

**DEPARTMENT OF DEFENSE AUTHORIZATION
OF APPROPRIATIONS FOR FISCAL YEAR
2015 AND THE FUTURE YEARS DEFENSE
PROGRAM**

WEDNESDAY, APRIL 2, 2014

U.S. SENATE,
SUBCOMMITTEE ON READINESS
AND MANAGEMENT SUPPORT,
COMMITTEE ON ARMED SERVICES,
Washington, DC.

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

The subcommittee met, pursuant to notice, at 9:36 a.m. in room SR-232A, Russell Senate Office Building, Senator Jeanne Shaheen (chairman of the subcommittee) presiding.

Committee members present: Senators Shaheen, Donnelly, Hirono, Kaine, and Ayotte.

Majority staff members present: Ozge Guzelsu, counsel; Michael J. Noblet, professional staff member; and John H. Quirk V, professional staff member.

Minority staff members present: Daniel C. Adams, minority associate counsel; Anthony J. Lazarski, professional staff member; and Daniel A. Lerner, professional staff member.

Staff assistant present: Daniel J. Harder.

Committee members' assistants present: Patrick T. Day and Joshua Lucas, assistants to Senator Shaheen; Karen E. Courington, assistant to Senator Kaine; and Bradley L. Bowman, assistant to Senator Ayotte.

**OPENING STATEMENT OF SENATOR JEANNE SHAHEEN,
CHAIRMAN**

Senator SHAHEEN. Good morning, everyone. Let me call the hearing to order and point out that since we scheduled the hearing, of course, there is going to be a vote this morning. It is going to be at 10 a.m. I think it is only one vote. And so we will recess, go vote, and then return. So I apologize. I think they decided to vote after we scheduled the hearing.

I have an opening statement, which I will introduce a longer statement for the record, but I will try and be brief and hopefully we can get through Senator Ayotte's comments and at least half of the panel before we have to leave.

Today the subcommittee meets to hear the testimony on the Department of Defense's fiscal year 2015 budget request for installations, military construction, energy, and the environment.

Testifying this morning we have representatives from each of the military Services and the Office of the Secretary of Defense who are responsible for these programs. We look forward to your testimony and I want to extend a special welcome back to our witnesses from the great State of New Hampshire, Mr. Conger and Ms. Ferguson.

The President's budget request for military construction and family housing is \$6.56 billion in fiscal year 2015, which is nearly \$4.5 billion, or 40 percent, less than what was requested last year. In addition, I understand that facilities sustainment, restoration, and modernization requirements across the Department are funded at only 65 percent of the requirement necessary to keep our facilities in good working order. These reductions are no doubt a reflection of the tough budget choices and the need to protect funding for readiness and operations to the fullest extent possible.

However, these reductions also assume a significant amount of risk and ultimately a higher cost over the longer term. So I look forward to hearing more from our witnesses about the level of risk to our military facilities.

I am disappointed that the Department has again requested a base realignment and closure round in 2017. I do not believe that the Department has yet adequately explained how the significant cost growth we saw in the 2005 BRAC round would be avoided this time around or made sufficient progress in reducing the infrastructure overseas particularly in Europe.

Facility and operational energy issues are also a major focus of today's hearing. In this difficult budget environment, it is critical that we pursue every possible opportunity for cost savings. Energy efficiency is not only the cheapest, easiest way to reduce operating costs; it also has the potential to continue to improve our warfighting capability and energy security. And I look forward to hearing from each of you more about this today.

The President's budget request also includes \$3.5 billion for defense environmental programs, down from last year's request and representing the fifth consecutive year of decreases in the funding. Despite limited resources, I look forward to hearing how DOD will continue to balance between environmental protection and readiness.

And last, I would like to note my strong support for the Air Force's proposed funding—I am sure I echo Senator Ayotte in this.

Senator AYOTTE. Absolutely.

Senator SHAHEEN. For the bed-down of the KC-46A tanker at Pease Air National Guard Base. We are very proud of the 157th Air Refueling Wing in Pease and of our National Guard, and I know that they will continue to provide the exceptional refueling support that the Air Force needs for decades to come.

Now, before our witnesses provide their opening remarks, I will turn to Senator Ayotte for her remarks.

STATEMENT OF SENATOR KELLY AYOTTE

Senator AYOTTE. Thank you, Madam Chairman.

I appreciate the witnesses being here, and I want to thank all of you for your service at a very important time in our country's history. And, of course, yahoo to the New Hampshire people who are here. It is fantastic.

Our country right now is facing a diverse, complex set of threats around the world. And one of the issues that really goes to the heart of readiness—and I appreciate the challenges that you are facing right now in terms of making sure that our troops have the training and equipment they need. But I think, as Mr. Conger said in his written statement, installations support our military readiness. And so this is an important part of readiness as well. And yet, it is often, I think, the first area that the Department has to turn to and has turned to to cut. And this year really is no exception.

The administration is proposing a significant cut to military construction and facilities sustainment, restoration and modernization funding. As Senator Shaheen outlined, the fiscal year 2015 request for new construction and family housing is 33 percent lower than fiscal year 2014 enacted levels and 40 percent lower than the fiscal year 2014 request. So this really, as I look at this proposal, funds only what is required to keep DOD installations, as well as housing and other facilities, safe, secure, and operational. And many important decisions on deferring routine maintenance are being held off, including major purchases, where we are going to be accepting more risks and really hoping that we are able to sustain that another year. And I think that is the challenge that we face here. And I think, unfortunately, we are accepting more risks for the past 5 years and we have many systems that are in poor condition.

I am concerned about some of the condition of the facilities in which our service men and women operate. The Defense Department has an increasing number of facilities that are in poor to failing condition, and this is true across all the Services, the total force, not just the active duty, but also the Guard and Reserve. And certainly I think this is an important part of the hearing today about what risks we are taking on with this proposal.

In Senator Shaheen's and my home State of New Hampshire, the average condition index for assessed Army National Guard facilities was poor, trending to failing. And in fact, since the mid-1960s, the New Hampshire Army National Guard has only been able to construct one new readiness center for soldiers. We are grateful for that, but the New Hampshire Army National Guard's largest readiness center in Manchester was constructed in 1932. It is grossly under size. It does not comply with building code standards, as well as some of the key health and safety standards, as well as anti-terrorism force protection standards.

So this to me, as we think about this—it is not just the investment we are making in the active duty, but we know that in the conflicts we have had in Afghanistan and Iraq, it has really been our Guard and Reserve who have been operational as well. And these facilities are very important to ensure that our men and women in uniform and our Guard and Reserve are not in sub-par facilities that really have health and safety issues.

So I look forward to better understanding how the Army determines the MILCON requirements in States as well and ensures that those requirements are met.

Let me just echo what Senator Shaheen said about the prioritization of funding for the Air Force's investment in the KC-46, both with development and stationing. I share Senator Shaheen's views that this is great to see you prioritize this funding, and obviously, we are incredibly proud that the Air Force chose the Pease Air National Guard Base to be the first Air National Guard base to receive the KC-46A next generation tanker. And so I thank you for prioritizing that in this proposal.

For the Navy, at our four public shipyards, I still remain concerned that critical MILCON projects are still being delayed that can negatively impact readiness and efficiency. And certainly I appreciate some of the advances that we have made for the Portsmouth Naval Shipyard. But at the Portsmouth Naval Shipyard, there are two projects that have been tentatively delayed by a year, the P285 barracks fiscal year 2015 to fiscal year 2016 and the P309 rail project from fiscal year 2016 to fiscal year 2017. These are projects that I am concerned about. I am also concerned that the public shipyards may not receive the 6 percent in MILCON funding as required by the minimal capital investment plan, and I look forward to discussing these issues with our witnesses.

Again, let me just echo the comments of my colleague and the chairman that the administration's proposal again for another BRAC round—I am very concerned about this proposal. It is not a proposal that I can support. The Government Accountability Office, as Senator Shaheen talked about, has done a number of studies of the 2005 BRAC round which found, among other things, that BRAC implementation costs grew to about \$35 billion, exceeding the initial estimates that were given for the cost of this BRAC round by \$21 billion, or 67 percent.

And I understand certainly that the Department will make the case that this was somehow a unique BRAC round, but I remain concerned that we are going to be in a position where the costs we put into this will not be the return that we receive. And in addition to that, I believe that if we look at, for example, the needs we have right now, one of them being in the Navy, and of our four public shipyards, that we do not have excess capacity and we do not have a need for a BRAC round at this point.

I mean, with regard to the maintenance, for example, at the Portsmouth Naval Shipyard of our attack submarine fleet, they are booked for a number of years, and really the work is there that needs to be done to ensure that our attack submarine fleet is prepared.

And in addition, with the Department's shift to the Asia-Pacific region, now more than ever, I would like to hear from the witnesses where you believe that there is excess capacity, if any, that would justify a BRAC round at this point.

Finally, I appreciate the work that the Department and each of the Services are doing to increase energy efficiency and to ensure that the Department of Defense energy programs allow for greater cost efficiency and mission effectiveness. And thank you for your work there. I think that is important.

I thank the chair for holding this hearing, and I want to thank again all the witnesses for your service to our country during challenging times.

Senator SHAHEEN. Thank you, Senator Ayotte.

As I said, hopefully we can get through as much of your testimony as possible before we have to go vote. I would ask if we could take testimony in the following order: Secretary Burke first, Mr. Conger, Secretary Hammack, Secretary McGinn, and Ms. Ferguson. So Secretary Burke?

STATEMENT OF HON. SHARON E. BURKE, ASSISTANT SECRETARY OF DEFENSE, OPERATIONAL ENERGY PLANS AND PROGRAMS

Ms. BURKE. Chairman Shaheen and Ranking Member Ayotte, Senator Hirono, thank you for the opportunity to discuss with you today the activities of the Office of Operational Energy Plans and Programs and provide highlights of the President's fiscal year 2015 budget in this area.

You have my statement for the record, so I will not repeat it here today.

I am honored to join all of my colleagues from the Office of the Secretary of Defense and military departments. And I know that you have a range of very important installation issues to discuss today as you just made clear. But I thought it might be helpful to start with just a short overview of how we all fit together when it comes to energy.

The Department is, of course, the country's single largest consumer of energy at a cost of about \$20 billion a year. We all have various roles and missions relating to that energy use, but we also have a common narrative that unites us and that is by design. Last year, then Deputy Secretary of Defense Ash Carter directed the Department's senior leaders to come up with that common narrative, one to guide the full range of defense energy activities, including operational and facilities energy and the energy-related elements of mission assurance.

In the intervening months, we have all worked together to write that narrative, which we hope to formalize soon. But I believe it is very fair to say that the basic principles already guide our activities and have for some time, and so I can give you a preview of what is in that policy.

The policy states that the Department of Defense will enhance military capability, improve energy security, and mitigate costs in its use and management of energy. We will do so by improving the energy performance of our weapons, installations, and military forces, by diversifying and expanding our energy supplies and sources, including renewable energy and alternative fuels, by analyzing the requirements and the risks related to our energy use, and finally by promoting innovation for our equipment and education and training for our personnel. The bottom line is that the Department of Defense values energy as a mission-essential resource and one that can actually shape the mission as well.

As the Department's lead official for operational energy, or the energy required to train, move, and sustain forces and platforms for military operations, I am delighted to tell you that the Presi-

dent's fiscal year 2015 budget request advances the goals of that common narrative. Energy and liquid fuel in particular is the lifeblood of military operations. It powers our vehicles, our ships, our aircraft, and the generators that, in turn, provide electricity to a range of systems.

It can also be a vulnerability on the battlefield, and our adversaries in Afghanistan have targeted our supply lines at times. And while we have had no operationally significant disruption of those fuel supplies, the opportunity costs, including in lives lost, has been higher than it has to be.

This has potential to be an even bigger concern as the Department rebalances to the Asia-Pacific region where full-spectrum operations, where vast distances create even greater logistical challenges, and also potential adversaries or range of adversaries are growing the capabilities to constrain or deny logistics, including with more precise weapons.

So the overall demand for operational energy today and in the future varies from year to year. It depends on our missions and on our operations tempo, but in fiscal year 2015, the Department estimates it will consume 96 million barrels of liquid fuel at a cost of approximately \$15 billion.

In fiscal year 2015, we will also invest \$1.7 billion in initiatives to improve how we consume that energy for military operations and about \$9 billion over the future year defense program. More than 90 percent of that investment will go to improve the energy performance of our weapons and our military forces. That includes procurement of equipment such as the Army's efficient generator program. It includes major innovation efforts such as engine programs for fighter aircraft and helicopters. 7 percent of that overall investment will go to diversifying and securing our supplies of operational energy, and that includes, for example, the Marine Corps program to procure tactical solar generation and solar battery charging systems.

Underlying all of these investments are efforts to develop better analytical tools for the whole force development process. So these will inform our strategy development, our plans, our requirements, the acquisition process. And this has been a key focus of my office since our inception. We are about 4 years old now. We are a new office, and it has been an important area of activity for us. And we have seen just, in that short period of time, a great deal of progress in this area with energy and energy logistics increasingly incorporated into all of those processes, including major war games, and there is now a mandatory key performance parameter for energy in the requirements process that the Chairman of the Joint Chiefs enforces.

So in addition to this focus on future force development, my office will continue to promote operational energy innovation, including through our own investment fund. We will continue to study and analyze how global energy dynamics affect national security and shape the defense mission. We will continue to analyze how climate change will affect our operational missions. And finally, we will continue to look for ways to support deployed forces with operational energy solutions, from rapid fielding of new technologies to adapting war plans to incorporating energy into international part-

nerships, and we are gathering and applying the lessons learned in Afghanistan.

So I thank you for your time today, and I look forward to your questions.

[The prepared statement of Ms. Burke follows:]

Senator SHAHEEN. Thank you.

Mr. Conger?

STATEMENT OF JOHN C. CONGER, ACTING DEPUTY UNDER SECRETARY OF DEFENSE INSTALLATIONS AND ENVIRONMENT

Mr. CONGER. Good morning. Chairman Shaheen, Ranking Member Ayotte, distinguished members of the subcommittee, I appreciate the opportunity to appear before you to discuss the Department's fiscal year 2015 budget request for installations and environment.

The testimony I have submitted for the record describes the \$6.6 billion that we are requesting for military construction and family housing, the \$8 billion more that we are requesting for sustaining and restoring our facilities, and the \$3.5 billion that we are seeking for environmental compliance and cleanup.

Because infrastructure generally has a long useful life and its associated degradation is not as immediate, the DOD components are taking more risk in the military construction program in order to decrease risk in other operational and training budgets.

In addition, reducing military construction reduces investment risk, as we contemplate the uncertain allocation of force structure cuts and the possibility of a new round of BRAC.

The MILCON request alone, as was indicated earlier, is a 40 percent reduction from what we requested last year, and the facilities sustainment request is only 65 percent of the modeled requirement.

The budget challenges facing the Department are deep and they extend for many years. We continue to believe that an important way to ease this pressure is with base closure, allowing us to avoid paying upkeep for unneeded infrastructure and making those funds available for readiness and modernization of the forces.

That said, I know the high cost of BRAC 2005 has left a bad taste in many Senators' mouths. We have long talked about the emphasis in 2005 on transformation rather than efficiency. But that answer did not satisfy Congress' concern about the \$35 billion cost, and it certainly did not explain why we were not going to end up with more of the same if another round were authorized.

I was not satisfied either and I tasked my staff to review each of the recommendations from BRAC 2005. What we found was that we actually ended up conducting two parallel BRAC rounds.

One was about transformation. The recommendations were expensive, and they did not pay back. But there were some moves that you could only do during a BRAC round. Looking at the nearly half of that last round's recommendations that either did not pay back at all or are paid back in 7 years or more, we found that this, quote/unquote, transformation BRAC cost \$29 billion out of the \$35 billion and resulted in only \$1 billion in recurring savings. In other words, the reason we were doing those moves was not to save money.

That said, the other half of the recommendations was focused on saving money. They had payback of less than 7 years. They ended up costing a total of \$6 billion out of that \$35 billion and yielded recurring savings of \$3 billion a year. So this, quote/unquote, efficiency BRAC proves that when we are trying to save money, we do.

That is the kind of round we are seeking to conduct now. It is fair to say that the Department needs to save money now.

During the hearing with Secretary Hagel, Madam Chair, you specifically asked about the European infrastructure consolidation effort. Many members have said that we should close bases overseas before we do a BRAC. So, as you know, we have embarked on a BRAC-like process in Europe. However, we are not looking in that process to bring forces back to the United States. So it will not take any pressure away from the need for a BRAC round. The analysis has taken longer than expected, but we are nearing the finish line and anticipate completing our report this spring. We have affirmed several recommendations already and have offered classified briefings to committee staff. In fact, we have scheduled an update with this committee staff next week.

Finally, Madam Chair, I understand that you wanted to spend some time focused on the Department's energy programs, and I applaud your focus on energy efficiency. I agree completely with the statement you have made in the past that, quote/unquote, the cheapest energy is the energy we do not use.

Let me make three quick points on facilities energy before I yield back.

One, many of our energy efficiency projects and most of our renewable ones are funded by third parties, minimizing our upfront costs and resulting in long-term cost reduction.

Second, for those projects that we do fund ourselves, we are focused on the business case and ensuring good payback. These are smart investments.

Third, one of the risks that is associated with reduced levels of facilities sustainment funding is reduced energy performance. Put simply, a hole in the roof or a malfunctioning HVAC system has a significant effect on a building's energy efficiency. To paraphrase your quote, the most expensive energy is the energy we waste. That is what you get if you underfund maintenance.

So thanks for the opportunity to testify, and I look forward to your questions.

[The prepared statement of Mr. Conger follows:]

Senator SHAHEEN. Thank you very much.

Secretary Hammack?

STATEMENT OF HON. KATHERINE G. HAMMACK, ASSISTANT SECRETARY OF THE ARMY INSTALLATIONS, ENERGY AND ENVIRONMENT

Ms. HAMMACK. Thank you, Chairman Shaheen, Ranking Member Ayotte, and members of this subcommittee. On behalf of soldiers, families, and civilians of the U.S. Army, thank you for the opportunity to discuss our fiscal year 2015 military construction budget.

For fiscal year 2015, the Army is asking for \$1.3 billion, which covers military construction, family housing, and the Army's share of the DOD base closure account. This does represent a 39 percent

reduction from fiscal year 2014. It is part of the overall \$13 billion Army budget which includes installation, energy, environmental programs, facilities sustainment, restoration and modernization, and our base operations support.

Due to the fiscal reductions required by current law and the end of combat operations in Afghanistan, the Army is shrinking our active component end strength to 490,000 by the end of fiscal year 2015. The 2014 Quadrennial Defense Review calls for an Army end strength to decline further to around 450,000 or 440,000. So as end strength and force structure decline, we must assess and right-size the supporting infrastructure to ensure that training and readiness needs are met. This requires us to achieve a difficult balance between maintaining infrastructure with force structure.

Last year, the committee asked when we had last conducted a capacity analysis. So the Army went ahead with a capacity analysis at a macro level. The magnitude of excess capacity showed that with an Army of 490,000, excess Army capacity will range between 12 and 28 percent depending upon the facility category group, with an average of 18 percent excess. Additional end strength reductions below 490,000 will increase excess capacity.

As Mr. Conger mentioned, we are all participating in the European infrastructure consolidation review to address excess capacity in Europe. The Army has been addressing excess capacity in Europe for many years. But currently we have 10 to 15 percent excess that we are participating with looking to see whether there is joint opportunities with the other Services. We are on track to shrink our overseas infrastructure, overhead, and our operating budgets.

But in the United States, we need BRAC authorization to do the same. BRAC is a proven means to address excess capacity in the United States. Prior BRAC rounds are producing \$2 billion in cumulative net savings to the Army each and every year, and we achieve recurring savings from the BRAC 2005 round of about \$1 billion a year. We have a clear business case for a BRAC round in 2017. There is a clear path forward for Congress to agree to a new round of BRAC.

As Mr. Conger mentioned, the BRAC 2005 round could be considered as two parallel BRAC rounds, transformation BRAC and efficiency BRAC. The efficiency BRAC round was the component that produced half of the savings for the Army. The BRAC 2005 selection criteria reflected DOD's stated goal at that time to achieve transformation, in addition to savings.

We relocated two large brigade combat teams from Europe. In Europe, the infrastructure was built by the Germans, funded by the Germans. A lot of our energy costs were paid for by the Germans. When we relocated them back to the United States, we had to build that infrastructure here with American taxpayer dollars. We had to operate them with American taxpayer dollars and pay for energy costs with American taxpayer dollars. The transformation BRAC was part of the BRAC strategy but not intended to achieve savings.

We look forward to working with Congress to shape the selection criteria for BRAC 2017 to reflect our need for an efficiency BRAC round. The Army does have a strong commitment to reducing our costs, especially our energy costs through energy and water secu-

rity measures. We have accelerated our partnerships for energy and water efficiency with the private sector through energy savings performance contracts. We have also accelerated our partnerships for renewable energy with the private sector, and we continue to identify ways to curb the rapid growth in utility costs through evaluation of new technologies.

And although the Army is reducing our missions in Afghanistan, we are not shrinking our focus on operational energy efficiency. Army missions around the globe, whether humanitarian assistance, disaster relief, or conflict, require energy as a critical enabler. Investments in more efficient helicopter engines that Honorable Burke mentioned extend operational capabilities. Energy efficient expeditionary shelters reduce ground resupply logistics. The Army operational energy modernization investments provide efficient, reliable, and maintainable systems that increase capabilities and maintain dominance.

Thank you for the opportunity to appear before you today. I look forward to your questions on our recommended 2015 budget and our request for a badly needed efficiency BRAC round in 2017.

[The prepared statement of Ms. Hammack follows:]

Senator SHAHEEN. Thank you, Secretary Hammack.

We have had a little change of process. Senator Ayotte has gone to vote. So we are going to keep the hearing going, and when she returns, I will go vote. I am not sure when Senator Hirono wants to go vote. But that way we can keep the testimony going and we will not delay everyone as much.

So Secretary McGinn.

STATEMENT OF HON. DENNIS V. MCGINN, ASSISTANT SECRETARY OF THE NAVY ENERGY, INSTALLATIONS AND ENVIRONMENT

Mr. MCGINN. Chairman Shaheen, Senator Hirono, you have, in your opening statements, outlined key important issues that are relevant to our program fiscal year 2015.

In the interest of time, I would simply like to submit my written statement for the record, and I look forward to answering your questions about our program that we believe best supports giving the funding available to the finest expeditionary force the world has ever known, our Navy and Marines, and their families and the civilians that support them.

Thank you very much, Madam Chairman.

[The prepared statement of Mr. McGinn follows:]

Senator SHAHEEN. Thank you.

Ms. Ferguson?

STATEMENT OF KATHLEEN I. FERGUSON, ACTING ASSISTANT SECRETARY OF THE AIR FORCE INSTALLATIONS, ENVIRONMENT AND LOGISTICS

Ms. FERGUSON. Good morning, Chairman Shaheen and distinguished members of the subcommittee. Thank you for the opportunity to speak to you today about the Air Force's military construction, environmental, energy, and base closure programs. And on behalf of Secretary James and General Welsh, I would like to

thank the committee for your unwavering support to the Air Force and our airmen.

The current fiscal environment required the Air Force to make some difficult choices. We attempted to strike the balance between a ready force today and a modern force tomorrow. To help achieve the balance, the Air Force took risk in installations support, military construction, and facilities sustainment programs.

In this budget, the Air Force is asking for \$1.9 billion in MILCON, family housing, and base realignment and closure. This reflects a 28 percent decrease in military construction. We deferred infrastructure recapitalization requirements while supporting combatant commander requirements and weapons system bed-downs like the KC-46 and F-35. This budget request also distributes military construction funding equitably between the Active, Guard, and Reserve components.

The Air Force is the largest single consumer of energy in the Federal Government, with over \$9 billion spent last year to fly aircraft and power our installations. In fiscal year 2015, we are requesting over \$600 million for energy initiatives to identify opportunities and invest in solutions. So far, our efforts have helped us avoid \$2.7 billion in total fuel and electricity costs just last year, compared to baseline years.

At 86 percent, our aviation fuel represents the largest share of our energy bill. To address this, the Air Force has a goal to improve aviation energy efficiency of our fleet by 10 percent by 2020. And while there are significant upfront costs to those improvements, there are also significant long-term savings. For example, we are working to re-engine the KC-135 by upgrading the engine's high pressure components. This effort will improve each engine's efficiency, reliability, and maintainability, and while it costs nearly \$100 million, this investment is expected to save approximately 85 million gallons worth of fuel through 2046. Additionally, there are maintenance savings which will start in 2025, and they should save an additional \$3.1 billion.

The Air Force has also reduced its facility energy intensity by over 22 percent since 2003, and last year resulted in savings or cost avoidance of \$270 million.

Right now, we are working to meet our target to develop over \$400 million in energy efficiency contracts, and these projects are a win-win. They address our sustainment shortfalls and implement new technology and obtain funding through third party financing.

Last year, 8 percent of electricity came from renewable energy, which was above our goal of 7.5 percent, and we are continuing to build on our successes. Just recently, we cut the ribbon on a 16.4 megawatt solar array at Davis-Monthan Air Force Base in Arizona, the largest of its kind on any U.S. Department of Defense installation.

My closing topic is base realignment and closure, and the bottom line for the Air Force is we need another round of BRAC and support the fiscal year 2015 PB request. While the Air Force has not done a recent capacity analysis, our analysis from 2004 estimated that we had 24 percent excess infrastructure capacity. BRAC 2005 directed the Air Force to close under 1 percent of our plant replacement value. Since that time, the Air Force has reduced aircraft by

more than 500, our military end strength by nearly 8 percent, and in our fiscal year 2015 budget request, have asked to reduce force structure and military personnel even further. So even though we have not done an updated capacity analysis, we intuitively know we have excess infrastructure capacity and continue to spend dollars maintaining that that could be put toward readiness and modernization.

In conclusion, the Air Force made hard choices to our budget formulation. We attempted to strike the delicate balance of a ready force today and a modern force tomorrow while adjusting to budgetary reductions. To help achieve that balance, the Air Force elected to accept risk in installations support, military construction, and facilities sustainment. We believe this risk is prudent and manageable in the short term, but we must continue the dialogue on right-sizing our installations for a footprint that is smaller but more capable.

Members of the committee, thank you for your strong support of the airmen and men and women of the U.S. Air Force, Active, Guard, reservists, and civilians.

And this concludes my statement. I look forward to your questions.

[The prepared statement of Ms. Ferguson follows:]

Senator SHAHEEN. Thank you very much, Ms. Ferguson. Thank you all for your testimony.

Everyone, except Secretary McGinn, has mentioned BRAC as part of your testimony. So I want to begin with that.

I know, Mr. Conger, you did a good job of explaining and describing the difference between the transformational aspects of the 2005 round and the savings aspects. But looking at GAO's report, they pointed out that even in the savings round, that the costs of the 2005 BRAC changes were 15 percent higher than were projected.

So I wonder if you could both respond to that, why those were higher, and then if you could talk about whether you are beginning or have developed an estimate for what the implementation costs would be for another round in 2017 and when the real savings would actually begin.

Mr. CONGER. Sure. First on cost escalation, there are a variety of factors that drove those costs up. For the most part, the costs that increased during the last BRAC round were driven by additional requirements in military construction, whether it was because renovations turned into construction projects or new requirements were placed on the Department. One of those examples is the world class hospitals requirement. It was added during the BRAC round and literally added billions of dollars of costs to the implementation. But that said, that is not the only factor.

What the GAO did say was that it was more specific than systemic when it came to those cost escalations. You can account for the preponderance of the cost increases at a relatively small number of the recommendations.

So that said, we are hopeful—and the fact that they all happened in—the preponderance were in the transformation section of the BRAC round. We are hopeful that we can mitigate and minimize those. But it is a fair point, and we have to keep our eyes open.

One example is the IT costs. IT costs were higher than anticipated. We have learned a lesson from that, and our cost projections going forward will accommodate a larger investment in IT for these recommendations.

Senator SHAHEEN. Can I just ask you why were IT costs higher than anticipated?

Mr. CONGER. I do not have the detail at my fingertips, but I think we did not fully model the costs for IT in that environment.

Senator SHAHEEN. And so, again to the second part of the question, have you begun to estimate what implementation costs would be for another round?

Mr. CONGER. We have an estimate and we have programs within the Department's Future Years Defense Plan. For a BRAC round, if it started in 2017, it would cost \$6 billion to implement. It would cost \$2 billion in the initial years. And keep in mind that as you begin the implementation of a BRAC round and you get closures early in the round, savings would appear as well early in that BRAC round. So by about the third year, savings would outweigh costs. By the end of the 6 years, we anticipate the cumulative savings would be about a wash. It would cost about \$6 billion, but we will have already saved \$6 billion at that point in time.

This is all based on a projection of approximately a 5 percent reduction in plant replacement value. So it is not specific installations that we are looking at or anything like that.

Senator SHAHEEN. I apologize. We are about to run out of time on this vote. So I am going to have to recess the hearing for a few minutes until Senator Ayotte comes back. [Recess.]

Senator AYOTTE. Hi, everyone. We are just obviously dividing today and trying to make the most of the time before us. So I appreciate all of your patience.

I wanted to ask all of you what steps are you taking to prepare to prevent and respond to threats to personnel and facilities in light of not only the 2009 Fort Hood shooting but last year's shooting at the Washington Navy Yard and last week's shooting at Naval Station Norfolk. Obviously, our thoughts and prayers go to all those who have been affected by those incidents. But I think what it raises is this idea of insider threats and how your Services are addressing those threats.

Mr. MCGINN. Senator, thank you. That is a very important question.

Much of the information related to what not only the Department of the Navy but, indeed, the Department of Defense is doing to recognize and mitigate these threats is contained in a package that was sent to the committee the week before last when Secretary Hagel and Secretary Mabus rolled out the results of all of the investigations that have been conducted in the wake of the Navy Yard shooting. These include the judge advocate general manual investigation report that Admiral John Richardson did for the Secretary of the Navy and two reports for Secretary Hagel, one an internal report that was done under the guidance of Mr. Vickers and another one that was done by former Admiral Olson from Special Operations Command and Mr. Stockton, a former member.

In the package that was sent up is a list of all of the recommendations, and in the case of the Department of the Navy, the

actions that have been taken in terms of screening of people for clearance and access and the physical security and anti-terrorism efforts that have already been taken and will be taken in the future for the ones that have not already been implemented.

I would like to just point out that as tragic as the shooting was last week in Norfolk—and I was aboard the naval station when that happened—there was a difference in that that was not an internal threat, insider threat, but rather someone who was a proven criminal that got unauthorized access through circumstances that are being investigated now. And the results were tragic.

But I assure you this has the attention of everybody in the Department of the Navy—indeed, in talking with my colleagues in the Department of Defense and other Services, all the Services—to take actions that help us to identify threats and to mitigate them.

Senator AYOTTE. Does anyone else want to comment on that?

Ms. HAMMACK. Yes. And all the Services are working together on this and have reviewed the report and working jointly to identify actions to take.

One of the things that Honorable McGinn mentioned is identifying and deterring potential hostile actors before they have a chance to act. And one of the recommendations in the report was a continuous evaluation process of security clearances versus the current 5- to 10-year periodic reevaluation system. And so that will help ensure that potential problems are flagged and dealt with in a more timely manner.

Senator AYOTTE. I appreciate that, and I also serve on the Homeland Security Committee, and Senator Collins and Heitkamp and I have a bill that would require periodic random auditing rather than the 5- to 10-year window. And so when we look at the situation with the Navy Yard, obviously things can change pretty dramatically over a 5- to 10-year window, particularly with the history that we saw there. So I hope that the Department will consider taking a look at our legislation as a tool as well.

I agree with you that we do need to have more regular vetting of these security clearances for those who have access to our most sensitive facilities and also, most importantly, our personnel. But I think also we really have got in a position where there needs to be more regular auditing and also the contractors that we are working with. I think that is a significant issue to ensure that to the extent we are working with contractors, that they are sufficiently accountable to us. So I think that needs to be reviewed as well.

So I appreciate that all of you have a priority on that. Secretary McGinn?

Mr. MCGINN. Senator, one other thing related to your other committee's work. There was an additional report called "The 120-Day Report" that was managed by the Office of Management and Budget and Office of Personnel Management that would be very relevant to overall homeland security. It certainly affects the Department of Defense. We participated very actively in the development of that report and its recommendations.

But the point about continuous evaluation and not letting folks have clearances that just go un-reinvestigated for a long time—I think we are moving quickly beyond that.

Senator AYOTTE. Yes, and I think that the Congress will move quickly on that with you. So I appreciate that.

I wanted to ask also—I had raised in my opening statement an issue related to the Portsmouth Naval Shipyard. And that is two projects that I mentioned in the opening statement. One is the P285 barracks project that has been tentatively delayed from fiscal year 2015 to 2016 and the P309 rail project that has been delayed from 2016 to 2017.

What I am hoping, Secretary McGinn, if you can comment on these projects. I would also like to see a list of delayed projects that are for public shipyards, but obviously, if you have any comment to make on these two particular projects.

And then also on this issue of the 6 percent in MILCON funding as required by the law, the minimal capital investment plan. I wondered if the Navy—I would like an answer to the question of whether the Navy plans to comply with section 2476 of title 10 on this 6 percent issue. So if you are able to answer that, I would appreciate it.

Mr. MCGINN. On the first point about the projects, I would like to take that question for the record and give you some detailed information on that.

[The information referred to follows:]

[SUBCOMMITTEE INSERT]

Mr. MCGINN. Regarding the 6 percent, we will do our utmost in the execution year of 2015 to meet that criteria. We fully intend to comply with the requirement.

And as you know, at Portsmouth, as in all of our public shipyards, the throughput is absolutely critical to getting the kind of product out there in the fleet. You mentioned submarines in particular, but new ship construction as well, refitting. And we recognize that we cannot take too much risk too much longer in any of our infrastructure projects, but especially our shipyards and aviation depots.

Senator AYOTTE. I appreciate that and I look forward to the more detailed answer.

And my time is up, so I would like to turn it over to Senator Hirono.

Senator HIRONO. Thank you very much.

I want to start by saying that I am disappointed in the overall MILCON reductions, as I am sure all of you are, but I do understand the need to help shore up our operations and readiness accounts.

That said, Mr. McGinn, you just mentioned that you do have a concern about the MILCON cuts to our shipyards, and of course, we have Pearl Harbor in Hawaii. I hope that the risks taken on by delaying some of these projects will be mitigated as additional MILCON funds become available through other efficiencies or sources. And one of the opportunities to increase these available resources is to attain energy savings, and all of you have talked about that.

So my question to Ms. Burke is at the end of your testimony, you state that, quote, institutional change within the Department of Defense, which is the biggest energy user, is difficult, time-consuming, and not for the faint of heart. Recognizing that your office

was only established in 2010, would you say that the Department has learned from the operational energy challenges it has had to address over the last decade? And is the memory of the impact of energy price spikes, in-theater threats to fuel convoys, and other constraints placed on the Department by its energy needs being fully internalized and included in the future planning to the degree that it should be? If so, how? And can you just describe briefly what everybody is doing to make sure that energy savings is very much a part of the decisionmaking within DOD?

Ms. BURKE. Thank you, Senator Hirono. You have been a great champion of energy security. So we have appreciated your support.

One of the reasons in my written statement that I said that this kind of institutional change is so difficult is because you cannot just buy something to fix it. You have to get into the whole process of how we plan for the future and incorporate energy as a consideration.

When it comes to operational energy, the number one consideration is always going to be capability, which is what do we need in order to get the mission done. And that is where we are looking to really press for innovation and for change, is to make sure we have the energy we need and that we are using the very best options to get the mission done. So we want more range. We want more endurance. We want a lighter footprint in terms of our logistics and our supportability. And those are all things that we have seen in Iraq and Afghanistan are important both in terms of the volume of fuel we are putting on the battlefield but also the fuel at the last tactical mile where it is not a lot of volume, but it is the hardest fuel to get to the warfighter.

So our number one goal is to improve the mission and the capabilities when it comes to operational energy. We often achieve savings in the process, but it is not the number one goal. The number one goal is to support the warfighter.

So, yes, I think we have learned those lessons, but incorporating them again is not an easy prospect because you do have to get into how we conduct war games, how we conduct requirements generation, how we plan with our operational planning and with our scenario planning. So all those things are improved. All these people at the table have put a great deal of time and effort to changing the processes, and we will see a change in the demand signal for a more efficient force and a force that takes advantage of a greater range of technologies.

Senator HIRONO. For the other members of the panel, would you say that in the Army, Air Force, and the Navy that energy needs and the efficiencies that we should attain these kinds of concerns or considerations are being internalized?

Ms. HAMMACK. From the Army's standpoint, I would say yes, they are being internalized.

What is challenging to many is they see the energy costs on our installations as one of those almost uncontrollable budgets. One base that I was at last week said that their energy consumption had declined 37 percent in the last 6 years, but over the same time period, their energy costs went up 57 percent. So they are working very hard on efficiency, and that is helping to curb some of the rapid growth in energy costs. That is why we have such a focus on

renewable energy because that helps dampen some of the costs that are driven by dramatic increases in fossil fuel.

But in operational energy, that is one of the areas that our soldiers are seeing immediate returns. There is a FOB that we worked with, a forward operating base in Afghanistan, that was getting an aerial resupply every 3 days. That meant every 3 days, they had to stop fighting. They had to secure a drop zone to pick up fuel. And with energy efficiency and operational efficiency, we brought it one air drop every 10 days. That is direct impact on mission, as Secretary Burke mentioned, and that is what helps institutionalize energy measures, is that it does have a direct return to mission capability.

Senator HIRONO. Well, I would say that probably the energy costs in the installations are very obvious, and there are things that all of you are doing to decrease those costs, and you are probably doing that in partnership with the private sector. And to the extent that you are dependent on possibly the grids that are already there, you are doing work in that area also. I know that you are all nodding your heads. So I assume that all of you are doing similar kinds of things to attain energy efficiencies.

I just have a continuing concern about the ongoing commitment by the DOD because energy efficiency, I do not think, and climate change is here. There was a recent report that acknowledged climate change and the impacts on energy costs. So for all of you and particularly for Ms. Burke, how important is R&D in the energy side of things?

Ms. BURKE. Research and development and test and evaluation is a very important part of the investment that we make, and certainly my office has a specific fund that we manage for those purposes and we look at where the gaps in funding are that we can help address. So those investments are looking across the board from everything from better engine and propulsion systems technologies to better materials. We are looking at materials that reduce drag on aircraft, for example. We have test and evaluation investments for alternative fuels, which I know you are very aware of. So we have got investments in R&D across the board that are really important for our future capabilities in this area. Our Under Secretary for Acquisitions and Technology and Logistics has gone to great lengths to protect those investments.

Mr. MCGINN. Senator, we think, all of us, in three different dimensions related to energy efficiency or alternative energies. We certainly talk about the technology, and that seems to start the conversation. But equally important are partnerships, partnerships among our Services, partnerships in the Federal Government, for example, the Navy's partnership with the Department of Agriculture and Energy for our biofuels program, and especially partnerships for sure energy efficiency with the private sector, third party financing, energy savings performance contracts, utility energy savings contracts. We want to use all of these things, these partnerships to further our goals.

The last area and perhaps in some ways the most important is culture. We all have very, very aggressive programs to educate and to increase the awareness at every level, every member of the Department about energy and how it directly relates, as Ms. Burke

pointed out in her statement, to warfighting capability and operational efficiency.

Senator HIRONO. Thank you. My time is up. Thank you, Madam Chairman.

Senator SHAHEEN. Thank you.

Senator Kaine.

Senator Kaine. Thank you, Madam Chairman.

I appreciate the witnesses being here. I was coming from another hearing, and I am going to apologize because I suspect I will repeat a little bit of what might have been asked before.

And, Secretary McGinn, in particular, I want to talk about the incident at the shipyard last week. I think Senator Ayotte may have talked with you about it as well.

It was a horrible thing, this Petty Officer Mayo in Norfolk. It really rocked the community there, and I know it rocked the entire DOD world. In particular in the aftermath of the shooting last fall at the Navy Yard here, it raised a lot of questions about the particular issue, the issuance of these TWIC access permits, but more broadly, are we doing what we need to do.

So if you could address this TWIC issue and how this individual was able to get one of these identifications with a criminal record, to the extent that you can talk about details. I am sure there is an investigation that is ongoing. But then talk more generally about what you are doing to try to make sure that our installations are as secure as possible.

Mr. MCGINN. Yes, Senator, as you probably know, the Secretary of Defense and the Secretary of the Navy Mabus released the results of three investigative reports the week before last. They were precipitated by the tragedy that happened on the 16th of September here in the Washington Navy Yard. And the package that was sent to the committee includes all of those investigative reports, which have a long list of actions that have been taken or are underway to increase our security on bases, whether that is physical security, the clearances to help diminish the threat from insider threats, for example.

Last Monday, I was at Naval Base Norfolk when that tragedy occurred, and as you rightly point out, Petty Officer Mayo, the sailor who was killed, was absolutely a hero. He saved a shipmate's life.

We are looking at that with a great deal of scrutiny trying to see were there lessons learned from the Washington Navy Yard shooting that could have, should have been applied. We think that there is a significant difference in that this was an outside threat and, oh, by the way, unarmed who entered an unauthorized area and ultimately made it to the ship's quarterdeck. But we will take a strong, strong look, including the type of documentation he had, this so-called TWIC card, to help him gain access through the main gate at Naval Base Norfolk.

I will be happy to provide a more detailed response on exactly what we are doing about that type of transportation pass that allows some of our trucking agencies to get onboard.

[The information referred to follows:]

[SUBCOMMITTEE INSERT]

Senator Kaine. Secretary McGinn, I do not know if you can answer this question, and the details might have been in a press ac-

count that I missed, but has it been established whether this individual received the TWIC card prior to his criminal conviction and the card was never revoked or whether he received the TWIC card in spite of having a manslaughter conviction.

Mr. MCGINN. I do not have the answer now, but I will provide it to you, Senator.

[The information referred to follows:]

[SUBCOMMITTEE INSERT]

Senator KAINE. Thank you.

When things like this happen—when I was Governor, there was the horrific shooting at Virginia Tech and we engaged in a significant investigation, and we found all kinds of problems. Some were system problems. Some were errors in judgment. Some were funding problems. We were underfunding certain kinds of community mental health services, and that was one of the factors that led to this horrible shooting. I am sure there is a whole series of things both with the Navy Yard and perhaps with this Norfolk Naval Station incident, maybe some human error, maybe some systems improvements, maybe some funding issues.

I know this subcommittee and the Seapower Subcommittee I just came from are very, very worried about sequester going forward and how it affects everything that we do. We were able to work to find some sequester relief in 2014 and 2015 in connection with the 2-year budget. The White House and DOD has asked for a budgetary—you know, from 2016 going forward, has asked for sequester relief, not sequester elimination. And, Madam Chairman, I am kind of impressed with the fact that as they have come to us and asked us for sequester relief, they basically said we will absorb more than 50 percent of the sequester cuts over the entire length of the sequester. Give us relief so that we can eliminate about 45 percent of the sequester cuts, which seems like a very reasonable request to me, maybe a little too reasonable, but very reasonable. So you are trying to work with the will of Congress to try to deal with the deficit in this strategy.

But it is my hope that we are not—well, I frankly think we are. We are tightening the belt in ways that will come back to bite us in a lot of different ways. I do not know if security is one of those ways, but everything costs money, and if we are trying to foolishly save here or there, I just worry that we have instances like this or all kinds of other things that go wrong that would not go wrong if we were taking a more strategic approach. That is an editorial comment, not a question.

But I look forward to getting the answer about this particular instance. I was not aware that you were there on that day. You know how seriously the Hampton Roads community—

Mr. MCGINN. Yes, sir. And, Senator, I talked directly with Admiral Bill Gortney, the Commander of Fleet Forces Command; Admiral Dixon Smith, Regional Commander, and they are all extremely focused on getting every answer we possibly can related to that tragedy.

Senator KAINE. Thank you. Thank you, Mr. Secretary.

A question on R&D to follow up a little bit from Senator Hirono's questions. We have a lot of DOD R&D facilities and labs in Virginia. We have got the highway sign planted right in the heart of

Arlington. This is where DARPA first created ARPANET, which is the foundation of the Internet on which so much of the global economy now depends.

Our research capacity depends upon people, but it also depends upon having the infrastructure we need to do the R&D. Talk a little bit about R&D challenges in the DOD right now. The civilian R&D has been hit very, very hard in sequester through NIH and other civilian R&D. How much have you been able to shelter or protect the R&D priorities of the Department in this tough environment?

Ms. BURKE. Well, Senator, thanks for the question.

I can really only speak for the R&D that I have oversight of, but we certainly will take the question for the record back to our colleague, Al Shaffer, who oversees all research and engineering for the Department.

[The information referred to follows:]

[SUBCOMMITTEE INSERT]

Ms. BURKE. We are certainly aware—Mr. Conger and I—that Under Secretary Kendall has put a very high priority on protecting those investments. It is our seed corn and we have to do that.

For energy, we are seeing a consistent investment in R&D in this area. There has been some reduction, but it is consistent with the reduction in the overall budget.

So in my own funds that I manage, for R&D they have been consistent and we have been able to protect those investments. And again, those are aimed at military capabilities and some of them for the short term, for the fight. So we think they are very important investments, and we have been able to keep them consistent.

Senator KAINE. Thank you, Madam Chairman.

Senator SHAHEEN. Thank you.

Secretary McGinn, as you are sharing the reports of the Navy shooting, if you could share those with the committee, we will make sure that everybody receives them as well.

Mr. MCGINN. I will, Senator.

Senator SHAHEEN. Thank you.

Senator Donnelly.

Senator DONNELLY. Thank you, Madam Chairman, and thanks to all the witnesses.

Mr. Conger, as you look forward, how are facilities that promote the mental well-being of our servicemembers and military families being prioritized as installation funding changes?

Mr. CONGER. You are speaking specifically about the subset of health facilities that deal with mental health?

Senator DONNELLY. Yes, sir.

Mr. CONGER. In fairness, I should probably take that for the record simply because if we are talking about the construction or maintenance—I can speak to this. From a health care perspective, in the programs managed by the Defense Health Agency, we have done our best to maintain the maintenance accounts that are associated with those specific facilities. Where the Department as a whole has taken significant risk in facility maintenance, in our health facilities, we have maintained those accounts.

From a construction perspective, there have been reductions in health care, hospitals and clinics, just the same as across the board.

Senator DONNELLY. As you make MILCON and other installation management decisions, do you take the access to readily accessible mental health services into account for men and women as you make those decisions as to how easy it is to obtain those services?

Mr. CONGER. I think it is important to—let me take that for the record simply because there are so many individual processes within the Department where things are prioritized, that there is not an overarching governance that says make sure that these particular kinds of facilities get this particular amount of money.

[The information referred to follows:]

[SUBCOMMITTEE INSERT]

Senator DONNELLY. Okay.

Ms. Burke, when you work on energy plans, energy efficiency, can you tell us—and I apologize. I had to vote. I got here as quick as I could. So you may have already answered this. Can you tell us, as you look, what percentage overall of the energy used is now American energy or that it came from this country?

Ms. BURKE. Senator, the Department uses about \$20 billion a year worth of energy. Three-quarters of that is for military operations, and one-quarter of that is to support facilities.

For the facilities, which my colleagues are the experts on, we are generally on the commercial grid. So we are generally relying on civilian commercial infrastructure for that energy.

For military operations, it is almost all petroleum fuels, and we have a tactical and operational imperative to buy it as close as we can to where we operate. So about 60 percent last year, approximately 60 percent of that fuel we purchased overseas where our operations were taking place. So it really depends on where we are operating.

Senator DONNELLY. Okay. So as you move forward, what are the most cutting-edge areas you have in terms of for our own facilities and for other things, obviously, other than the imperatives of having to purchase fuel where you are when you are in military actions? For our facilities, what are some of the things we can look forward to over the next 5 years?

Ms. BURKE. I will let my colleague answer for facilities.

Mr. CONGER. So we have a research and development program specifically focused on facilities and energy efficiency, on micro-grids, on various ways of production. There is a long list of projects. I think that you will see fruition in building efficiency. Certainly we have a lot of micro-grid programs going on right now, but they are each sort of testing a different facet of the overall picture. These are research programs not necessarily designed to end up in a project.

But we do have a small amount of money in an energy test bed that we are taking technologies and programs that are pre-commercial but that have not gotten the data to sort of push them over the edge into viability where they might be able to be purchased by the entire Department. I can get you a list of what those projects are.

[The information referred to follows:]

[SUBCOMMITTEE INSERT]

Senator DONNELLY. That would be great.

Secretary McGinn, you know, I am from Indiana. We have Naval Surface Warfare Center Crane, over 3,000 Navy employees. 67 percent of them are scientists, engineers, technicians doing some of the most cutting edge work. What we were wondering is the MILCON plans as we look forward to improve the infrastructure there, if you know of those plans or if you can get to us, hey, here is the infrastructure improvement plan that we have moving forward.

Mr. MCGINN. Senator, I look forward to actually visiting Crane in about 3 weeks. I am going to go out there to your great State and visit Crane, see some of those facilities, see some of—

Senator DONNELLY. Do you need a ride from the airport, sir? [Laughter.]

Mr. MCGINN. No, sir. And I am also going to go up to Purdue University and see some of the good research they are doing on biofuels up there. But I will take a close look at what is going on and what is needed.

As you know, Crane has some really world-class capabilities in battery technology, everything from watch-sized batteries to batteries in ICBMs. So that is critical. We want to keep that viable.

Senator DONNELLY. Thank you.

Secretary Hammack, one thing in looking at how things are being done is the different standards of liability protection for hazardous waste risks at former Army facilities. For instance, in cases where they are closed by a BRAC, there is help with hazardous waste. If not a BRAC, often not. And so if the only substantive difference is how the facility was closed, how do you make those determinations and why the difference in treatment?

Ms. HAMMACK. Well, I appreciate your highlighting one of the benefits of BRAC in the base closure operations.

Senator DONNELLY. You will not have that happen too often, ma'am. [Laughter.]

Ms. HAMMACK. I want to take advantage of it for the record here, sir, and I appreciate that.

And the BRAC program does give additional protections for both base transfer and base closure and dealing with environmental liabilities. Those bases that were closed prior to that—it is difficult, if not impossible, to go backwards in giving protections once a base has been closed and already transferred. So at the time of transfer, there are terms and conditions of that transfer. There are terms and conditions that are agreed upon by all parties that we work forward on.

And I understand there is some legislation that is looking at grandfathering things backwards called “BRIC.” I have not had a chance to thoroughly review that. We will review it and take a look at it. But I think using BRAC as a closure mechanism by some of the prior year mechanisms in the early 1980s does highlight benefits to the community.

Senator DONNELLY. Thank you, Madam Chairman.

Senator SHAHEEN. Thank you.

Well, I am glad Senator Donnelly got us back to BRAC because I want to pick up on the line of questioning that we were discussing before I had to go vote.

Mr. Conger, I think one of the things you were talking about was the fact that some of the construction requirements had changed. You mentioned hospitals in particular. One of the things that the GAO has said is that DOD did not include some of those military construction requirements that were needed to implement the recommendations as envisioned and that, therefore, the additional requirements increased costs. I am paraphrasing what GAO said.

So I still want to go back to the idea of how are you improving on the ability to accurately assess what the cost of another BRAC round would be? I think I am accurately quoting your response to the GAO report where you said that, quote, I am concerned with the report's emphasis on establishing goals, measurements of effectiveness, and capacity reduction targets, because it seems to me that that is exactly what we ought to be doing as we are thinking about how we develop a proposal for another BRAC round. And so I wonder if you could enlighten me a little more——

Mr. CONGER. Sure.

Senator SHAHEEN.—on how we are looking at assessment. And I do not know, Secretary Hammack, if you have anything you want to add, feel free to do that too.

Mr. CONGER. So there are two things that I think you mentioned that I would like to touch on, and if anybody else has amplifying comments.

The reason that we are concerned about goals is because while we execute a BRAC round to save money, the individual recommendations have been premised on the idea that they are focused, first and foremost, on military value. We do not want to reduce military value through these actions. The intent is to amplify such. We specifically do not want to have a requirement set out at the beginning of a BRAC round that says you have to close this many bases. That is what I am concerned about. You do not want to get down to a point on the list of items under consideration and say, well, these are the ones that I would do if it made sense, but I really need 10 more bases to close in order to meet my targets. We do not want something like that, and that is my concern with the GAO.

Senator SHAHEEN. And that makes sense to me, but it still makes sense that there should be goals for cost savings in a BRAC round and also that those goals might include not just cost savings but also what kind of value we want to maintain for the operations that we want to continue. And I guess it is the whole metrics piece and how we model those assessments and the extent to which we are comfortable with what is in them and the accuracy of them and that Congress is also aware of how we are doing this so that we can avoid what happened in 2005 from happening again.

Mr. CONGER. So what you are asking is how do we measure the effectiveness of a BRAC round, I think.

Senator SHAHEEN. No. I am asking a little bit different question, and that is, how do we anticipate the costs and the effectiveness of a BRAC round?

Mr. CONGER. So let me talk to costs.

Senator SHAHEEN. Okay.

Mr. CONGER. I think if you look at the specific recommendations in 2005 that had the most cost associated with them, they were the actions that were characterized as transformational. And I know that word gets thrown around a lot. So let me play that out a little bit more.

If you consolidate all of the criminal investigative services at one particular location down at Quantico, that is more of a transformational thing rather than being done for the sake of savings. If you collocate the various Services' health functions in one building, that is more of a transformational looking for efficiencies and effectiveness, but not necessarily in cost savings. Those are the kinds of things that had a lot of costs associated with them but did not necessarily drive savings.

But I think there is a finer point here. If you look at the previous BRAC rounds where we were driven by closure, driven by efficiency, the MILCON requirements associated with those actions were very small. If you look at the 2005 round and you segregate the closure and efficiency actions from the transformation actions, there was a relatively small component of military construction in those efficiency recommendations, keeping in mind the fact that the entire cost is not a MILCON cost. There is O&M. You have to move people from place to place, et cetera, et cetera. There are a variety of O&M costs as well. But the MILCON costs associated with the 2005 BRAC round were an order of magnitude larger than the MILCON requirements from the previous round, and that was because of the kinds of recommendations that were put forward and accepted.

Senator SHAHEEN. Well, I think it would be helpful to this committee and probably to the full committee to have a better understanding of how you assess what you are trying to achieve through another BRAC round.

Secretary Hammack, do you want to respond?

Ms. HAMMACK. Yes, I would like to.

One of the things that we are doing European infrastructure consolidation process is looking at a very methodical process: first, determine the military value and rank the military value of each site; secondarily, look at the capacity analysis from every type of building that is located on that base, from headquarters buildings and barracks and motor pools, et cetera. Where do you have excess capacity? And then step three is do a scenario analysis. What are the various scenarios? What could you move where to consolidate, and what is that cost?

What has been done in prior rounds is a budget has been set. So as Mr. Conger spoke of, you set a \$6 billion budget, and as you are looking at all the different scenarios, you evaluate those that have the best return on investment to return the best military value to take up as much capacity as you can. And it can be a very analytical, mathematical process. Yet, military value of the locations is a priority to ensure that we are appropriately positioned.

From the Army's standpoint, if you look at BRAC 2005, the cost to the Army was \$13 billion. Of that, \$2 billion was efficiency BRAC. Of that \$2 billion, we are getting \$574 million in savings

every year, and that is about a 3.4-year return on investment. I think that is a good deal. I think that is the efficiency BRAC.

And that is what I want to see from the Army's standpoint in the next round. Give me a budget and we will do the military value. We will do the capacity analysis. We will run some scenarios and we will identify those scenarios with the best efficiency that we can return to this Nation.

And in the BRAC process, it is all with congressional oversight. So you will appoint a BRAC commission that will take a look at all the details here before it comes to Congress for a vote. I think it can be very clear. I think it can be very transparent. It can be very focused on efficiencies. And that is what we want to do, is work with you to identify the characteristics of the next round of BRAC because we need it in order to work within the budgets that this Nation is asking of us.

Senator SHAHEEN. My time is up, but I just want to get a clarification. The excess capacity analysis that you are doing now—I assume that is going to be part of the European infrastructure consolidation review.

Ms. HAMMACK. Yes, it already is. And so we have already finished our capacity analysis in Europe on a site-by-site basis, and it shows us a range of 10 to 15 percent excess capacity in Europe. We are running through the scenario analysis right now to determine what have the best return on investments.

Senator SHAHEEN. Because I think, given the request from this subcommittee and the full committee about getting that report—and I know you addressed it in your comments, Mr. Conger, but that is the kind of information that is very helpful as you are asking us to make decisions about another BRAC round.

So my time has ended. Senator Kaine?

Senator KAINE. Thank you, Madam Chairman. I am just going to follow up just for 1 minute on this same topic, kind of just really more to say what I do not necessarily like about BRAC, being a former Governor.

I can see why the DOD likes the BRAC process. I can see why it was established.

Being Lieutenant Governor and Governor during the 2005 BRAC round, my objections are not the cost savings issue. My primary objection is kind of a process one.

DOD makes budgetary recommendations to us about everything, what weapons system to buy, what weapons system not to buy, whether to have one uniform, whether to have multiple. You make recommendations to us about everything and you do not need external panels except in rare instances to make recommendations to us.

I would prefer that the base decision be like everything else and that DOD make recommendations to us. And then we kick them around up here, and as you know, we would not agree with all of them. We would probably agree with two-thirds of them, just like we do about weapons systems. Maybe 50 percent. Maybe not two-thirds.

But you are the experts in a way that we are not, and we rely on your expertise.

My observation about a BRAC process. When a BRAC process starts, every community in the country that has a military asset, whether the asset is actually in jeopardy or not, has to lawyer up and lobbyist up, and they start to spend tons of money to make this big effort to protect what they have, even communities whose assets really are not in jeopardy. And so I saw in Virginia even a community that says we do not think this is in jeopardy. There is important stuff that goes on here. But if we do not hire all the lawyers and lobbyists and make this big effort and then we end up on the short end of the stick, people will say you are a dope. You should have done this.

So I think there is an enormous wasted energy in a BRAC process for communities needing to come together and make this massive case, even when there is really no likelihood there is ultimately going to be a recommendation that would change the status of the installation.

My preference would be that the DOD come to us with recommendations about installations like they do anything else, and then we debate them and kick them around. I know you are going to bring the European consolidation study to us, and I gather that because those are external bases, those are not subject to the same requirements of congressional approval. And yet, when that report comes, if Members of Congress do not like a piece of it, they will probably put in some kind of legislation to say, yes, but do not do that one thing that you mentioned. You know, so we can always by legislation overturn a recommendation even if there is not a requirement of approval.

I would hope, as we think about the way to deal with these installation questions, I would just like the DOD to give us their professional recommendation about installations recognizing that Congress would kick them around, recognizing that local politics and everything else would create headwinds and crosswinds. But that is the same as in every other line item in the budget.

Mr. CONGER. Right. BRAC was not created for no reason. BRAC was created because before BRAC, there was a lot of politics in these decisions, and there were accusations of partisanship in which bases ended up closing, et cetera, et cetera. This enforced a process that was deliberate, that was analytical, that treated all bases equally, and set forth a way that was defensible and auditable for the Department to say, okay, these are the ones I want to keep. These are the places of highest military value, and I would like to fill those in even if it is more empty.

In an environment where we are not able to do that, then you are probably going to end up with folks looking at the places that have more capacity even if they are of higher military value. And that is a concern. You end up with actions that are more subject to litigation and especially since BRAC sort of takes the place of some of the NEPA process. And so what you will end up with is rather than less lawyering up, you will end up with far more lawyering up if you do not have BRAC.

Senator SHAHEEN. Sadly, Senator Kaine, everybody is not as reasonable as you and me. [Laughter.]

Senator KAINE. Thank you, Madam Chairman.

Senator SHAHEEN. Thank you.

Secretary Hagel, in his remarks to the press when the budget was released, said that he was mindful that Congress has not agreed to BRAC requests in the last 2 years. And I quote, if Congress continues to block these requests, even as they slash the overall budget, we will have to consider every tool at our disposal to further reduce infrastructure.

So, Mr. Conger, what tools was Secretary Hagel referring to? And what are you considering in terms of using them in the absence of any authorization for a BRAC round in 2017?

Mr. CONGER. Clearly he was listening to the Senator Kaine saying do things outside of the BRAC process. [Laughter.]

The Secretary has amplified his comments subsequent to that and noted that there is an authority that Congress provided the Department of Defense in 10 U.S.C. 2687 to review—it has a process for how one would take base closure and realignment actions independent of a BRAC round.

The Secretary has also said he would much rather do this through a BRAC process. It is apolitical. It is analytical. It is transparent. It is the preferred way of doing business, and it makes the most sense to the Department. And that is why we asked for BRAC authority.

Senator SHAHEEN. And I assume that the Department does not have an interest in getting into a back and forth with Congress over taking action that Congress has not authorized in a way that would produce a backlash in Congress.

Mr. CONGER. Of course, not. We will only use authorities that Congress has provided. Moreover, even if we are using existing authorities, the Department often has consultations with Congress in advance of actually using those authorities. The MILCON statutes are replete with examples of notification requirements where we come up and have that conversation, and if the committees advise against taking a particular action, that we accede to the will of the committee. So those kinds of things are there already.

I do not think you are witnessing a desire to sort of have a back and forth with Congress per se, but you are recognizing a degree of frustration and a recognition, as has been demonstrated by the witnesses up here, that we are paying for facilities and bases that is essentially waste. And you do not want to do that. You do not want to tax the warfighter in order to pay for facilities that you do not need and for bases that you do not need. If you have a way to save money and are able to plow that money back into readiness, we really would like to do that.

Senator SHAHEEN. And, look, I think that is the interest on the part of all of us here, but if we do not have information on which to assess what is being proposed, it is really hard. All we have is past history, and past history, at least the 2005 past history, is not a very good example of what we would want to accomplish in the future. So I am just saying to all of you the more you can provide information for us about how you assess what you are looking at in the 2017—if you are coming up with a 2017 proposal, how you get to savings, what you are trying to achieve before we get to the BRAC process, I think the better audience you are going to have for what you are trying to do.

Ms. HAMMACK. And I understand that, but the BRAC process is where we bring you those ideas. I mean, that is what the BRAC process is, and that is where we do the site-by-site capacity analysis and the site-by-site military value and put it together as part of an analytical process with the ground rules defined in the BRAC authorization.

Senator SHAHEEN. I get that, but I am not going to go home to my constituents in New Hampshire and say I have authorized something when I do not have a good idea of where I think the outcome of that might be. And I think I probably represent most of the Members of Congress when I say that.

So I understand what you are saying in terms of the BRAC process itself, but I am saying something a little bit different, and that is, I think for us to have reports like the European consolidation review as you are coming to us to say this is what we want to do is really helpful. You know, last year we heard we were going to get that before you came back with another budget request. Well, we still do not have it. So we have beaten this dead horse, I think, already. But I am just trying to convey my frustration about not having the information that I think is helpful in making a decision.

Ms. HAMMACK. But one of the things to understand that you are authorizing in the BRAC process is you are authorizing the analysis. You have to vote on the recommendations. You are authorizing the analysis.

Senator SHAHEEN. Right.

Ms. HAMMACK. And so one of the things that section 2687 that John talked about is any bases closed under 2687 would be submitted as part of a budget. You did not see any as part of the 2015 fiscal year budget, but if we do not get authorizations for a BRAC 2017, you might see some bases listed in the budget request for 2016 because at this point in time, I do not have the money to run the bases the way they should be run, and it is not appropriate due diligence on my part to continue in this manner. If I cannot run the buildings appropriately, if I cannot appropriately support soldiers, then I am going to have to do something to ensure that I am not spreading an ever-thin budget across a base that I cannot afford.

Senator SHAHEEN. Listen, I get that. And I have been opposed to the cuts from sequestration that are putting additional pressure on DOD. But as long as we have got the GAO coming back with reports that raise questions about how the BRAC rounds are being done, I think they need to be answered.

Ms. HAMMACK. But I would just say look at the prior year rounds. Look at all the prior efficiency BRACs that were duly noted as efficiency BRACs that are returning the investments stated, that did not exceed the budgets. Anytime any BRAC project exceeded budget, we came back to Congress and said this project is going to increase in cost because of the following reasons and got approval from Congress for that incremental cost. So everything was done in an open and transparent manner. And all prior BRAC rounds are delivering the expected savings. And for the Army, the efficiency savings expected from this BRAC round in 2005 are delivering savings, and those measures that were not expected to deliver savings are not.

Mr. CONGER. If I could strike a conciliatory note. Your staff has asked us a series of questions about the BRAC 2005 round, and we have done our best to get that information. I think we still have a couple extra things to provide. We will continue to provide that information.

We have actually a fairly good story here. There is a good justification, even inside of the 2005 efficiency actions that we have identified, to justify the fact that a future round can be done with a mind to efficiency, can be done with minimal cost increases. We think we can manage this process and we think there are a lot of good examples that demonstrate that.

Senator SHAHEEN. Well, we look forward to getting that information.

Senator Kaine, do you have any more?

Senator Kaine. No.

Senator SHAHEEN. I want to go the energy, now something we can all agree on hopefully. And I think one of the best stories that is untold is the work that is being done in the military to save energy and to produce new research that is going to benefit everybody in the private sector as well in terms of energy savings. So I wonder if we could explore that issue a little bit more.

And I have a specific question because my understanding is that there was some confusion around questions at the full hearing and the renewable energy projects that are valued at \$7 billion a year as part of the President's performance contracting challenge. So, Secretary Hammack, can you explain what the contractual agreement is on that direct funding? Because my understanding is that people, when the topic was raised, assumed that that \$7 billion was money that was going to be paid for through DOD's budget, and my understanding is it is actually an agreement with the private sector. So can you explain that further?

Ms. HAMMACK. Absolutely. Thank you, Senator Shaheen.

The multiple award task order for \$7 billion is what is generating questions, and that is solely focused on renewable energy. It is not an energy efficiency or performance contracting.

So awards were made under the MATOC to a total of 48 companies, of which 20 are small businesses. And so the award recipients are qualified through this process to compete for future task orders. So they did not get a contract that we are going to commit to buy anything. This was a prequalification. So it is like developing a short list of contractors. And we are going to issue task orders to bid for power purchase arrangements, and the power purchase arrangements are anywhere from 20- to 30-year contracts to buy the energy generated from renewable energy.

So if you look at the next 30 years, the Army's bill for facility energy is projected to be \$40 billion. So our objective and our mandate from Congress is 25 percent of our energy to come from renewable energy. So if you take 25 percent of \$40 billion, that gets you about \$10 billion. And so we put a contract ceiling in for \$7 billion. So when we contract to buy energy from someone, it might be a 30-year contract to buy energy at this price with this acceleration for this time period, and that is considered the value of that power purchase agreement.

So I understand that it is confusing, and I hope I have been able to clarify it, that it is not money that we are coming to you to ask for. It is money paid out of our utilities account to buy electricity.

Senator SHAHEEN. Good.

Mr. Conger, do you want to clarify that more?

Mr. CONGER. Could I amplify one point in there that is very important? As people hear about us buying renewable energy, when we do these arrangements with third party entities to develop renewable energy and bring a utility function onto our base, generally we are paying either the same amount or less, and more often than not, it is less than we would normally pay for our electric bill. So, in essence, what you are looking at represents a reduction in costs over the life of these projects.

Senator SHAHEEN. Ms. Ferguson, one of the things you talked about was the 10 percent savings—at least I think I understood you correctly—to fuel use that you were hoping to achieve in actual usage I assume mostly for flying planes. I do not know to what extent you are sharing or there is collaboration between the Air Force and the Department of the Navy in terms of the energy work that is being done by the Navy. But my understanding is that most of the development in fuel savings on the Navy side was to develop drop-in fuels that did not require any changes in engines. Is that right, Secretary McGinn?

Mr. MCGINN. Yes, it is.

Senator SHAHEEN. And is that what you are looking at? Because I understood you to say something a little different.

Ms. FERGUSON. We are actually looking at how we operate the aircraft and how we can do that more efficiently. And so one of the things we are looking at, how many tons of cargo we can move per gallon of fuel. And right now, we are doing 9.5 percent more cargo tons moved at 8.6 percent less fuel. And so we are doing this in a variety of ways.

One of the things we have done is we have updated KC-135 landing weight restriction. We have an energy analysis task force that is made up of reservists across the United States and in the AOR, and they are looking for opportunities to save money with operational efficiencies. And we save \$1.2 million annually through decreased fuel dumping. In the past, the aircraft had to have a certain amount of fuel left in their bowels before they could land, and they would dump the fuel if they had too many. Now we have adjusted that so they are able to save that and not dump that fuel. So that is one of the things that we are looking at to save.

Senator SHAHEEN. And to what extent are you collaborating with what the Navy is doing as you are looking at these efforts?

Ms. FERGUSON. All the Services collaborate together on energy initiatives under Ms. Burke's leadership through the Defense Operational Energy Review Board. We are collaborating. The three deputy assistant secretaries for energy meet together quite frequently, and so all this information is shared across all the Services.

Mr. MCGINN. We look for good ideas wherever we can find them, including with the Air Force.

[Laughter.]

Mr. MCGINN. We similarly are looking at this forward thinking about key performance parameters to buy things that are better military capability but operate with less energy.

But importantly, because our force structure that we own is where we could really make a lot of money, save a lot of money on energy, it is how we use them. For example, Ms. Ferguson mentioned load-outs of aircraft and policies that relate to how much fuel you need to have to land. We are doing similar things. We are trying to look at eliminating what we call hot refueling where a jet that lands goes through to the flight line and shuts down right away, and then we will bring a truck in which is better than sitting in what we call fuel skids or fuel pits where the engines are running and you are filling it up with fuel.

We are looking at the right balance of actual flight time and simulators to maintain the same levels of training and readiness, but to do it without as much expenditure of fuel, but always with the idea that combat readiness comes first and energy comes later. But we are making great strides. We have an air energy conservation program that we are launching this month, literally in 10 days, that is similar to what we have done with our surface ships over the past year.

Senator SHAHEEN. So, Secretary Burke, are we on track to reach the fuel savings targets that we are hoping to reach? And how are those spread out across each branch of the military? And how do you determine what those targets should be?

Ms. BURKE. Well, Senator, each of the Services has their own targets. At a departmental level, we have not set targets, and here is the reason why. This is really about operational effectiveness, and we have wanted to get that metric right. So if you say, for example, that at a departmental level, we are just going to reduce our consumption by 10 percent but then we have to go somewhere, your target is going to become irrelevant. So we have been working very hard with all the people here and lots of others in the operational community to develop logistics supportability metrics. So in other words, what you need to be able to do, what is the planning scenario or the operational plan, and do you have the energy you need, do you have the logistics you need to support that plan? And if not, it helps us put a value on the innovation or the changes in doctrine that you need to make in order to support the plan. So that is the metric that we are aiming for that will measure military effectiveness.

As for whether we are hitting the targets, yes and no. I mean, our top line goal is to make sure that our forces have what they need, wherever they are for whatever purpose.

As we look at the future, one of the ways we know we have to get there is by improving our efficiency. So we are very much in tune with your own priorities. We have to improve our performance and we have to get that volume of fuel off the battlefield.

Our analysis suggests that right now we are on track to increase our overall fuel consumption by 2025 by about 10 percent. If we continue with all the initiatives—

Senator SHAHEEN. To increase or reduce?

Ms. BURKE. Increase. Because of all the new systems coming in that have been in the pipeline for some time, they are fabulous ca-

pabilities, but they also do consume more fuel generally speaking. If all the initiatives that the people here at the table have been championing go in, we will cut that by 6 percent, but it is still an increase.

So this again points back to we have to get into the planning process and make sure that we are putting a value on what this means for us when we actually have to go to war to have this kind of energy demand. And that is where we are really putting the effort. So we should see that pay off over time, but right now, we have got a lot of things in the pipeline. So we are not where we want to be, but we are heading in the right direction and we are developing the kinds of measurements that will be meaningful in this space.

Senator SHAHEEN. So I think it was you, Secretary McGinn, who talked about changing the culture in terms of energy use. And I wonder if you could speak to that and perhaps you could also, Secretary Burke, about how we are trying to change the culture of energy use within the military.

Mr. MCGINN. To illustrate what I am talking about, Senator, all of our fleet commanders have changed the expression "save energy when you can" to "save energy unless you cannot" to just drive home that message that energy equals warfighting readiness.

And I was in Norfolk last week working with Admiral Gortney and his team of operators on our energy education and awareness event, annual event. I was out in San Diego in February doing the same thing with Admiral Harris from Pacific Fleet. And we had divisions into air, surface, subsurface, and infrastructure or installation support where they are doing nothing but swapping best practices. We are measuring a lot better than we ever have in the past in terms of individual performance. And we are trying to introduce more and more competition which is something that really has done great things in all of the military Services into this idea of getting the same or better combat readiness out of every gallon of liquid fuel or kilowatt hour of electricity.

Senator SHAHEEN. I have had the opportunity to tour the Portsmouth Naval Shipyard and see the energy savings there, and it is really very impressive, and to be part of one of your award ceremonies where you recognized various units for their savings.

Mr. MCGINN. We are very proud of Portsmouth. In fact, we want to do more. That is a case where the culture has already changed and folks are looking for even more ways to save energy.

Ms. BURKE. And, Senator, to also field the question, I would say it is two things from an OSD point of view, from the Secretary of Defense's point of view.

One is that it is not so much to change the culture, but to find the parts of the culture that you can harness this and where it makes sense for people. I will tell you a story that I think illustrates what I mean by that.

The Marine Corps, when they were first putting some of their experimental forward operating base into play where they were introducing some of these new energy efficiency and renewable energy measures, were bringing it to Twentynine Palms to marines who were in training. And the marine at the time that was in charge of this went to these guys and he said, look, you have got solar

panels on the outside of your tent, geothermal heat exchange in the floor. You have got more efficient lights, more efficient tents, and a more efficient generator. See this meter here? If you stay below that red line, you will not turn on your generator. Now, do what you got to do for your lights and your computers. If you go above the red line, that is fine, but the generator will come on. You will hear it. You will smell it, and you will also have to then get resupplied. But if you stay below that line, you will not have to get resupplied. And these marines said, you know, got it, sir, and they stayed below the line.

So they had all been deployed or most of them had, and they know what that means when they are in a forward base where they do not have to have the noise and the fumes of a generator right next to their tent. They also do not have to put a person on it to refuel it, and they are also lowering the risk to their fellow marines or to our partners in the private sector who have to bring them the fuel through a battlefield. So if you tell them what it is for and what it gets them in warfighting terms and then you give them the tools, it is in their culture to understand that.

So the challenge is really to us. Where I think as an official I see the most need for a culture change, though, is back in the building, is in the way that we run our business processes. And it is really the same challenge. The burden is on all of us to explain why this is beneficial for the mission. Once we do that, we are finding that people do incorporate these changes, but it is hard. As I said, there are no shortcuts on that. Sometimes it is one person at a time conversation. But we are all working hard on that.

Senator SHAHEEN. I did a hearing in Norfolk a couple of years ago with demonstrations of various technologies that were being implemented out in the field in Afghanistan, and I remember very clearly when I asked the Marine Colonel how people had responded to the technology, he said, well, their immediate reaction was that it was a piece of crap, but then they realized how much it improved their mission. Then they embraced it. So I think it is a great lesson.

And to what extent are we anticipating maintaining the technology and the improvements that we made and integrating that into the continued operation so that it is sustainable? Is that part of what we are planning for as well?

Ms. BURKE. Absolutely. And I think both the Marine Corps and the Army have made great strides in incorporating some of the improvements they have put into play in Afghanistan into programs of record. So that is a great step forward. But we are also all putting a lot of effort on capturing the lessons learned and making sure that we do not just document them and have a report, but that we are translating it into changes and into actual change requests. So that is a really important effort for us now. But we have also already seen the Services incorporating these changes.

I think the Army in particular has done some things in Afghanistan with an effort called Operation Dynamo. At these little outposts where it is hardest to deliver fuel, they have returned 40 to 60 percent fuel savings at times. And those are things that they are incorporating into their program of record. So the next time someone orders that kind of base, it is already incorporated.

Senator SHAHEEN. Great.

Someone mentioned—it may have been you, Secretary Hammack—ESCOs and the use of ESCOs. I wonder if, Secretary Burke, maybe you can speak to all of the branches, whether we are incorporating those opportunities to use performance contracts in what we are doing and whether there are any impediments to doing that.

Mr. CONGER. It is more of a facilities thing.

And we are. The President has an initiative that he is emphasizing performance contracts across the Federal enterprise. He had a goal of achieving \$2 billion over the past 2 years of energy savings performance contracts. And we in the Department of Defense have more than half of that goal.

Let me actually take the opportunity to brag on the Army a little bit in that they have been particularly aggressive, particularly efficient, and have set up—well, I will let Katherine talk to it in particular, but they have an innovative way that they are pursuing these.

Senator SHAHEEN. Can I also ask you, before we go to Secretary Hammack, to what extent have you had challenges with the accounting of how we phase out—how we deal with the costs of those performance contracts? And the reason I ask is because this has been an issue with Federal agencies because of the way CBO scores the ESCOs. And has that been an issue for all of you and how have you gotten around that.

Mr. CONGER. Let me defer to Katherine to start.

Ms. HAMMACK. We have not found that to be an issue to us. Right now, as John mentioned, we are doing about 25 percent of the ESPCs in the Federal Government. And it is something that we have had a very focused effort on and a focused team. But we do realize that there are upper limits to what you can do with an ESCO because it is paid for out of your utility budget. Your utility budget is something you pay every year. And it is sort of like your mortgage. I mean, if we all had cash, we would buy our house, and we know that your long-term 30-year price point is lower if you bought it all up front yourself. But an energy savings performance contract—bring in those experts to bring in the technologies and the strategies. And there is a measurement and verification process to ensure that you are achieving those savings and you pay them back out of the savings.

Senator SHAHEEN. And so is there an outline for what you are allowed to use within DOD? I am trying to figure out how CBO gets around—does not have a problem when you all using them, but they have a problem when the Department of Energy is using them or Homeland Security or somebody else.

Mr. CONGER. To best answer your question, we will probably want to take it for the record and find out what the specific issue is.

[The information referred to follows:]

[SUBCOMMITTEE INSERT]

Senator SHAHEEN. I will be happy to do that.

Mr. MCGINN. Senator, I would just like to add that we have implemented an energy return on investment model that we are working with the ESCOs. We are saying, look, here are the criteria

that we are using to decide the terms and conditions of an energy savings performance contract. We are educating them so that they can aim at meeting those criteria when they make proposals. But also we are asking them what is wrong about this model? Are there other things that we should be considering that you have learned from your business case analysis in private sector transactions similar with a university, municipality, or a light industrial park where they have brought their considerable technological and financial wherewithal to bear to reduce those energy costs? So we are finding that this dialogue with the ESCOs is absolutely essential to meeting those goals and really exceeding them.

Senator SHAHEEN. I am a big proponent, having seen it work as Governor when we did buildings in New Hampshire. So I think it is a great way to provide savings and something that I think we ought to be doing across the Federal Government and trying to figure out why CBO is viewing this in a different way when it comes to other Federal agencies.

Can I just ask—in terms of performance incentives, it is my understanding, Secretary McGinn, that you have presented an award to some folks for actual savings and that that helps to incentivize crews. For example, I was given the example of the USS *Peleliu* that saved \$5.3 million in fuel compared to ships in the same class. Can you talk about how incentivizing that comparison is helpful?

Mr. MCGINN. I mentioned earlier that I had been in Norfolk last week and I was in San Diego in February with the fleet commanders and their chains of command to present awards like the one to the *Peleliu* where we actually recognized a whole variety of different types of ships, some with cash awards, the absolute best performers with cash awards. The only stipulation is that cash has to be used for increasing their energy savings, energy efficiency. And also we recognized them with certificates—individual commanding officers, senior enlisted folks—to illustrate the point that we really value the kinds of practices that these ships have used to achieve those energy savings. We do this in a formal way on an annual basis for all of our fleet concentration areas, but it is an ongoing process with the fleets to make sure that everybody gets it and they are availing themselves of the lessons learned.

Senator SHAHEEN. And how do we codify the goals for energy savings in a way that means that they continue, if leadership changes or if there are other issues that come up, so that we can continue to produce these kinds of savings?

Mr. MCGINN. At the highest levels in our precepts that are assigned for selection for various promotion boards, Secretary Mabus has put in this precepts energy and energy awareness, energy savings as one of the criteria that should be considered by the promotion board. It is discussed in fitness reports and evaluations. So in every way possible, we are emphasizing this idea that we are all about warfighting readiness. There is a bright connection, inextricable connection, between warfighting readiness and energy. Therefore, if you want to be a warfighter, you have to be an energy warfighter as well.

Senator SHAHEEN. And are the Army and Air Force doing similar kinds of efforts to codify the goals into what you are doing in the future?

Ms. HAMMACK. Yes. The Army just updated our officer evaluation reports and we have a similar kind of metrics in it.

But one of the things we have also done is every month we issue a report and it shows who the largest energy consumers are and the percent change. And we have found that showing where you stack up on the chart is one method of promoting efficiencies, and you do not want to be the one who is biggest consumer with the highest growth rate.

Ms. FERGUSON. And I would say the Air Force does this a lot through our Air Force governance process for energy, and that is overseen by the Voice Chief of Staff of the Air Force and the Under Secretary of the Air Force, so at the highest levels. Each one of the major commands sits on that, and we track each one of the metrics, whether it is the industrial energy, facilities energy, or operational energy.

To get back to the earlier question, we also do provide some financial awards, particularly Air Mobility Command, to both individuals and units for saving fuel, operational fuel.

And to brag just a little bit on the Air Force, we have won 21 Federal energy management level awards since 2010. So a lot of Air Force folks have been recognized at a national level for the good work they have done in energy initiatives.

Senator SHAHEEN. And so what have you found to be most effective in terms of encouraging energy savings? Has it been the cash awards? Has it been the comparison to how you stack up against other units or other operations? What is the most effective?

Ms. FERGUSON. I do not know if I could say what the most effective is, but I think all of them have great benefits. And I think the folks like to get recognized for the great work that they are doing no matter how we do it.

Mr. MCGINN. I would say probably competition, that professional pride in your unit and your individual performance that is a real driver. The cash awards are nice, but they are not as important as that professional pride and competition.

Ms. HAMMACK. I will echo the competition. The competition seems to be one of the biggest drivers. You want to be a winner, and so highlighting those who are winners and showing where you rack and stack can help motivate individuals.

Senator SHAHEEN. Well, thank you all very much. I have no further questions.

We will leave the record open until close of business on Friday. The hearing is adjourned.

[Whereupon, at 11:39 a.m., the subcommittee adjourned.]