International Space Station protection activities to ensure the safety of NASA Astronauts. Dr. Chaudhary is a DoD Level III Acquisition Officer and has published numerous articles in future strategy, aircraft design, business transformation and space operations.

EDUCATION

1993 Bachelor of Science, Aeronautical Engineering, United States Air Force Academy, Colorado Springs, Colo.
 1999 Master of Science, Industrial Engineering, NASA Research Fellow, St. Mary's University, San Antonio, Texas
 1997 Department of Defense DAWIA Acquisition Certification, Level III, Test and Evaluation, Level I Prog. Management
 2003 Air Force Advanced Instrument School, San Antonio, Texas
 2006 Master of Military Operational Art and Science, Air Command and Staff College, Maxwell Air Force Base, Alabama
 2008 Joint Personnel Recovery Command and Control, Joint Personnel Recovery Center, Fort Belvoir, Va.
 2008 Air War College, Maxwell AFB, Ala., by correspondence
 2015 Federal Executive Institute, Leadership for a Democratic Society, Charlottesville, Va.
 2017 Doctor of Liberal Studies, Executive Leadership and Innovation, Georgetown University, Washington, D.C.

CAREER CHRONOLOGY

1. 1993–2014, Officer, United States Air Force
2. 2014–2017, Executive Director, Regions and Center Operations, Federal Aviation Administration, Washington, D.C.
3. 2017–2020, Director, Advanced Programs and Innovation, Office of Commercial Space Transportation, FAA, Washington, D.C.
4. 2022–2023, Senior Advisor then Deputy Assistant Secretary of the Navy for Energy (acting), Office of the Assistant Secretary of the Navy for Energy, Installations, and the Environment, the Pentagon, Arlington, Va.
5. 2023–present, Assistant Secretary of the Air Force for Energy, Installations, and Environment, Department of the Air Force, the Pentagon, Arlington, Va.

FLIGHT INFORMATION

Pilot: C-17, T-1, T-37, FAA Commercial Multi-Engine Rating in the PA-28, BE 400 aircraft
 Flight Test Engineer: C-5, C-130, C-141, F-15E, T-37

MAJOR AWARDS AND DECORATIONS

<https://www.af.mil/DesktopModules/ArticleCS/Print.aspx?PortalId=1&ModuleId=858&Article=3342171>

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DR. RAVI I. CHAUDHARY

Meritorious Service Medal with four oak leaf clusters
 Air Medal with four oak leaf clusters
 Aerial Achievement Medal two oak leaf clusters
 Air Force Outstanding Unit Award with "V" device and oak leaf cluster
 Global War on Terrorism Service Medal
 Combat Readiness Medal
 Afghanistan Campaign Medal
 Iraqi Campaign Medal
 Joint Service Commendation Medal

 (Current as of March 2023)



QUESTIONS SUBMITTED BY MEMBERS POST HEARING

APRIL 16, 2024

QUESTIONS SUBMITTED BY MR. ROGERS

Mr. ROGERS. In the FY24 NDAA, Sec. 2811 included explicit authority that the DOD and the military services may use areawide contracts to procure utility services from a utility service supplier. Does the Sec. 2811 language provide the legal clarifications needed for DOD and Army (or Navy/USMC) to overcome all the hurdles to using the areawide contract for utilities services? If not, what are the remaining legal or policy obstacles, and what are your suggested legislative solutions?

Secretary OWENS. The Department recognizes the value of areawide contracts (AWC) and is already using them widely, with \$663M obligated since 2013. Even prior to the FY24 provision on AWCs, DoD—as a delegee of GSA—routinely used the authority at 40 U.S.C. 501, as implemented at FAR Part 41, to procure utility services such as electricity, natural gas, water, wastewater, and steam through AWCs.

Multiple DoD installations have also leveraged AWCs to procure non-regulated energy-related services that help meet resilience goals. Examples include the acquisition of electric vehicle support equipment (EVSE), advanced meters, and utility infrastructure. DoD uses this authority where (1) DoD has a requirement for utility services within an area covered by an areawide contract and (2) the area is a vertically integrated market in which there is no other available supplier, aside from the regulated utility. DoD believes that the existing Title 40 authority has been useful, and DoD does not believe that it is constrained by hurdles to using AWCs for utility services.

FY24 NDAA Section 2811(b)(1)(C) expanded—or at least clarified—an expansion of the scope of “utility services” that DoD may acquire through AWCs. In addition to those traditional utility services that DoD historically has acquired through its delegated Title 40 authority, 2811(b)(1)(C) explicitly permits DoD to use AWCs to “implement[] utility system infrastructure projects.” DoD reads this language as providing it the authority to add onto existing AWCs new task orders for the construction and maintenance of new infrastructure that will integrate with the existing utility services provided by the regulated utility. These projects could include local supply-side, demand-side, or micro-transmission projects.

However, DoD does not read Section 2811(b)(1) as excepting DoD from the Competition in Contracting Act (10 U.S.C. §3201). DoD may choose to sole source these types of infrastructure projects to regulated utilities, but because the regulated utilities are not the exclusive available source for constructing that type of infrastructure, DoD would need (and would want) to complete a justification and approval (J&A) demonstrating that non-competitively awarding such infrastructure work to a regulated utility meets one of the exceptions enumerated within 10 U.S.C. §3204 and implemented at FAR 6.302.

The Department does not seek additional statutory authority to sole source (without a J&A) these types of infrastructure projects through AWCs. Competitive procurements reduce costs to the taxpayer, spur innovation, yield improvements in the quality of products and services rendered, and curb fraud.

If a regulated utility with whom DoD has an AWC is best positioned to implement infrastructure projects to help an installation become more resilient, DoD—either through competitive acquisition or through an other-than-competitive J&A—will select the utility to do the work and acquire the work through an AWC. But DoD objects to any legislation that would compel it to use vertically-integrated utility companies to implement resilience infrastructure projects as a service, particularly through a non-competitive award under an AWC, as such a mandate would undermine all of the benefits of competition and would curtail DoD’s ability to get the best value for the taxpayer.

In sum, there are no remaining legal or policy obstacles to using AWCs to procure infrastructure as services from regulated utilities, and DoD suggests that Congress refrain from adding new language on this issue.

Mr. ROGERS. Underground utility strikes during military construction are dangerous and costly events. There are many ways to mitigate the risk of utility strikes, but general data suggests that hand digging still leads to a considerable amount of incidents. Vacuum excavation is another method of reducing the risk for utility

strikes during construction, how have the military departments considered this method and associated best practices to avoid potential utility strikes?

Secretary OWENS. The Military Departments have used this minimally-intrusive method of excavation in construction projects to reduce the risk of damaging underground utilities. It has particularly been used to excavate test holes to determine the location of critical utilities prior to full scale excavation. Use of non-destructive methods prior to excavation such as ground penetrating radar help the Department determine the level of risk for associated with subsurface utilities and inform the decision to employee more precise excavation methods such as vacuum excavation.

Mr. ROGERS. In the FY24 NDAA, Sec. 2811 included explicit authority that the DOD and the military services may use areawide contracts to procure utility services from a utility service supplier. Does the Sec. 2811 language provide the legal clarifications needed for DOD and Army (or Navy/USMC) to overcome all the hurdles to using the areawide contract for utilities services? If not, what are the remaining legal or policy obstacles, and what are your suggested legislative solutions?

Secretary JACOBSON. The Sec. 2811 language provides a broad definition for utility services that the DoD and military services may procure under an areawide contract, however, that authority does not waive the requirement to compete those services, when retail competition for those services is allowed under state law. To further streamline the procurement of utility services under an areawide contract, Congress could expressly authorize the DoD and military services to contract for those service on a sole source basis.

Mr. ROGERS. Underground utility strikes during military construction are dangerous and costly events. There are many ways to mitigate the risk of utility strikes, but general data suggests that hand digging still leads to a considerable amount of incidents. Vacuum excavation is another method of reducing the risk for utility strikes during construction, how have the military departments considered this method and associated best practices to avoid potential utility strikes?

Secretary JACOBSON. The Army is strongly committed to safety, especially when performing demolition of or working around existing infrastructure. For construction projects, the Army requires the contractor to prepare a project and site-specific demolition plan which must detail the means, method, and equipment to perform the work, as well as the work sequence. That plan must be approved by the Army. Before starting any definable feature of work, the Army's Construction Quality Control procedures require a preparatory meeting with contract and government personnel, which includes review of all safety measures.

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Secretary BERGER. The areawide contract is one of several valuable tools available to the Department of the Navy to procure utility services or complete utility projects. The current language provided in Section 2811 of the FY24 NDAA, which is consistent with prior NDAA language authorizing the use of the areawide contract, provides sufficient clarity to ensure appropriate use of the areawide contract. The language in Section 2811 of the FY24 NDAA also allows the Department of the Navy's Heads of Contracting Activity the discretion they need in order to select the best contracting method for each individual utility services procurement or utility project.

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Secretary BERGER. The Department of the Navy requires that our contractors utilize safe construction practices. As a means and method of construction, Contractors may choose to utilize vacuum excavation in conjunction with hand-digging when in the vicinity of marked underground utilities.

Mr. ROGERS. In the FY24 NDAA, Sec. 2811 included explicit authority that the DOD and the military services may use areawide contracts to procure utility services from a utility service supplier. Does the Sec. 2811 language provide the legal clarifications needed for DOD and Army (or Navy/USMC) to overcome all the hurdles to using the areawide contract for utilities services? If not, what are the remaining legal or policy obstacles, and what are your suggested legislative solutions?

Secretary CHAUDHARY. DAF has successfully used areawide contracts (AWCs) for Utility Energy Savings Contracts (UESCs). GSA AWCs are typically used for electricity purchases where utility providers participate in the Department of Energy (DoE) areawide contract vehicles. UESCs have been used by DAF to obtain energy management services, including energy efficiency, demand reduction, and energy resilience.

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Secretary CHAUDHARY. The DAF does not stipulate the use of any particular method for excavation on our installations. Instead, the Department relies on the expertise of contractors and in-house military and civilian craftsmen to analyze each situation and apply their experience to determine the best means of safely excavating without striking utilities.

The DAF has used vacuum excavation on occasion, because in some circumstances it may be the safest, most-suitable method. However, the technique may not be optimal in certain situations. For example, vacuum excavation is not the best choice for large excavations or when speed of excavation may be critical to a project or mission. Additionally, depending on local environmental regulations, the collected soil and water spoils may need to be brought to an off-site collection facility instead of deposited on-site.

RESPONSE TO QUESTIONS SUBMITTED BY MR. GARAMENDI

Mr. GARAMENDI. We've talked about the BRAC installations that remain on the Army's books due to long term requirements for environmental clean-up. In some cases, such as Sharpe Army Depot, it may be possible to transfer these facilities so they can be put to beneficial use before the cleanup is complete. The Army would retain its clean-up requirements, but the surrounding community would get the benefit of using the land while the clean-up continued. Does the Army have any mechanisms to execute these types of transfers, where appropriate?

Secretary JACOBSON. Enabling beneficial reuse while the Army continues its environmental response obligations under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) or the Resource Conservation and Recovery Act (RCRA) is a fairly common occurrence at Base Realignment and Closure (BRAC) locations as well as large non-BRAC excess properties such as Sharpe Army Depot.

In general, Army may pursue several strategies to support community beneficial re-use while the Army completes its environmental clean-up obligations. The Army's options include: (1) leasing or granting a less-than-fee interest in the land (such as an easement) to allow compatible redevelopment or reuse activities to commence which do not interfere with Army clean-up activities; (2) splitting the parcel(s) in question so that the Army can transfer a clean parcel, while maintaining Army ownership over contaminated parcels until such time as the parcels are ready for transfer; or (3) requesting permission from the Governor of the particular state for a CERCLA "covenant deferral", allowing early transfer.

The Army has used these approaches at many sites. For any of these options, the beneficial reuse would be subject to land use restrictions to protect human health and the environment while the Army completes its remedial obligations. Additionally, in conjunction with the third (early transfer) option, the Army could sell the parcel for "in-kind" consideration whereby the transferee agrees to perform the clean-up on behalf of the Army.

Under this scenario, the transfer documents would contain one or more financial assurance provisions to ensure the clean-up is performed and regulatory close-out achieved. As a general matter, CERCLA Section 120(h), requires the United States to provide a covenant in the deed conveying the property warranting that all remedial actions necessary to protect human health and the environment have been taken prior to the date of transfer. For federal facilities not listed on the National Priorities List (NPL), the Governor of the state in which the property is located may agree to defer the CERCLA covenant requirement and allow for an "Early Transfer."

For federal facilities that are listed on the NPL, the early transfer requires approval from both the Governor of the state in which the property is located and the U.S. Environmental Protection Agency. Once the cleanup at an Early Transfer location is complete, the United States executes the CERCLA warranty post-transfer.

We would be happy to explore the feasibility of each of these options for the Sharpe Army Depot and report back to you.

Mr. GARAMENDI. It is imperative that installations pay close attention to the issue of encroachment and the risk that activities and purchases outside may have on operations inside the installation. The military must do a better job of identifying and preventing encroachment. One area of concern to me is the land surrounding MOTCO. Although the land may currently be privately owned, we've seen previously that without taking action, such as agreements with surrounding communities or leveraging the REPI program to obtain easements, private developers can acquire land and develop plans which inhibit the military's ability to carry out its missions. Secretary Jacobson, what steps the Army is taking to ensure there is no incompatible development around MOTCO?

Secretary JACOBSON. The Army will perform an encroachment analysis for MOTCO and then determine the feasibility of using Army REPI plan to address potentially incompatible use. Army Installation Command plans to meet with MOTCO Garrison leadership before the end of the calendar year 2024 to identify potential Army REPI partners and the Army's capacity to pursue such opportunities.

RESPONSE TO QUESTIONS SUBMITTED BY MS. STRICKLAND

Ms. STRICKLAND. Secretary Jacobson, I want to express my appreciation for you and your team's partnership with my office to address the housing issues at Joint Base Lewis-McChord. Working together to address our shared concerns about military housing, both family and unaccompanied housing, on base is vital to ensuring that servicemembers have what they need to have safe, high-quality living situations.

Moving forward on a new housing project to address the revised housing shortage at JBLM is the right step forward, and I know my team is looking forward to the site selection visit this week. I am pleased that after three or almost four years of advocacy from my constituents and office, there appears to be a path forward to improving and adding military family housing at JBLM.

I know that the Garrison, members of the Army Installations team, and my staff are participating in site visits this week. What is your anticipated timeline for building these new homes?

Secretary JACOBSON. Thank you for your continued interest and support of the Army's housing program at Joint Base Lewis-McChord (JBLM). Members of the Army Installations team met with the local JBLM team on 16-18 April to continue to discuss the potential future expansion of the JBLM family housing inventory.

We were pleased that Ms. Larter, the District Director for your state office, was able to participate in the briefing with the Command Group and has followed up with very useful information to support our work. The Army is working actively with the current Military Housing Privatization Initiative (MHPI) company at JBLM - Liberty Military Housing. Liberty has agreed to construct an additional 212 family homes on the installation.

The original schedule assumed that that site work would begin in August 2024. Vertical construction was expected to begin in April 2025 with all units delivered by the end of May 2027. To meet the needs of JBLM families, the Army continues to review the housing inventory and monitor housing costs. Should the Army adjust the inventory composition, a delay of up to six months may result.

Construction of additional housing on JBLM beyond the 212 Liberty Military Housing will construct hinges on a variety of factors, including Liberty's ability to obtain financing, the demand for additional housing, and future changes in the rates of Basic Allowance for Housing for Soldiers assigned to JBLM. As a result, the Army is continuing to assess the housing situation at JBLM and we will continue to keep you and this committee informed of our progress.

Ms. STRICKLAND. Secretary Jacobson, I want to address a pressing issue for my local community - the North Clear Zone. In September 2009, the City of Lakewood entered into a Cooperative Agreement with the Army to ensure that the North Clear Zone is compatible with the Department of Defense's safety and mission readiness requirements.

While the Air Force provides the majority of the funds, it is the Army that is managing the real estate transactions. It took 850 days for the first purchase under the Cooperative Agreement to be completed. This is unacceptable. There are 20 other transactions within the North Clear Zone, and these commercial properties and the City of Lakewood need a reasonable process for purchasing these properties.

How can we work together to create a sensible policy that guarantees that these transactions are completed in a timely manner and ensures public and flight safety?

Secretary JACOBSON. Our process is very thorough and includes several due-diligence actions such as an appraisal, a boundary survey, a title search, etc. Only after these actions occur can the Army move forward with acquisition. While the first transaction took over 2 years, we have since been able to streamline the process through communication and collaboration with the City of Lakewood and expect future transactions to be completed more quickly.

Ms. STRICKLAND. The Department of Defense was first authorized to undertake research, development testing, evaluation, study, and demonstration activities as it pertains to carbon dioxide removal (CDR) in the FY2020 National Defense Authorization Act (Sec. 223. Direct Air Capture and Blue Carbon Removal Technology Program of P.L. 116-92). Since then, the Department has received \$10 million annually to explore Direct Air Capture (DAC) and potential pathways to turn this captured CO₂ into fuel. These activities have been funded under RDTE Programs within the United States Navy.

1. This program was devised to include 2 stages, (1) research & development and (2) testing and evaluation. Has phase 1 of this program concluded? Thus far, what are the results of this phase?

2. The Intergovernmental Panel on Climate Change's (IPCC) has concluded deep decarbonization across all systems won't be enough to achieve global climate goals, and all pathways that limit warming to 1.5 degrees C depend on some quantity of carbon removal. Given this reality, do you believe that the Department should pursue decarbonization efforts along with carbon removal? Do you believe the Navy should pursue procurement of high quality carbon removal credits as a means to achieving net zero?

3. As the chief sustainability expert at the US Navy, what role do you believe carbon removal should play in managing the risks associated with climate change?

4. The 2023 State of Carbon Removal Report found that the overwhelming majority of carbon removal patents are held in China. What is the Department doing to ensure that the United States remains the global leader in carbon removal? What are the geopolitical implications of governments and private companies turning to the Chinese, instead of the United States, to meet their climate commitments?

Secretary BERGER. 1. Phase I of the program continues. All research and development (R&D) efforts are supporting further development of components and materials related to direct air capture, direct ocean capture, and fuel synthesis.

Technology maturation continues as the components and the systems that support the components are tested and evaluated for scaling, process efficiencies, and integration. At this stage the research phase is on-going and testing and evaluation of the technologies is in progress. Thus far the results of the R&D phase have led to advancements in key materials, small scale component demonstrations, and prototypes of direct air capture technology and the electrolytic cation exchange modules for process efficiencies and CO₂ removal from the air and the oceans.

These small-scale prototypes of CO₂ reduction technologies are currently being tested and evaluated by researchers at Naval Research Lab, Army Research Lab, academia, and industry partners to enhance carbon utilization and fuel qualifications.

2. Decarbonization is central to Navy's efforts and we recognize that our net zero goal cannot be achieved by decarbonization alone. The Department of the Navy manages nearly five million acres of land and we partner with other agencies, private landowners, and conservation groups on millions more. We are actively investing in nature-based carbon sequestration and are undertaking assessments to ascertain the greatest potential opportunities to sequester carbon. We are doing this not only to draw down carbon, but also because by working with nature on and off our installations, we can increase the resilience of our installations. At this time, we prefer this approach where we directly invest in carbon drawdown and build resilience at our installations, rather than purchasing external carbon offsets.

3. The DON is quickly moving forward with opportunities to remove carbon emissions. The Department of the Navy also recognizes, as the IPCC reports state, that globally we cannot reach the goal of net zero by 2050 relying on emissions reductions alone. That is why we are investing in nature-based carbon drawdown projects on our bases, with the dual benefit that working with nature we increase our resilience to climate hazards.

The Department of the Navy is pursuing many opportunities to reduce carbon emissions generated. We have also been investing for several years in priority research that removes dissolved carbon dioxide from seawater and uses it to make jet fuel. At this time, we do not have a robust pathway for the Department of the Navy to engage in carbon removal at scale, apart from these efforts. We are pursuing these efforts for operational reasons and to make us a more lethal and resilient force.

4. The Navy is pursuing decarbonization efforts as a key component for the Department, and for the United States as a whole, to reach net zero by 2050. These efforts align with maintaining and enhancing warfighting capabilities and mission effectiveness. Priority research in science and technology investments are developing concepts and technologies at carbon removal and synthesis into fuels, as described above.

We also understand that climate change and the energy transition offer an important opportunity for competition, and that countries and companies that master the technologies of this transition will have an advantage. As the Department of the Navy, we set requirements that support our Naval forces' ability to maintain warfighting advantage and enable mission success. We are committed to working closely with industry and academia, and other US agencies to support US competitiveness in this important transition, to include support for carbon removal technologies that may be relevant to Department of Navy equities.

5. Thank you for your concern over wait times and housing availability at Naval Air Station (NAS) Key West. The Department of the Navy (DON) is paying close attention to this issue. Improving the quality of unaccompanied housing (UH) and family housing (FH) continues to remain a focus area for the Navy, and we will continue our efforts for Key West. The Navy is continuing work on major UH renovations at NAS Key West, and we anticipate that those will be complete February 2025.

To help reduce long wait times while these repairs are completed, affected Sailors have been given Certificates of Non-Availability for purposes of Basic Allowance for Housing (BAH) eligibility, and NAS Key West's Military Housing Office has been counseling affected Sailors on housing options using their BAH, including in-town options, privatized housing, and new Morale, Welfare and Recreation (MWR) vacation rentals located on the base.

The DON has had positive results through the use of the 10 U.S.C. § 2881a authority to establish pilot programs for privatized UH, currently in San Diego and Norfolk. The privatized UH structure successfully piloted by DON has allowed these facilities access to private financing at initial start-up to make improvements and build new facilities, proving to be a powerful tool to help the UH facility conditions and improve quality of life.

The DON has started evaluating other fleet concentration locations for UH privatization feasibility. Concerning, the DON's privatized the FH requirement at NAS Key West, the Navy is exploring opportunities within existing privatized and leasing authorities to explore additional new family housing.

RESPONSE TO QUESTIONS SUBMITTED BY MR. GIMENEZ

Mr. GIMENEZ. How do you ensure that your installations don't have exposure to power stations with foreign adversary supply chain concerns? Within the Defense Critical Infrastructure Program (DCIP) do you monitor your local energy partners for exposure to foreign adversaries and compromised gear being installed?

Secretary OWENS. DoD continues to collaborate with the Department of Energy on Defense Critical Energy Infrastructure efforts, a subset of DoD work with the interagency on Defense Critical Infrastructure efforts, and we strongly support that program. DOD is also leveraging its efforts through the National Defense Industrial Base Strategy to engage and work with partners across the U.S. Government, to align USG efforts to expose and prevent foreign adversary presence in our infrastructure systems.

Mr. GIMENEZ. In your testimony, you cite the GAO report on Military Unaccompanied Housing that noted that service members living in privatized barracks consistently stated that they were satisfied with the condition of their housing, and it has improved their quality of life. I'm glad to hear that. Does this mean the Navy will continue to pursue privatized barracks and housing options for our Sailors?

Secretary BERGER. The Navy is continuing work on major UH renovations at NAS Key West, and we anticipate that those will be complete February 2025. To help reduce long wait times while these repairs are completed, affected Sailors have been given Certificates of Non-Availability for purposes of Basic Allowance for Housing (BAH) eligibility, and NAS Key West's Military Housing Office has been counseling affected Sailors on housing options using their BAH, including in-town options, privatized housing, and new MWR vacation rentals located on the base.

The DON has had positive results through the use of the 10 U.S.C. § 2881a authority to establish pilot programs for privatized UH, currently in San Diego and Norfolk to get Junior Enlisted sailors access to BAH when assigned to a ship. The privatized UH structure successfully piloted by DON has allowed these facilities ac-

cess to private financing at initial start-up to make improvements and build new facilities, proving to be a powerful tool to help the UH facility conditions and improve quality of life. The DON has started evaluating other fleet concentration locations for UH privatization feasibility.

Mr. GIMENEZ. What is the plan for housing in NAS Key West? Is privatized housing part of that plan? What is the timeline to fix this housing crisis for servicemembers in Key West?

Secretary BERGER. Thank you for your concern over wait times and housing availability at Naval Air Station (NAS) Key West. The Department of the Navy (DON) is paying close attention to this issue. Improving the quality of unaccompanied housing (UH) and family housing (FH) continues to remain a focus area for the Navy, and we will continue our efforts for Key West.

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RESPONSE TO QUESTIONS SUBMITTED BY MR. FINSTAD

Mr. FINSTAD. I am concerned about the Air Force's plans to renew the class justification and authorization (Class J&A) for other than full and open competition under the HVAC Chiller Replacement Standardization Project. As you are likely aware, in 2019, the Air Force Civil Engineering Center (AFCEC) issued a Class J&A limiting chiller purchases to a single company on each of 77 Air Force installations, eliminating competition for new purchases through the end of FY24.

While there are four major U.S. chiller producers, one manufacturer is listed for 45 of these installations, one is listed at 22 bases, and the remaining two vendors are permitted to sell chillers to just five bases. This policy flies in the face of the Air Force's efforts to promote competition and fair bidding practices, and I am concerned it is not achieving the costs savings the Air Force intended. I urge you and your colleagues to reconsider the renewal of the Chiller Class J&A when the current policy expires at the end of this fiscal year.

1. Assistant Secretary Chaudhary, it is my understanding that original equipment manufacturers (OEMs) have transitioned towards virtual training to allow technicians to learn at their own pace, increase information retention, and reduce costs. How did the Air Force consider this industry-wide shift towards blended learning in making its determination to renew the Chiller Class J&A?

Secretary CHAUDHARY. 1) The DAF has not seen an industry-wide shift towards virtual training. The two major original equipment manufacturers have been investing in in-person training centers. The Air Force has found that technicians maintaining the systems learn best by physically handling the equipment. Virtual training is used to augment in-person training and when necessary to provide timely updates, but is not considered the most effective method of training.

2) The DAF's current facility tracking systems are not designed to track cost differentials between initial procurement and ancillary equipment with and without competition. However, we are tracking components of the total cost of ownership and procuring updates to our tracking systems to improve our data analysis. Furthermore, the DAF is standing up a working group to establish standards for determining chiller costs and to define what ancillary equipment is included and excluded. This includes contracting involvement to provide specifications as a part of contract documents. Additionally, the working group will recommend any changes that are necessary in the tracking tools to improve data fidelity.

3) The Class J&A initiative does not eliminate competition. Each Department of the Air Force installation requested its standard HVAC chiller and the Air Force Civil Engineer Center reviewed and approved the installation's requested HVAC chiller manufacturer brand. The identified brand can be procured from local authorized distributors that support the installations.

The preponderance of these distributors are small businesses. The average life of an HVAC chiller is approximately 17 years and replacements occur only through attrition and we have not had enough replacement to determine potential improvement. The DAF acknowledges it is behind in establishing performance metrics.

However, the Department has started making modifications to its tracking database systems to enable better tracking and metrics related to chiller systems. Notwithstanding this, installations have provided a great deal of anecdotal data that supports the program. Technicians at DAF installations indicate they are happy with the Chiller Class J&A. In terms of energy costs, the DAF has determined that energy consumption across a family of HVAC systems is typically a zero-sum gain and does not provide any significant differentiation between Manufacturers.

Therefore, energy is being held as an equivalent across industry. The DAF will continue to examine performance of newer systems as manufacturers evolve and innovate to meet efficiency and resilience goals for DoD.

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2. When installations replace chillers, the chillers are purchased using sub-contracts for installations projects and packaged with other products. Given that installations receive a packaged bid, how is the Air Force assessing the costs of chillers procured under the Class J&A? What efforts has the Air Force pursued to compare the cost differential between initial procurement, not only of chillers but also ancillary equipment, with and without competition?

Secretary CHAUDHARY. 1) The DAF has not seen an industry-wide shift towards virtual training. The two major original equipment manufacturers have been investing in in-person training centers. The Air Force has found that technicians maintaining the systems learn best by physically handling the equipment. Virtual training is used to augment in-person training and when necessary to provide timely updates, but is not considered the most effective method of training.

2) The DAF's current facility tracking systems are not designed to track cost differentials between initial procurement and ancillary equipment with and without competition. However, we are tracking components of the total cost of ownership and procuring updates to our tracking systems to improve our data analysis.

Furthermore, the DAF is standing up a working group to establish standards for determining chiller costs and to define what ancillary equipment is included and excluded. This includes contracting involvement to provide specifications as a part of contract documents. Additionally, the working group will recommend any changes that are necessary in the tracking tools to improve data fidelity.

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and does not provide any significant differentiation between Manufacturers. Therefore, energy is being held as an equivalent across industry. The DAF will continue to examine performance of newer systems as manufacturers evolve and innovate to meet efficiency and resilience goals for DoD.

Mr. FINSTAD. I am concerned about the Air Force's plans to renew the class justification and authorization (Class J&A) for other than full and open competition under the HVAC Chiller Replacement Standardization Project. As you are likely aware, in 2019, the Air Force Civil Engineering Center (AFCEC) issued a Class J&A limiting chiller purchases to a single company on each of 77 Air Force installations, eliminating competition for new purchases through the end of FY24.

While there are four major U.S. chiller producers, one manufacturer is listed for 45 of these installations, one is listed at 22 bases, and the remaining two vendors are permitted to sell chillers to just five bases. This policy flies in the face of the Air Force's efforts to promote competition and fair bidding practices, and I am concerned it is not achieving the costs savings the Air Force intended. I urge you and your colleagues to reconsider the renewal of the Chiller Class J&A when the current policy expires at the end of this fiscal year.

3. Because chillers are a major source of energy utilization, lifecycle cost analysis is necessary to ensure the Air Force is selecting the right product for project-specific cooling needs. I am especially concerned that a March 2023 Congressional Requested Report (CRR) on the Chiller Class J&A stated that the Air Force had not yet developed the performance metrics and data to support the total cost of ownership (TCO) model. How is the Air Force justifying its plans to renew a policy that eliminates competition without data to demonstrate the Chiller Class J&A is achieving overall cost savings?

Secretary CHAUDHARY. 1) The DAF has not seen an industry-wide shift towards virtual training. The two major original equipment manufacturers have been investing in in-person training centers. The Air Force has found that technicians maintaining the systems learn best by physically handling the equipment. Virtual training is used to augment in-person training and when necessary to provide timely updates, but is not considered the most effective method of training.

2) The DAF's current facility tracking systems are not designed to track cost differentials between initial procurement and ancillary equipment with and without competition. However, we are tracking components of the total cost of ownership and procuring updates to our tracking systems to improve our data analysis.

Furthermore, the DAF is standing up a working group to establish standards for determining chiller costs and to define what ancillary equipment is included and excluded. This includes contracting involvement to provide specifications as a part of contract documents. Additionally, the working group will recommend any changes that are necessary in the tracking tools to improve data fidelity.

3) The Class J&A initiative does not eliminate competition. Each Department of the Air Force installation requested its standard HVAC chiller and the Air Force Civil Engineer Center reviewed and approved the installation's requested HVAC chiller manufacturer brand. The identified brand can be procured from local authorized distributors that support the installations.

The preponderance of these distributors are small businesses. The average life of an HVAC chiller is approximately 17 years and replacements occur only through attrition and we have not had enough replacement to determine potential improvement. The DAF acknowledges it is behind in establishing performance metrics. However, the Department has started making modifications to its tracking database systems to enable better tracking and metrics related to chiller systems. Notwithstanding this, installations have provided a great deal of anecdotal data that supports the program.

Technicians at DAF installations indicate they are happy with the Chiller Class J&A. In terms of energy costs, the DAF has determined that energy consumption across a family of HVAC systems is typically a zero-sum gain and does not provide any significant differentiation between Manufacturers. Therefore, energy is being held as an equivalent across industry. The DAF will continue to examine performance of newer systems as manufacturers evolve and innovate to meet efficiency and resilience goals for DoD.

RESPONSE TO QUESTIONS SUBMITTED BY MR. DAVIS

Mr. DAVIS. In your testimony, Assistant Secretary Owens, you state that the FY 2025 request includes funding to "support[] a transition of the Department's non-tactical vehicle fleet to zero-emission vehicles." You go on to say that "[w]e recognize that China dominates the supply chain lithium-ion batteries that many of our crit-

ical defense systems rely upon—we are working with our partners investing in on-shoring and friend-shoring of key supply chain capabilities to evolve this paradigm and ensure our ability to access these critical batteries.”

Please state how and whether current planning and funding is in place to also evolve the paradigm for enhancing resilience of stationery sources to avoid or avert the procurement and installation of CATL equipment (or any other equipment manufactured by a foreign company with direct or indirect ties to a foreign adversary) at a US military base.

Secretary OWENS. The Department’s concerns and efforts regarding battery security include, but also extend beyond, stationary storage. Two briefings requested by Congress in Section 225 of the FY23 NDAA and Section 154 of the FY24 NDAA are being generated to answer these questions in depth and will be delivered to Congress in the next few months. One key challenge is the dominance of China in the grid storage sector.

If DOD is to avoid procuring products from CATL, BYD, EVE, and others identified in Sec 154 of the FY24 NDAA, it will need alternatives. Specific key initiatives underway include: Publication of the DOD’s Lithium Battery Strategy 2023-2030 and associated lines of effort being executed.

Investment in critical minerals associated with battery security through the Defense Production Act Title III Program

Close collaboration with the Department of Energy’s Office of Manufacturing and Energy Supply Chains (MESC), Bipartisan Infrastructure Law (BIL) and Inflation Reduction Act (IRA) efforts and investments through the Federal Consortium for Advanced Batteries (FCAB)

Development of a DFARs rule to ensure the DOD complies with FY24 NDAA Section 154 sourcing limitations from Chinese companies beginning in 2027. In addition to our internal efforts, it is worth noting that, because of DOE grants and loans and tax incentives through the Inflation Reduction Act, a number of companies are establishing cell production for the energy storage market here in America. Some of these are South Korean and European companies and some are new American suppliers like Our Next Energy. The DOD looks forward to shifting to these more secure sources manufactured here and generating good paying jobs as they become available.

Mr. DAVIS. On April 4, 2024, I sent a letter to your office regarding a FY 2024 NDAA provision that I authored on “Indoor Air Quality Monitoring and Remediation.” This NDAA provision directed DOD to provide a report to the House Armed Services Committee on the status of the directives to “prepare a plan for a pilot project to implement integrated air quality monitoring and remediation systems to improve the indoor air quality of military installations, healthcare facilities, and military housing facilities.” by February 1, 2024. The report has not been delivered to date. The Letter requested an update on the delayed report required in the NDAA language from your office by April 30, 2024. Could you please provide an update on the status of your response to my letter, the delayed report, and an update on the pilot program, including a firm deadline for when the report will be completed, as well as a timeline for when you expect to begin the pilot program?

Secretary OWENS. Improving indoor environmental quality for our military members and their families is a strong priority of the Department of Defense and a personal priority of mine. I anticipate providing the report required by House Report 118-125 by the end of 2024. Producing this report and development of a pilot program requires the assistance of external organizations to provide expertise not available internal to the Department. Commencement of the pilot program will be determined by the methodology established in the report and therefore, the Department will provide a timeline for pilot program commencement in the report.

Mr. DAVIS. It was reported In a recent Military.com article, titled China-Made Batteries Eliminated from Navy, Marine Corps Infrastructure After Camp Lejeune Incident, dated April 11, 2024, that following the disconnection of CATL batteries from Camp Lejeune due to security concerns, the Department of the Navy stated that it would be taking a “proactive approach” to procure American or Allied-supplied batteries for its installations.

Please expound on the new “proactive approach”: How will it differ from the previous framework and approach that were in place when decisions were made to install the CATL batteries? To what extent, will American-supplied batteries receive just as, if not more favorable consideration than Allied-supplied batteries for these installations?

Secretary BERGER. To mitigate against potential future supply chain risks, the DoD will require, to the maximum extent possible, that our partners source all components from American or other allowable allied-nation sources by inserting appropriate contract requirements. Additionally, host installations will inspect all DON

property improvements to assure compliance with these clauses. Contract requirements are standardized and will be drafted in accordance with US law.

Mr. DAVIS. Assistant Secretary Chaudhary, you mentioned that the Air Force budget request included \$1.1 billion for housing, dorms, and child development centers. In addition, you emphasized the importance of decreasing Air Force fuel consumption and increasing the resiliency of energy grids and storage systems. In keeping with these goals, how will you incorporate technology designed to improve indoor air quality as a part of these programs? What role can industry play to assist in meeting these goals?

Secretary CHAUDHARY. The Air Force follows Unified Facilities Criteria (UFC) 1-200-02, High Performance and Sustainable Building Requirements, which addresses indoor environmental quality (IEQ) and indoor air quality (IAQ) through adoption of the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHREA) 90.1.

This UFC focuses on high performance and sustainable building requirements. When a building meets the requirements of this UFC, it is considered compliant with the High Performance and Sustainable Building (HPSB) Guiding Principles. ASHRAE 90.1, Energy Standard for Buildings Except Low-Rise Residential Buildings, defines the minimum requirements for mechanical and natural ventilation systems and the building envelope to provide acceptable IAQ in residential buildings.

DAF is working with the Office of the Secretary of Defense to implement resilient and healthy defense community objectives, which include creating livability standards for facilities and housing. The livability standards will target specific standards such as air and water quality and thermal, lighting, and acoustic comfort; availability and reliability of utilities and amenities; walkability and accessibility; prevalence of shared and community-oriented spaces; and proximity to critical services, such as child development centers, schools, healthcare facilities, and dining facilities.

RESPONSE TO QUESTIONS SUBMITTED BY MR. VEASEY

Mr. VEASEY. It was reported In a recent Military.com article, titled China-Made Batteries Eliminated from Navy, Marine Corps Infrastructure After Camp Lejeune Incident, dated April 11, 2024, and in prior press reports that batteries and network-equipped systems made by Contemporary Amperex Technology Co., Limited (CATL) were decommissioned at a U.S. military base after lawmakers, defense officials, and national security experts raised a number of security and vulnerability concerns. CATL is a Chinese battery manufacturer and technology company that manufactures lithium-ion batteries for electric vehicles and energy storage systems as well as battery management systems.

In your testimony, Assistant Secretary Owens, you state that the FY 2025 request includes funding to "support[] a transition of the Department's non-tactical vehicle fleet to zero-emission vehicles." You go on to say that "[w]e recognize that China dominates the supply chain lithium-ion batteries that many of our critical defense systems rely upon—we are working with our partners investing in on-shoring and friend-shoring of key supply chain capabilities to evolve this paradigm and ensure our ability to access these critical batteries." Please state how and whether current planning and funding is in place to also evolve the paradigm for enhancing resilience of stationery sources to avoid or avert the procurement and installation of CATL equipment (or any other equipment manufactured by a foreign company with direct or indirect ties to a foreign adversary) at a US military base.

Secretary OWENS. The Department's concerns and efforts regarding battery security include, but also extend beyond, stationary storage. Two briefings requested by Congress in Section 225 of the FY23 NDAA and Section 154 of the FY24 NDAA are being generated to answer these questions in depth and will be delivered to Congress in the next few months.

One key challenge is the dominance of China in the grid storage sector. If DOD is to avoid procuring products from CATL, BYD, EVE, and others identified in Sec 154 of the FY24 NDAA, it will need alternatives. Specific key initiatives underway include:

- Publication of the DOD's Lithium Battery Strategy 2023-2030 and associated lines of effort being executed.

- Investment in critical minerals associated with battery security through the Defense Production Act Title III Program

- Close collaboration with the Department of Energy's Office of Manufacturing and Energy Supply Chains (MESC), Bipartisan Infrastructure Law (BIL) and Inflation

Reduction Act (IRA) efforts and investments through the Federal Consortium for Advanced Batteries (FCAB)

Development of a DFARs rule to ensure the DOD complies with FY24 NDAA Section 154 sourcing limitations from Chinese companies beginning in 2027. In addition to our internal efforts, it is worth noting that, because of DOE grants and loans and tax incentives through the IRA, a number of companies are establishing cell production for the energy storage market here in America. Some of these are South Korean and European companies and some are new American suppliers like Our Next Energy. The DOD looks forward to shifting to these more secure sources manufactured here and generating good paying jobs as they become available.

Mr. VEASEY. It was reported In a recent Military.com article, titled China-Made Batteries Eliminated from Navy, Marine Corps Infrastructure After Camp Lejeune Incident, dated April 11, 2024, that following the disconnection of CATL batteries from Camp Lejeune due to security concerns, the Department of the Navy stated that it would be taking a "proactive approach" to procure American or Allied-supplied batteries for its installations. 1. Please expound on the new "proactive approach": a. How will it differ from the previous framework and approach that were in place when decisions were made to install the CATL batteries? b. To what extent, will American-supplied batteries receive just as, if not more favorable consideration than Allied-supplied batteries for these installations? 2. What specific modifications to the previous approach and procurement framework would help ensure that a similar occurrence does not happen in the future?

Secretary BERGER. To mitigate against potential future supply chain risks, the DoD will require, to the maximum extent possible, that our partners source all components from American or other allowable allied-nation sources by inserting appropriate contract requirements. Additionally, host installations will inspect all DON property improvements to assure compliance with these clauses. Contract requirements are standardized and will be drafted in accordance with US law.

