

House Armed Services Subcommittee on Strategic Forces Holds Hearing on the Proposed Defense Authorization Budget Request for Fiscal 2012 and Future Years for Missile Defense Programs

[LIST OF PANEL MEMBERS AND WITNESSES](#)

TURNER:

I call to order the meeting of the subcommittee. I would like to extend a warm welcome to our four distinguished witnesses here today to discuss the fiscal year 2012 budget request for missile defense programs -- Dr. Bradley Roberts, Deputy Assistant Secretary of Defense for Nuclear and Missile Defense Policy; Lieutenant General Patrick O'Reilly, Director of the Missile Defense Agency; and Dr. David Ahern, Deputy Assistant Secretary of Defense for Portfolio Systems Acquisition; Dr. Michael Gilmore, Director of Operational Test and Evaluation.

Members have several issues that they want to address, and we have votes that are actually pending. So I'm hopeful that we can get through my big statement and the statement of the witnesses before we actually depart for votes and then perhaps we can return for the questioning portion.

First, I am deeply concerned about the Ground-based Midcourse Defense system in Alaska and California -- GMD. The back-to-back flight test failures this past year raise doubts about the reliability and effectiveness of this capability. I had the opportunity to talk with General O'Reilly yesterday. I appreciate his efforts to establish a rigorous failure review and mitigation process. However, I question the administration's long-term commitment to getting it right.

While I understand there are some changes to the program this year, I have also observed the funding for GMD plummet over the past few years. In fiscal year 2010, the President's budget request slashed it by \$445 million. Last year, we saw a restoration of some funds, but then again this year, the program is cut by \$185 million.

Furthermore, the outyear spending profile for GMD is \$1 billion less than was projected a year ago. With these levels of cuts, it is clear that something will be broke or something won't get done. I worry that these test failures may be a harbinger of further setbacks if we don't make GMD a priority and devote the resources necessary to make it right.

After all, what is at stake? GMD is currently the only missile defense system that protects the United States homeland from long- range ballistic missile attacks. We have to get it right. Surely, I know you are committed to that.

Second, a year ago, I was highly critical of the administration for the lack of information it was providing to Congress on the Phased Adaptive Approach for missile defense in Europe.

In the past several months, we have seen significant improvement in engagement with our committee, and I want to commend our witnesses for that.

Last month while in Brussels, I had the opportunity to meet with Admiral Stavridis and other NATO and European Command officials to discuss progress in PAA implementation. I've also met with NATO parliamentarians and was pleased to see how far the missile defense discussion in Europe had advanced from just three years ago.

No doubt, there is significant work ahead that I would ask our witnesses to discuss today.

On the policy front, a near-term decision must be made on where to locate a forward-based X-band radar. Charting a path forward with Russia while also protecting our interests will continue to be challenging.

On the programmatic front, there is a substantial amount of development and testing required to ensure new systems and technologies planned for PAA are proven. There are still considerable technology risks reduction activities that must be accomplished in this -- excuse me -- technology risk reduction activities that must be accomplished in the Standard Missile SM-3 Block 2-A and Block 2-B programs; both of which are key to protecting Europe and the United States.

Some of us also remain concerned about the department's hedging strategy for defense of the homeland in case the long-range threat comes earlier or technical issues arise in the development of a new SM-3 interceptor. I came away from our PAA hearing last December believing that the department's hedging strategy was hollow. Since then, I understand the department has worked in earnest to develop the strategy, and I hope our witnesses can discuss some of this.

Third, the budget request contains approximately \$400 million in 2012 and another \$400 million in 2013 for the Medium Extended Area Defense System, MEADS, a joint U.S., German and Italian missile defense system that the department does not plan to continue beyond design and development due to cost and schedule overruns.

I understand the government's contract termination obligations, but spending \$800 million -- in this budget environment -- on a program that is not going forward into production doesn't make a whole lot of sense. These resources could be better spent on other missile defense priorities. And is the department looking at options to lower this liability?

Fourth, we need to continue to invest in innovative science and technology. Last year, our committee expressed bipartisan concern that the budget request for Directed Energy Research appeared insufficient to maintain the Airborne Laser Testbed aircraft, conduct flight experiments, and fund technology maturation of innovative directed energy concepts.

This year, the budget request is less than last year's, which only heightens my concern that MDA, and the scientists and engineers it leverages, lack the resources to make major advancements in this technology area.

On a final note, I would like to thank Dr. Roberts and General O'Reilly for their participation in the committee's 101 briefings. These sessions have provided members with a greater

understanding of the complex issues and programs that are within our subject matter jurisdiction of the subcommittee, and ultimately, they improve our ability to do effective oversight.

I want to thank you again, each of our witnesses, for their service and for being with us today, and I look forward to your testimony.

With that, I turn to my ranking member, Ms. Sanchez, for any opening comments that she might have.

SANCHEZ:

Thank you, Chairman Turner. I'd like to, once again, welcome everybody, Dr. Gilmore, Mr. Ahern, Dr. Roberts, General O'Reilly, thanks for being before us again today.

I'm interested in hearing about how the budget request support plans to strengthen the hedge for homeland defense. Beyond the deployed interceptors that we have in California and Alaska, including plans at Fort Greely to moth ball Missile Field One and adding a hedge of eight available silos at Missile Field Two, and also the upgrades to the Clear Radar, plans to locate and interceptor communication system on the East Coast, and preparations for Phase 4 of the Phased Adaptive Approach.

I know that General O'Reilly, we've spoken several times this week, and I hope that the committee will get a good sense of where you all are with respect to these things I just mentioned.

I also look forward to hearing about the implementation of the PAA this year and about preparations as we move beyond Phase 1. I know you said we were on track, but maybe we can get a little bit more information on that. And I'd like to specifically address three important issues -- first, the cost.

The Ballistic Missile Defense Review stated that continued capabilities must be sustainable over the long-term. And in the context of the current budget environment, I'd like to hear more about savings in management improvements resulting from efficiencies and also what the plans are for the most efficiently closing out needs program without wasting, what I believe is nearly about a billion dollars of taxpayer money if I read the report correctly.

And second, on testing, BMDR made the commitment that before new capabilities are deployed, they must undergo testing that enables assessment under realistic condition. So I'd like to hear about how the budget request supports effective testing to help us achieve mature and reliable technologies including plans in the integrated master test plan for operational realistic testing.

And third, I'd like to thank the administration for strengthening the international cooperation with our allies. I know that Chairman Turner was out in Europe this past week. I didn't have an opportunity to go. And -- but I did have good reports back, and I heard that especially our NATO allies were all on board and happy with the PAA and the process that we're going through.

And beyond cooperation with NATO, and Israel, and Japan and other allies, I'm pleased that we continue to keep informed on plans as you work through with some of issues and try to engage Russia on missile defense. So preserving strategic stability is essential to U.S. in international security as we develop a defense against the threats from Iran and North Korea, in particular. And I am open to hearing what you all have to say, and I'm sure our committee has many questions. So thank you again for being before us.

TURNER:

We will now ask each of our witnesses to summarize the written statement in about a five-minute oral statement.

Dr. Roberts, the floor is yours.

ROBERTS:

Thank you, Chairman Turner, Ranking Member Sanchez, and additional members of the subcommittee. Thank you also for the opportunity to participate in the BMD 101 sessions. We also found that helpful from our perspective in terms of reaching out to you and creating a common foundation of information.

My written statement begins with a review of the scope, findings, and conclusions of the Ballistic Missile Defense Review issued now a year ago. I won't repeat these here.

Clearly, over the last year, our focus has shifted from policy development to policy implementation. And in our dialogue with you, four issues have emerged and I'd like to touch briefly on each of those in turn.

The first issue relates to the commitment in the Missile Defense Review to continue to closely monitor developments in the threat and to assess our priorities in light of new information. And although the unclassified nature of this hearing constrains our discussion of this particular topic, it's clear we've had a lot of new information over the last year that confirms the basic intelligence community finding that the threat is continuing to develop both quantitatively and qualitatively, and it has reinforced our principal conclusion that we need a balanced approach that continues to improve the defense of the homeland while, at the same time, accelerating regional protection.

The second main topic of continuing discussion between us has been about defense of the homeland. The Ballistic Missile Defense Review expressed two principle commitments. The first, to continue to improve the GMD system in order to ensure that we maintain our, quote, "currently advantageous position vis-a-vis the threats that might emerge from states like North Korea and Iran to conduct limited strikes on the United States.

And our second commitment was to be well-hedged against the possibility that those threats might emerge in a way and with a speed quantitatively and qualitatively that require some significant shift in our posture.

All of us today have provided testimony with details about the commitments that we're making in support of strengthening, continuing to improve the GMD system. We have a lot of ongoing activity in this area and some additional initiatives beginning this year that we proposed.

In our conclusion as to the cumulative effect of these commitments is to ensure that we will maintain the advantageous position we have vis-a-vis first-generation threats.

The hedge, we've also made a commitment to as you know not just something we might do in the future but something we're doing now. We committed to the additional silos -- both the completion of Missile Field Two and the moth balling rather than decommissioning of the residual capabilities in Missile Field One. And this puts us in a position to increase by 50 percent if we are to choose to do so the number of deployed GBIs in light of additional threat information.

We're also committed to assess and detail this basic hedge posture and to bring additional information forward. I believe you met with Dr. Jim Miller a month ago, and he expressed our commitment to bring to you as soon as we've done to the secretary additional information in this area.

The third continuing topic of discussion between this has been about implementation of the Phased Adaptive Approach and the Ballistic Missile Defense Review, of course, expressed this is a global approach meaning an approach that will be pursued in each region. We elaborated in detail the review of the approach to Europe.

And, as you know, the progress in the interim year has been, we think, strong with both a ramp up in the investments in the needed capabilities and working politically with our partners whether multilaterally in NATO or bilaterally in the other regions to strengthen our postures.

The fourth issue I'd like to touch briefly is the commitment expressed in the Ballistic Missile Defense Review to strengthen international cooperation. And this is a global intent and one that we're realizing through our collaborations with our allies and partners in Europe, East Asia, and the Middle East but, of course, the sensitive and important question today is about cooperation with Russia.

We believe in the potential benefits for our national security, for the national security of our NATO allies, and also for Russia of cooperation in this area. We're mindful that there are many challenges associated with this objective. We reject cooperation that would, in any way, limit our defenses. And you've heard the President say that NATO will defend NATO, Russia will defend Russia, and we will try and reinforce each other's defenses cooperatively.

We will not compromise the central technologies. There is no discussion on providing hit-to-kill technology as a part of our cooperative activities with Russia.

We've made clear that cooperation will require successful conclusion of a defense technology cooperation agreement as originally proposed and pursued by the Bush administration. And of course, we are mindful of the fact that any classified information that might be discussed with Russia or any other international partner is subject to national disclosure policy.

As you know, we're pursuing two primary pathways of cooperation with Russia -- the first bilaterally and the second, in the NATO context. Bilaterally, our principal focus is on joint analysis in order to better understand what capabilities we might bring to the table at this time. And clearly, from Russia's perspective, their -- what they bring to the table at this time is only sensitive information. And we're looking also bilaterally at them this -- what might be possible on the way of exchanging data without compromising its integrity.

In NATO context, we are working to explore the possibility of a cooperative system for the common defense of the European space. We've resumed our Theatre Missile Defense Cooperation with Russia that had been pursued under the Bush administration, and we're also developing a joint analysis process there to support the NATO process.

So that's a quick review of our four key areas, I think, of continuing dialogue with the committee. And I look forward to answering your questions.

TURNER:

General O'Reilly?

O'REILLY:

Good afternoon, Chairman Turner, Ranking Member Sanchez, other distinguished members of the subcommittee. I appreciate the opportunity to testify before you today on the Missile Defense Agency's \$8.6 billion fiscal year 2012 budget request. We continue to enhance today's Ballistic Missile Defense System, which is capable of protecting our homeland from limited ICBM attacks, to countering the growing proliferation of increasingly capable ballistic missiles that threaten our deployed Armed Forces, allies, and friends.

By the end of 2012, we plan to complete the initial fielding of the Ground-based Midcourse Defense system or GMD for homeland defense, deliver the first Theatre High Altitude Area Defense or THAAD units to the Army, and test the next-generation of Aegis missile for the Navy for regional defense. Our objective is by the end of this decade to enhance our current initial capabilities to achieve very robust missile defense against all ranges of threat missiles.

Like the rest of the Department of Defense, our FY12 budget request was based on the assumption of approval of the FY11 President's budget request. However, the impact of operating under a continuing resolution at the FY10 level is significant for the Missile Defense Agency since our FY11 request was \$486 million more than our FY10 budget, including a \$324 million increase for homeland defense.

We have had significant accomplishments over the last year, including conducting eight out of eight planned flight tests with 13 successful target flights, the first flight of a two-stage ground-based interceptor, the third successful missile intercept by the Japanese Aegis program, a successful low altitude intercept by the THAAD system. We started production of the THAAD Batteries 3 and 4, and we emplaced the 30th GBI, upgraded two additional GBIs, completed the upgrade of the Early Warning Radar in Thule, Greenland to a missile defense radar, converted two Aegis ships, thus, increasing our fleet to 20 operationally configured Ballistic Missile Defense ships.

We delivered 25 SM-3 IA interceptors and demonstrated the ability for two Space Tracking and Surveillance satellites to provide high- fidelity missile tracks. And with our Airborne Laser Test Bed, we destroyed two boosting missiles in flight.

We have demonstrated interoperability with the NATO Active Layered Theater Ballistic Missile Defense system on multiple locations, and we supported Israel's successful intercept of a separating threat missile off the coast of California earlier this month.

Today, MDA's top priority is to confirm the root cause of the recent GBI flight test failure, verify the resolution of the problem and successfully repeat the previous flight test. While the Failure Review Board has only produced preliminary results, it is clear more ground testing and additional non-intercept flight test of an upgraded GBI Exo-atmospheric Kill Vehicle or EKV will be required before the next intercept.

For FY12, we're requesting funding for the completion of the construction of the Ground-based Midcourse Defense Missile Field Two, a second fire control node at Fort Greely, Alaska; a construction of a missile communication system on the East Coast of the United States, placing Missile Field One at Fort Greely in a storage mode for possible upgrade for operational use in the future, procuring five new ground-based interceptors, upgrading existing ground-based interceptors, and upgrading the Early Warning Radar in Clear, Alaska.

Today, 30 operational GBIs protect the United States against a medium ICBM raid size launched from current regional threats. We closely monitor intelligence assessments with the intelligence community. And if this capability is deemed to be insufficient, we are developing options to increase the capacity of operational GBIs and accelerate the delivery of new sensors and interceptor capabilities. The department is committed to brief Congress soon on our hedge strategy to mitigate against uncertainties and threat estimates.

Our execution of the European Phased Adaptive Approach is on track for meeting the timelines outlined by the President in September 2009. For Phase 1, our initial capability against short, medium, and intermediate range threats in Europe, our first Aegis ballistic missile ship deployment, the USS Monterey is on station. The latest command and control system upgrades are being installed in the European command. And the AN/TPY-2 forward-based radar will be available in August for deployment by the end of this year.

Finally, a major test verifying the readiness of the EPAA Phase 1 against an intermediate range ballistic missile will be conducted next month in the Pacific.

For Phase 2, our enhanced capability against medium-range ballistic missiles by 2015, the first flight test of the next- generation Aegis missile interceptor, the SM-3 IB will occur this summer and the associated upgrade to the Aegis Fire Control System is on track for certification by the Navy in 2012.

The design of the adaptation of the Aegis system for land-basing called Aegis Ashore began last summer with manufacturing beginning in FY12. The Aegis Ashore site will be installed in Hawaii in 2013 and flight tested in 2014. And installation of the second Aegis Ashore system in Romania is also on track to occur in 2014, for full operation by 2015.

For Phase 3 of our enhanced capability against intermediate range ballistic missiles by 2018, the SM-3 Block 2A interceptor is completing its preliminary design this year in support of flight testing in 2015 and deployment in 2018. The airborne infrared sensor for early missile tracking will begin flight testing of the next- generation sensor in 2012 and is on track for deployment of a missile defense sensor pod that could attach to any aircraft by 2016.

Due to the FY11 continuing resolution, the first flight of the Precision Tracking Space System satellite has now been delayed to 2016 and six more satellites though would then be on schedule for placement on orbit by 2018.

For Phase 4 or medium and intermediate range and ICBM early intercept capability in Europe by 2020, we have completed the government system studies and will award interceptor contract -- interceptor concept design contracts to three industry teams within the next week.

Even though the SM-3 2B requirements are less stringent than on other missile defense interceptors and we are allocating more time to develop the SM-3 2B than the average time it is taking to develop other similar missile defense interceptors in order to ensure low development risk. While not necessary for the defense of the United States against limited attacks by early generation ICBMs, the SM-3 2B will greatly reduce the cost of homeland defense and will be effective against larger raid sizes of more sophisticated ICBMs from today's regional missile threats.

We are pursuing advanced technologies for applications beyond PAA Phase 4 such as our partnership at Lawrence Livermore National Laboratory to developing new laser technologies, which offer great potential for high efficiency, compact and light-weight high energy lasers for a variety of missions of interest to the Missile Defense Agency and the Department of Defense.

Finally, the Missile Defense Agency also continues to engage in missile defense projects, studies, and analysis with over 40 countries.

In conclusion, our FY12 budget funds the deployment of the initial missile defense capability and the creation of an international network of integrated ballistic missile defense capabilities that are flexible, survivable, affordable and tolerant of uncertainties of intelligence estimates of both nation-state and extremist ballistic missile, non-nation-state extremist ballistic missile threats.

Thank you, Mr. Chairman, and I look forward to answering the committee's questions.

TURNER:

Thank you, General. I believe our witnesses are aware that the votes have been called, so at this point we'll stand in recess, and we'll return after votes.

(RECESS)

TURNER:

I call the committee back together. Mr. Ahern?

AHERN:

Mr. Chairman, Ranking Member Sanchez, members of the committee, thank you for the opportunity to appear before you today. I want to begin by addressing the department's recent decision regarding MEADS.

Beginning in the 1990s, MEADS is a ground-based air and terminal ballistic missile defense capability that would replace existing Patriot systems in the U.S. and Germany, and the Nike Hercules system in Italy.

In 2004, the MEADS partner nations -- Germany, Italy, and United States -- signed a Memorandum of Understanding for a cooperative design and development or D&D phase that anticipated readiness for production beginning in 110 months or about 2014.

However, the NATO MEADS Management Agency program restructure proposal presented to the Board of Directors in November 2010 indicated that MEADS D&D would require 30 additional months beyond the original 110-month plan. Further, it would require nearly a billion dollar more U.S. investment during fiscal year 2012 to 2017 and production would not begin earlier than 2018 with the first U.S. fielding around 2020.

As we build the fiscal 2012 budget, the department is fully cognizant of the NAMEADSMA updated estimates for cost and schedule, and we're also informed by an independent cost estimate of a D&D phase by the department's Cost Assessment and Performance Evaluation Office.

With those estimates on hand, the U.S. considered three potential course of action -- terminate immediately, continue development within the funding limits set by the MOU that entered into force, and complete the planned D&D phase by adding additional funding and allowing additional time.

The department has decided that best course of action is to continue the D&D phase up to the previously agreed MOU cost ceiling. However, the U.S. will not pursue procurement and production in MEADS. The department believes the implementation of a proof of concept program using the remaining D&D funds incurred by the three nations is the best option for the following reasons.

Funding MEADS up to the existing MOU ceiling enables all partners to harvest technology from the large investment made to date. The U.S. cannot afford to purchase MEADS and make required upgrades to Patriot concurrently over the next two decades. The U.S. can achieve some of the capabilities that MEADS provides using existing assets.

Our air and missile defense portfolio is based on integrating and fielding a diverse set of elements to provide expanded coverage against a wide range of threats. So while we accept some risk due to MEADS decision, the U.S. is still able to achieve some of the capabilities that MEADS wants to provide.

The U.S. remains concerned with the overall track record of the program. The proof of concept effort will use the remaining D&D MOU funding in 2011 to 2013 to complete prototypes, demonstrate and document the capabilities of major system elements, and complete limited system integration. This work would allow Germany and Italy to continue MEADS development and production efforts after the current MOU funding is expended if they so desire. The same options would be available to the United States should U.S. air defense plans change.

While the MEADS program of record performance might ordinarily make it a candidate for cancellation, terminating the program now just after successful completion of a MEADS Critical Design Review would force the nations -- would force the nations to devote significant funding to contractor termination costs instead of using this funding to bring MEADS development to a viable level of maturity.

Turning now to the Missile Defense Executive Board, I testified before this subcommittee two years ago describing the board structure, operation, and activities. The MDEB was established in 2007 to recommend and oversee implementation of strategic policies and plans, program priorities, and investment options to protect our nation and its allies from missile attack.

The USD(AT&L) has maintained the MDEB's structure and operation in essentially the same form since its inception. A notable MDEB achievement has been the creation of a Life cycle Management Process. It has had a significant impact on the preparation and execution of MDA's plans and budgets.

The LCMP provided for the participation of the MDA, the Office of the Secretary of Defense, STRATCOM, other combatant commanders, the JCS and the Military Departments in an annual process to identify capability and support requirements, balance resources and technical capabilities, and prepare a BMDS program and budget.

For the last two years, the department has executed the LCMP -- has executed the LCMP to derive comprehensive department involvement and influence on the MDA's plans and budgets. A

key element, which provides the foundation for the LCMP is an input derived from the Strategic Command's Warfighter Improvement -- Warfighter Involvement Process. An output of this process is a Missile Defense Prioritized Capability List that documents operator capability requests and is reviewed and endorsed by the MDEB. The MDA provides a formal response which in turn facilitates MDEB assessment of MDA program plans against desired capabilities.

Recent MDEB activities included reviews of FY2012 MDA budget request, evaluation of Operation and Support funding responsibilities, force structure recommendations such as an addition of TPY-2 radar to the BMDS acquisition planning.

One oversight focus area is the department's assessment of BMDS element's maturity for production and Lead Service operation. The department's current criteria for missile defense element production include an assessment of the depth and breadth of preparation including performance against -- validated by testing results; funding to support the program plans; and an executable plan for operation and support.

MDA, in conjunction with the designated Lead Military Department makes the recommendation for a production decision. The USD(AT&L) is responsible for the review and decision.

The department is ensuring proper management and oversight of this complex portfolio through its effective utilization of the MDEB. We are taking prudent steps to transition individual elements to Lead Military Departments at the appropriate time for operation and support. In that regard, the MDEB just agreed to guidelines for MDA and the military departments regarding funding responsibilities for BMDS elements development, operation, and support.

Continued cooperation between the MDA, OSD, the military departments, the joint staff and COCOMs are critical to long-term success of the BMDS.

I'm grateful to the members of this committee for your support and the Defense Department's missile defense programs and look forward to your questions.

TURNER:

Thank you.

Mr. Gilmore?

GILMORE:

Mr. Chairman, Ranking Member Sanchez, members of the committee...

(UNKNOWN)

You need to...

GILMORE:

I'm sorry.

Mr. Chairman, Ranking Member Sanchez, members of the committee, I'll very briefly summarize my written statement. In my view, General O'Reilly has brought outstanding rigor to missile defense testing through his implementation of the Integrated Master Test Plan or IMTP.

My office and I, myself, are substantially involved throughout the six-month development and review process that the General is using to develop and update the IMTP.

The IMTP remains focused on conducting a live testing needed to demonstrate Ballistic Missile Defense System performance under selected critical engagement conditions and to conduct -- and to collect the other empirical data required to rigorously accredit the models and simulations that will be used to assess the system's performance against the broad range of scenarios that could be encountered in real world operations.

And so another benefit here that the General has brought to his approach to missile defense testing is to tie the testing very rigorously and tightly to the development of the models and simulations into their rigorous accreditation.

The IMTP now includes operational testing of the Ballistic Missile Defense System and the first such test is now scheduled for the fourth quarter of FY12, and it will demonstrate, among other capabilities, layered defense, shot coordination, and mitigation of a small raid. Those are all important capabilities they demonstrate.

General O'Reilly has summarized a testing that's occurred over the past year and that is planned in the near-term. And as he mentioned, there were two unsuccessful intercepts conducted using the ground-based interceptors of the Ground-based Midcourse Defense system equipped with capability enhancement to kill vehicles. Each of those tests failed -- each of those intercepts failed for different reasons. And the reason for the failure of the second intercept remains under investigation.

I think it's inevitable that the rigorous test regime General O'Reilly is executing will inevitably result in such failures. And those failures although they may be perceived negatively also provide information that's absolutely critical to assuring that the missile defense system will actually work if it's ever needed. The failures also demonstrate why live fire testing of the system, with all the complexity and expense that it entails is absolutely necessary.

The testing conducted during the past year has provided valuable information although because of the unsuccessful intercepts are not quite as much as we had hoped for, for example, there were supposed to be intercepts conducted against target complexes including associated objects in the intercepts that failed.

And although we've gotten additional very useful information, in my annual report, I have not changed my assessment this year as well as the last year in terms of demonstrating capability of the Ballistic Missile Defense System. I used a six-point scale to do that, ranging from one where our capabilities are estimated using engineering analysis and laboratory testing, to six where our capabilities are verified across the full range of scenarios and conditions possible and real-world operations using a combination of rigorous flight testing and rigorously accredited ground testing models and simulations -- so one to six scale.

On that scale, Patriot has demonstrated level six against short- range ballistic missiles. That is not to say that Patriot meets all of its requirements but it has been rigorously tested across a broad range of conditions and scenarios.

Aegis with the so-called build 3.6.1 is I assess at level five against short-range ballistic missiles in the lower end of the range capable of medium range ballistic missiles. I assess Aegis 3.6.1 at level four against the upper end of the range possible for medium range ballistic missiles and the lower end of intermediate range ballistic missiles because it is yet to actually be tested against such threats.

Although as General O'Reilly pointed out, next month, we will conduct a test against an IRBM at 3,700 kilometers range. That will incorporate a queue from a forward-based AN/TPY-2 radar and possibly launch on remote of the Aegis interceptor, and those are all important capabilities to demonstrate and support implementation of the Phased Adaptive Approach Phase 1 for the defense of Europe.

I assess that at level four against short-range ballistic missiles and that's because it's been tested only against simple short-range ballistic missiles and the limitations on testing of that up to that - - up to this point are in part due to the target failures that occurred last year, otherwise, we would have tested against if the target that failed to ignite upon launch from the C17, if that have not failed, we have been able to do a test against the more complex ICRM. But so far, we've only tested against simple short- range ballistic missiles and have not tested other advanced capabilities with that. And it's a level three against medium-range ballistic missiles because it hasn't yet been tested against those.

And then finally, I assess the Ground-based Midcourse Defense system at level three because it's been tested only against IRBMs. The first ICRM test is now scheduled for the fourth quarter of fiscal '17 in simple threat presentations with no silos, no simultaneous engagements and many of the models are not accredited.

Thank you. That concludes my remarks.

TURNER:

Thank you. Well, we have very good attendance in this meeting today. I know members have a great deal of questions. So I'm going to start my trying to combine several questions that I have.

And then, General O'Reilly, I'm going to start with a series of them that relate to GMD.

We -- there was acknowledgement in -- with my comments and yours of the two GMD flight tests that failed to achieve intercept. It is only -- it is our only missile defense system that protects U.S. homeland from long-range ballistic missiles attacks as you acknowledge them. And certainly, we all believe we have to get this right.

Also, in looking at the issue of acquisition, MDA plans to acquire total of 52 GBIs to support the systems availability and reliability until 2032. Of these 32 GBIs, 30 are operational in Alaska and California and 16 are designated for flight tests from FY10 through FY20. This leaves only six GBIs available for spares and testing in 2020 through 2032. Already two of these six pairs may be consumed to compensate the failed flight tests in 2010.

Then also the GMD program has, as I said in my opening comments, seen sizable budget cuts in the past three years in FY10. It was reduced by \$525 million. FY11 request to restore \$300 million of this. But under the current continuing resolution, MDA is spending \$291 million less than it anticipated in FY11.

The FY12 budget request further reduces the GMD program by \$185 million. Also, a few changes to the GMD program are reflected in this year's budget request to include a decision to moth ball on Missile Field in Alaska instead of decommissioning it and beginning a preliminary design work to locate an interceptor communication terminal at the East Coast side by 2015.

So combining those, would you please speak the issue of the failures and its impact on the GMD program, your acquisition pace, and the issues that we might need to address there for adequacy, the reductions in funding and their effect overall on the program at the same time that it's having these challenges from the failures? And if you'd also address the issues of the changes resulting in the status for Missile Field One.

Thank you, General.

O'REILLY:

Thank you, sir.

First of all, for the failure of the GMD system, we have two versions of the GMD missile. The first version is called Capability Enhancement Number 1, and it's the kill vehicle that has performed five times on flight. It's done very well -- three intercept attempts and it's intercepted three times. Those are flights out of -- the target out of Kodiak, Alaska and they intercept out of Vandenberg. That roughly equates to the geometry of a launch out of North Korea and an intercept coming out of Fort Greely, Alaska.

So for those type of scenarios and for that system, the CE1, we remain to have confidence in the system based on the data we've seen.

However, we started a second version of the missile kill vehicle in 2005 based on obsolescence reasons -- parts manufacturers and so forth, not producing parts anymore that in the electronic systems that we needed. And therefore, we redesigned the system, upgraded it, and actually gave it greater sensitivity and greater capability.

However, it's failed on the first flight test due to a quality control problem we identified in the plan. We corrected that quality control problem in the second flight, it didn't happen. However, we did have a failure at the very end of the second flight. And we have a Failure Review Board that's been formed. It's working diligently. It combines industry, academia, the best of government, FFRDCs, national labs.

They are completing their analysis. Right now, it looks like we have a very good idea of what the failure mode was, but that's not enough. I need to have it verified and demonstrated, which they will do through testing across the summer but that's not enough. We really need to have the industry team, the GMD team demonstrate to us; they've corrected it. So I have requested in this budget a support for a flight test, which tests the missile very rigorously without an intercept but the purpose of it is to verify the resolution of these issues. And then, as I said, we'll have another flight test next year.

What that effectively does is it has delayed our flight test program that Dr. Gilmore referred to for accrediting our models in simulations by approximately a year. And we will continue to upgrade the committee as we go through this testing and verify that we have, in fact, corrected the issue. That is for Capability Enhancement 2. Most of the missiles, which are deployed today are the earlier version, which again we haven't had those issues with.

As far as the number of 52 GBIs, which was our original calculation, there are several assumptions we use, which we now deem no longer valid. First of all, we did not take into account the last two flight tests have been failures. I just mentioned another flight test that originally wasn't envisioned, and we're going to repeat the last flight test. So right there are indicates four GBIs that we hadn't accounted to before.

I propose that the best way to make this decision is as we do these tests over the next year, we determine what in fact is the failure, make the corrections, as I said, and then go back into production and make a decision based on those -- that reliability information.

Again, what is the acquisition objective for the GBIs and whether it should be adjusted? And what is that adjustment?

I would propose that that would be appropriate for the FY13 budget so that the timelines of the decisions I just said would be in effect. However, we have proposed five new GBIs for this year so the production lines will be up. They will be operating. And it is clear to me that there will be some increased number of GBIs that will be necessary.

As far as the budget cuts, most of the GMD system over the last several years has been investing in infrastructure. And we will complete Missile Field Two, the power plant, power distribution, other upgrades over FY12 and that is one reason why you see a reduction in the budget after that

because from then on the investments is not into the infrastructure of the system, it is into testing and upgrades to the GMD system or procuring which will be in our follow-on budget additional GBIs.

However, I would point out that inside that GM budget, if the operations in support funding, it is an R&D-funded program, but the money to go to those type of activities has increased which is indicative of a program, which is fielding and operating.

The impact as a CRA, as I said, is significant to GMD because that particular program was to receive 324 more million this year. It is exasperated by the timing of the CRA that we're under right now. Normally, at this time of year, that's when we have the most significant hiring of the construction crews in Alaska.

If we don't hire them over the next several weeks, they have opportunities further north in the oil fields. And we have become very adept at managing workloads our contractor team has in Alaska, and if we don't fund the hiring of these folks over the next several weeks, it will have a major impact in the summer construction season, which is where we do 90 percent of our annual construction.

So if this continuing resolution goes beyond the current date of April, we then will face some significant setbacks to the construction schedule to complete that infrastructure. And I would propose to come back and re-propose that funding for the following year so that we can, in fact, complete the infrastructure that I was referring to.

TURNER:

General, the SM-3 Block 2B interceptor is planned for deployment by 2020 to improve protection of U.S. homeland against potential ICBM attack as part of Phase 3 of the Phased Adaptive Approach. The FY12 budget request provides additional \$1.7 billion to the SM-3 Block 2B development program request of Future Years Defense Program if I do. Will the SM-3 Block 2B design be optimized for ICBM intercept capabilities?

O'REILLY:

It will be optimized to intercept missiles early in flight and to -- if I may, to better answer the question more precisely, in early parts of flight, it is -- there is not a significant amount of distinguishment between an intermediate-range ballistic missile or an ICBM. So the original design of this and the original concept was against intermediate-range ballistic missiles, 5,500 kilometers or less.

And when we look to have effective capability for that range of missile, it became apparent that it would work. The capability doesn't fall off when you increase the interceptor velocity. So it is - its design space is to maximize its performance from a medium-range ballistic missile to an ICBM, not to an ICBM that is greater than -- on the order of 12 or more thousand kilometers.

It would not be effective against the very largest ICBMs, but it would be effective against the ICBMs that are traveling at velocities that we are concerned about distances. We are concerned about for countries in the Middle East and Northeast Asia.

TURNER:

OK. Obviously, I'd like to have an additional conversation with you about that -- the intent of 2020 and Phase 3 and then even four of the Phased Adaptive Approach is protecting the homeland. So I just like to have additional discussion about that subsequent to the hearing.

Dr. Roberts, the administration's decision in 2009 to adapt the Phased Adaptive Approach for missile defense in Europe was based in part in the assessment that the longer range threat from Iran was slower to develop than previously estimated. We just had Secretary Gates in today to talk about Libya. And in discussing Libya with him, we asked the, you know -- I asked the question of and what if they -- in their discussions on engaging Libya, what were their concerns as to what the effect might be on Iran and our efforts for nuclear non- proliferation. You know, is there prospects that could make them go faster in the request?

And he said, I don't think they could be going any faster, which would leave to me -- you know, it certainly is a statement of intent, which certainly gives everyone the concern that the threat from Iran could develop much faster than what the Phased Adaptive Approach is designed to respond to.

What is your current thought of how the threat is emerging and prospective gaps between the Phased Adaptive Approach and, you know, recognizing, of course, our ground-based system but just focusing on the issue of the Phased Adaptive Approach, trying to respond to a threat from Iran. What are your thoughts on the emergence of that threat and the potential gap?

ROBERTS:

To be clear, I think your question, Phased Adaptive is, of course, focused on the defense of the regions. With -- in the case of Europe, the addition of the Phase 4 capability that would offer some protection against intercontinental threats but also improve protection in the early intercept mode against IRBMs.

And the question we face in anticipating Iranian threats is how they might mature in a way that threatens both Europe more rapidly than PAA. And the American more rapidly -- and the American homeland in a way that would overwhelm our current posture, it's an interrelated question.

The -- without venturing in the classified information, I think our fundamental view is that the regional threat from Iranian ballistic missiles is rapidly growing quantitatively and qualitatively, and that the threat from the intercontinental capability remains difficult to predict precisely when and how it might emerge.

The -- and I think that's about all to say about the threat at the unclassified level from Iran. How does that measure up against the posture we're trying to put in place?

In the case of the regional protection posture, we are putting into the field as rapidly as we can the capabilities that MDA has been developing. And they were in a race between their quantitative and qualitative improvements and our quantitative and qualitative improvements, and our phased approach is intended to take the advantage as early as possible of our improving capabilities for the defense of Europe.

In terms of the protection of the American homeland, the -- what we're trying to hedge against is something quite specific and not general. The -- and let me begin with a quick summary of our baseline of homeland defense capability.

Because it's not just the interceptors in being today, it's the improvements that we expect over the coming two decades with the additional enhancements to the capabilities of the Ground-based Midcourse Defense system and the addition in the outyears in the second decade of the SM-3 2B, it's a complimentary set of tools that we'll apply to the defense of the homeland over this time.

In addition, we have in place the hedge such as it now exists to increase from 30 to 44 the number of deployed GBIs. In the case of a more rapid emergence of an Iranian threat between where we are today and 2020 when presumably we'll have the SM-3 2B to help supplement the defense of the homeland.

The need is not to be hedged against an initial ICBM capability from Iran or some other country. We're already well-hedged against that position. We have 30 deployed interceptors against -- we view as the shorthand to distinguish first-generation threats from second-generation threats, first-generation threats being initial capabilities from proliferators in the intercontinental range with unsophisticated countermeasures.

Second-generation threats would be in quantities sufficient overwhelm the GMD system or advanced countermeasures or both. And our basic hedge concern is to be well-prepared for the possibility that there might be a more rapid emergence of that second-generation threat than we're ready to meet because SM-3 2Bs are not yet in place.

Now, that involves some discussions of how confident you are in the intelligence that it tells you that something is coming -- low, moderate, or high, and how much risk you're willing to accept in the period -- how much risk you're willing to accept about the possibility of an emerging second-generation threat.

So I'm sorry to dance around the subject that's got a lot of classified information in it, but I hope that addresses the thrust of your question.

TURNER:

You did a very good job of shepherding through that, and I'll take your -- since we're talking about missile defense, you're asking about the thrust of the question as a very bad pun.

And we'll go to Ms. Sanchez.

SANCHEZ:

Thank you, Mr. Chairman. Thank you again, gentlemen. Let's see.

Mr. Ahern, you said -- you were talking about MEADS and you said something to the extent of stopping the program -- the cost versus completing it, versus paying out the closing cost from the contracts that you have. Can you get back to this? We don't have to have it here unless you have it off the top of your head, but what that calculation is just for the record since you brought it up.

AHERN:

Yes, ma'am. Well, the phrase I used is that we would be -- if we went into that scenario, my notes are here but essentially that they're really spending an extensive amount of money that's about what I said on termination costs, we'll run in that direction.

The calculation that we have right now is the remaining funding in the MOU. And that's that liability that we're into, and I want to be sure to explain this carefully. There is an original commitment written into the MOU of about 4 billion U.S. equivalent dollar shared between the three allies. Our share was \$58 billion, about \$2.5 billion over that period -- 110 months that I mentioned earlier.

The way that it's written, if you withdraw from the MOU then you are liable potentially to termination liability up to the level of your commitment under the MOU. Currently, we have put in -- and I can get back -- the numbers are about right -- about \$1.5 billion. So our remaining commitment to the MOU, therefore, our maximum termination liability is about \$800 million. So I think we've -- \$846 million at some point was the number that we had used.

Now, the other side of the coin is what do we have asked for \$800 million in '12 and '13 to continue to fund the MOU. So the point I was trying to make is that in balancing the -- to make the decision going forward that the four reasons that I said going forward, one of the -- one of the ways that was thought about is if it's about the same amount of money and this is my -- Dave Ahern paraphrasing it -- if it's about the \$800 million to go forward and be able to get into the demonstration show the prototyping -- the capability of this system that's a better use of that funding, then it would be to unilaterally terminate where you don't come away with anything at all.

SANCHEZ:

OK.

AHERN:

Does that answer your question?

SANCHEZ:

Yes, yes.

AHERN:

That's what I was trying to do.

SANCHEZ:

Absolutely. I'm trying to see what the magnitude of that was. OK.

And Dr. Gilmore, you said at one point -- you had a phrase where you spoke about General O'Reilly's system testing or his -- the way he setup his tests. And you said something to the effect of it would almost lead to failures or because it was such strict testing or it was...

GILMORE:

I said that rigorous testing will probably inevitably lead to some failures. That would be unexpected.

SANCHEZ:

OK, OK.

GILMORE:

Just because these are some of the most -- the same thing is true...

SANCHEZ:

Right.

GILMORE:

...with the missile defense systems that's true of all defense systems, which is these are some of the most complex systems that human beings try to build and get to work. And so when you test these systems and this is true not just in missile defense interceptors and kill vehicles, it's true of joint strike fighters, it's true of advanced anti-radiation-guided missiles, it's true of virtually every program that I have to write a test report about.

When you test them realistically under operational conditions where they are first stressed to the max or much more than they have been in developmental testing, inevitably you find problems and there are failures.

SANCHEZ:

Right. Some are regular, some are calibrated. You're trying to get to test more...

GILMORE:

Actually, the rigorous testing can be less calibrated. It can be under conditions, which are unexpected.

SANCHEZ:

OK.

GILMORE:

And therefore more stressful.

SANCHEZ:

Do you think...

GILMORE:

But in any event, if you test rigorously under operational conditions, you will probably encounter failures and that's true of missile defense interceptors as it's true of other defense systems.

SANCHEZ:

OK, good. Thank you for that because I'm coming back to a question for you, General O'Reilly. We had an earlier conversation while I spoke to you but having spoken to somebody else.

And one of the comments that group made was that that we might be a little bit less of a risk-taker in this arena. Can you speak a little to where you're calibrating how much risk we should be taking? Because in some of the other systems that I was talking to about with his group, they were having some quantum leaps, if you will, Ford in theirs, and ours is more doggedly coming along. What is your sense of just how calibrated or how stringent you are rigorous you're making the test?

O'REILLY:

Ma'am, the way we are setting up our test, I do believe are representative. And I do work with Dr. Gilmore and the services operational test community, but I do believe they're representative of an actual scenario that the Ground-based Midcourse Defense system, for example, could see.

So my philosophy to testing for the agency is we need to assure it's going to work in combat and therefore, if there is a problem, I'd rather find out now and fix it than obviously find out later. And I also have to report to the combatant commanders why they should have confidence that, in battle, these systems will work.

So we do stress it. We do ensure that we understand the minimum performance. For example, these flight tests I've done recently are very long in flight and the reason we're doing that is to replicate the longest flight we could possibly have to defending the United States, for example, from Port Greely, Alaska.

And again, our philosophy is we want to ensure they work, and we also want to find out if they don't work, let's find out now, we have an opportunity to fix them, which is what we're doing in the Ground-based Midcourse Defense program.

SANCHEZ:

Thank you for that. Another really subjective sort of question I have with you is, how do you balance the need for ensuring an operationally effective missile defense with the pressure to deploy the missile defense systems quickly? And how do you schedule an employment pressures, you know, that are obviously aimed at that?

Again, going back to this question of -- you know, maybe we're lagging behind because we're being so risk-averse or more -- you know, more particular. And would the pressures of that you see sometimes of people pushing, would they lead you to do shortcuts. I mean -- you know, how

do you balance that that you're really our guy trying to figure this out with respect to testing everything and working everything and getting the schedule on?

O'REILLY:

Ma'am, I believe the key to handling those situations where you are under a lot of pressure to deploy something, and there is a great need. And we recognize, for example, against regional missile defense, we are outgunned in about every region of the world today.

I think the need to balance that pressure versus verifying and making sure the system works correctly is the approach should be to determine upfront what is that criteria before you get in those high- pressure situations.

And again, I greatly appreciate the help of the operational test community. We defined in our Integrated Master Test Plan upfront what is our purpose of testing, what is the success and failure criteria, and we do that early in the process even in some cases years before we actually conduct the test. Therefore, once the test is done and we're looking at the results, that's not really the time to determine what is deemed a successful test or not.

Now, then if we have a system that is not mature to the point that we had originally setup criteria for, at that point, we go to the combatant commander and the operational test community and STRATCOM prepared a document of the -- what capabilities do we -- have we verified the system does have and what are the limitations that it has. And then the combatant commander has to make a determination does he want to accept those limitations or not accept the capability until we mature it further.

SANCHEZ:

OK. Thank you.

Dr. Roberts, can you talk to us a little bit about how things are proceeding -- consultations are proceeding with Russia? Or is that you try to do that off record?

ROBERTS:

Well, the detail should be done in a different venue because the state of discussions is sensitive. In general, we see strong Russian leadership interest in moving for -- with missile defense cooperation with the United States and NATO reflected in presidential and prime ministerial statements.

We see supporting activities in the various ministries aligned with the senior level commitment. We see some concerns on their side akin to the concerns we have. We're concerned about sharing

classified information. They are concerned about sharing classified information. They are concerned about some of their technology.

But I think the short answer would be we perceive that they are approaching this cooperative effort in a constructive and pragmatic way and with some realistic expectations about what we might be able to accomplish.

SANCHEZ:

Thank you. I'll yield back.

TURNER:

Mr. Franks?

FRANKS:

Well, thank you, Mr. Chairman. We OK?

(UNKNOWN)

(OFF-MIKE)

FRANKS:

Yes. Gentlemen, thank you for being here. We appreciate what you do. I got two little two-year-old twins so I especially appreciate what you do.

General O'Reilly, I hope the question has already been asked. You know, we get divided in our attentions here. But the Ground-based Midcourse Defense system in the Alaska and in California, as you know, essentially already have to defending our homeland from long-range missile attacks. And it's been my estimate, and I want to ask you about it, the stockpile of these GBIs is dangerously low.

And so, I guess, I would ask you just to refresh our memories on what the present stockpile is and in your personal opinion -- I put you in a bad spot here, if you don't mind. In your personal opinion, that is wearing your MDA hat but your personal opinion, is the number of available GBIs sufficient or do we need more?

And couple of that question, how will the \$2.4 billion reduction in the future years Defense program affect our GMD effectiveness?

O'REILLY:

Sir, we built the basic or the current acquisition objective we call it, the quantity of how many of an acquisition item we believe we need to procure including testing and development.

And for GBIs today, the number is 52. Thirty will be deployed, the others will be put into a pool, which again the way our approach is the reliability of the GBI system is we continually learn about this system over time so we want to have a pool of interceptors that we can rotate through which is not unusual to do with missiles. We do it with Patriot and plan to do it with THAAD and we do it with Aegis.

And you put them back into a depot. You test them, you take components of that, you fire them off, and you keep improving your knowledge of how they are aging over time. So there is a calculation of how many missiles are necessary for that.

We do not have a lot of data that you would normally have before you field a system just due to the urgency, as we say, the need because of the GMD system is our only homeland defense system. So we put prototypes that are more akin to prototypes than production representative missiles in the field. We watch them very carefully. And we have assessed that we needed 16 for flight testing and ground testing. And as those -- as been said before, that leaves you six for testing in 2020.

Well, there are some assumptions we made at the time that have since no longer been valid and that is we didn't anticipate the two flight test failures we've had. We also didn't anticipate my request for another flight to verify it works. And then we're going to repeat the test. So right there are four GBIs we hadn't anticipated.

I believe over the next year, it would be prudent to reassess the number of GBIs we ought to be buying. For our FY12 budget, we are requesting five new GBIs so the production lines will start and that will commit the contractors probably to their limit -- close to their limit to what they can do to start. That would be more of GBIs, and we have produced it one time in the past and in one lot.

And so we believe we're going to sufficiently start the production line. And over the next year between -- I would recommend between now and the FY13 budget submit, the department reassessed the total number we need to procure, and then included that in the FY13 President's budget.

FRANKS:

Well, thank you, sir. I'm trying to throw in more question here question here (inaudible).

I know that the directed energy, I know they are going laser tests scheduled to take place last night. It had to be canceled. And -- but given what we've learned from the Airborne Laser

Program, do you foresee any near or medium-term applications for directed energy weapons in the ballistic missile defense architecture at this point or anything new?

And secondly, do you -- can you tell us a little bit about the DDR&E report on -- Defense Research & Engineering Report on the directed energy technologies?

O'REILLY:

We have supported the effort of that study -- DDR&E's study. And so I can talk from a point of view of us providing information to them. But the bottom line is that there are many applications of directed energy. Unfortunately, for this menu right here, they're highly effective. Most of them are classified.

I can tell you that last year twice, both against liquid fuel systems that are very hard to shoot down, the lethality mechanisms was the theory, they would be hard to shoot down; and solid rocket motors, we've shot both of them down with our laser system and -- at great ranges. And the destruction actually occurred much faster than we theoretically thought it would occur. So there are some lethality effects that are actually greater than our theory had indicated.

So the bottom line is it's extremely promising. We have effectively tracked and intercepted while a missile is boosting, which is ultimately where you would want to be in missile defense. Then you would never know how far the missile was in whether it was an IRBM or ICBM because they killed it while it was still boosting -- tremendous cost-effectiveness of having that capability. And we have demonstrated for the first time empirically over the last year our capabilities which allow us to upgrade our theory and our models and simulations.

FRANKS:

Thank you, Mr. Chairman. Thank you.

TURNER:

Thank you.

Mr. Larsen?

LARSEN:

Thank you, Mr. Chairman.

General O'Reilly, a couple of questions with regards to SM-3 Block 2A. It's a co-development program between U.S. and Japan. And in a letter to Japanese Ministry of Defense, you know that

the project is rapidly approaching key milestones that absent a production agreement with the government of Japan. U.S. will assume -- produce the missiles in the United States.

And I am curious as to what decisions you believe and MDA believes indeed from the Japanese Ministry of Defense to move this from development to production with the Japanese. And if that does not happen, then what does happen to SM-3 Block 2A?

O'REILLY:

Sir, the SM-3 Block 2A has a -- we have a commitment to utilize that weapon system. It's Phase 3 of the Phased Adaptive Approach for the deployment of missile defense in Europe.

As the President had stated, the SM-3 2A will be part of that configuration. Therefore, it's my responsibility to ensure it is brought to production and produced. Our current agreements with the Japanese government are more based on timelines.

And so by 2015, the current agreement is, that's when we would end our cooperative development of the SM-3 2A. It's not that they have decided not to finish the development with us, nor have they decided to participate in production of it. They haven't announced that they've made those decisions.

My point in the letter was that in our budget process, it would be very helpful if we understood their commitment and we extended the cooperative development and also made the agreements early on how we would produce it and how we would conduct work, share, and so forth.

Short of that information, unless assumed that I have to put something in there to ensure to submit to Congress the resources needed to deliver the SM-3 2A by 2018. And so in the -- what I have done in the outyear budget without having a commitment from the Japanese government and assumed that the United States will finish the development and production. It was done only to have a comprehensive budget submission. It was not meant that we do not desire it. In fact, we would and we've had great success with the Japanese. It's just that it would be very helpful for our budgetary purposes to understand what their intentions are for completing the development and to going into production.

I frankly would imagine that...

LARSEN:

Do you anticipate understanding -- do you anticipate then meeting a time obviously (inaudible) 0:01:14.0 Japan, and we're very sensitive to that. But on this issue, do you anticipate sometime this year meeting with them to try to find out what their intentions are?

O'REILLY:

Sir, we have several meetings planned this year to discuss this, and the sooner the better for us. But obviously, we're very sensitive to the situation they are in. And -- but they have not delayed our upcoming meeting that will occur in the next two months on this topic. So that's where we stand on it, sir.

And I made it for the OSD policy too because they work this from the policy side, right?

LARSEN:

You go ahead, Mr. Roberts, it's fine?

ROBERTS:

Well, I would only add that we have every reason to expect continued strong partnership from Japan on this matter. Their commitment is clear even if the terms of the next agreement are not yet finalized, and we think they're an excellent model of burden-sharing with our allies in this area.

LARSEN:

OK. Thanks.

Mr. Gilmore, in your testimony -- you know, in your written testimony you noted on -- back of the GMD and interceptors, you said because the GMD interceptors available for testing is limited and initial targets must be purchased to support this repeat testing. FCG11 has been eliminated.

The point is that additional targets must be purchased, and we've heard this from General O'Reilly as well. So putting that together -- actually, this is a question for Mr. Ahern from MDEB perspective, is this on your -- is this yet on your radar, or it has to be worked for the '13 and then comes to you?

AHERN:

That's correct, sir. I have not seen that come forward the additional, but I understood what General O'Reilly indicated and I expect that we will see it coming forward in '13.

LARSEN:

Yes, OK. Thank you. Thank you, Mr. Chairman. I'll take the second round later.

TURNER:

Mr. Lamborn?

LAMBORN:

Thank you, Mr. Chairman.

General O'Reilly, I want to build on a question or two that Representative Franks asked a moment ago. Is the funding for a directed energy what it should be given what we continue to learn about the greater and greater applications for directed energy?

O'REILLY:

Sir, I am a strong supporter of a development of directed energy. I believe we have shown over the last year that it does have lethal effects as we desired.

The Missile Defense Agency probably has the greatest application of high energy -- megawatt plus class lasers, so we're unique in that area. But at much lower energies, we have significant applications in missile defense to assist our interceptors if we have a directed energy.

But for this type, it's still in research and development in a large part especially the next generation. We would like to see powerful lasers like we're working with Lawrence Livermore National Labs that is about the size of this table rather than a 747 that would have tremendous lethality. And to achieve that, I believe the best way is almost like the approach I answered to -- for test criteria.

We established technical milestones, and we established a steady funding level. And until they hit that technical milestone, we keep a steady funding level that adds stability to the research team. And once they achieve it, then a decision is made to move to a higher funding level where then you have a -- you can then start applying that technology, where they are in this program. And we're prepared to move rapidly once they've achieved milestones. These are significant milestones associated that they're working right now at the efficiency of these lasers. Once they've reached the type of efficiency.

Where they reach the type of efficiencies they are trying to achieve, which is greater than we've ever seen before, and I do believe they are achievable. It just has to be demonstrated. Then I believe that's the best strategy for justifying additional funding to apply that capability.

LAMBORN:

Well, are we at least doing that initial stable R&D type of funding in the proposed budget?

O'REILLY:

Yes.

LAMBORN:

And the proposed budget we are. OK.

Secondly, I've heard that the Standard Missile 3 Block 2B program -- 2B program described has a schedule risk. Do you see this as an important problem?

O'REILLY:

Sir, when we laid out the SM-3 2B program, we looked at interceptors that are much more complex than this one. If I may say, trying to intercept the missile in boost phase has some big advantages and actually is a more simplistic missile. The target you're trying to hit is very hot. You just finished boosting. And the accelerations of it, it's very clear to find it, to track it. And we have other classified requirements that are not applicable at the front end of a missile kill chain.

So the bottom line is we don't believe the criteria are as great on this missile as it is on, say, PAK-3 or THAAD or Aegis, yet we added time to the average development time. And we went back and looked at how long it takes to build missiles of this class. And so for this missile from the beginning of product development to making a milestone decision for production is 5-1/2 years, which is longer than what the average is for a typical missile. So we do believe we've put margins -- schedule margin into the development of this missile.

LAMBORN:

OK. Thank you very much. And my last question for you is I was recently informed that the Defense Efficiency Initiatives will be cutting 1,000 positions from the Missile Defense Agency over the next two years. What parts of the agency are these cuts coming from? And can your agency absorb such a huge cut without impact to the missile defense mission?

O'REILLY:

We were part of that process to determine what the efficiency goals were. Our input was along that line. And a majority of that is in the area of our contractor support for government functions -- the supporting functions.

And it's a different way of contracting is what we've taken into mind. Instead of taking a path like we have in the past where we augment our staff, we -- everybody inside the agency determines how many more technical support contractors they need, and we go out and procure for that number. We've turned it around, and we've made it competitive, and we will announce what are the tasks that need to be accomplished. And then we let the contractors come back to us and proposed industry to tell us how many people it would take rather than we pre-determining how many people.

We have -- we're about 50 percent through this new contracting process over the last year. The savings, we have already identified for this year alone over \$100 million where the actual proposals that we accepted was less than what the government estimate was under the previous contracting approach. So we believe the competition that's been added to this.

We've also -- we are awarding larger contracts in this area. So instead of having a whole series of small contracts we had over 400 for this agency, we are now pursuing 40 larger contracts, which then have their own efficiencies because the government doesn't have oversight over 400 contracts. So there is a reduction on the government side.

But most of that thousand -- that goal for the reduction of effectively a thousand full-time equivalent personnel is achieved through this new contracting approach of letting the industry tell us and bid competitively on how much it would take in order to meet the task that we have.

LAMBORN:

General, as a final follow-up, you have explained the process very well, but do you think any of the missions of MDA will be compromised?

O'REILLY:

No, we have determined upfront what are the tests that need to be done in order to accomplish our missions and we're set out to contract to all of those tests.

LAMBORN:

OK. OK. Thank you and thank you all for being here.

TURNER:

Mr. Brooks?

BROOKS:

Thank you, Mr. Chairman.

General O'Reilly, you addressed -- I'm discovering what it's like to be a freshman since like all my questions have been asked in one shape, form, or fashion, some modifying a little bit, but you address the impact of a continuing resolution.

As you know, we, in the House and the Senate, are facing a log jam of sorts with respect to C.R. versus a budget for the remainder of this year. Which is the lesser of the evils to you continuing throughout the remainder of the year on a C.R. basis, sporadic three or four weeks at a time, or if push comes to shove having a partial government shutdown of two -- three weeks, something of that nature which may be required to force the parties to pass a budget for the remainder of this year? Which is easier to you?

O'REILLY:

I felt that everybody's anticipating my answer, what Congress should do but...

BROOKS:

Well, not -- what Congress you do but which is easier for you to operate under? Which is the lesser of the evils?

O'REILLY:

I think between shutting down the government and continuing contracting in a very inefficient way, I would rather continue the contracting in a very inefficient way. But if I could, there are some impacts there that I just like to clarify and make sure I have represented correctly. It's not only the government operations but obviously all of the contracts out there especially as we propose the Phased Adaptive Approach, there's a lot of new starts in this budget that we're not allowed to turn on.

And there are particular issues such as the National Defense Authorization Act in December authorized my agency to procure Iron Dome -- the system that the Israelis have developed for short-range defense -- \$205 million. Even though the President has committed and it is in the Authorization Act, it is a new start for me. And so I can't even execute what the Authorization Act has asked me to do.

So it's that and it is what impacts to the workforce trying to determine new contracts and things whether or not they're going to be hired or laid off its buying material. We can't commit legally to buying material because we don't have the follow-on funding.

As I said, up in Alaska, we're missing in a critical time for hiring our construction workforce. It's extremely difficult and it is extremely inefficient to operate this way even though I said that

would be better for me than stopping and not moving forward at all with any of my -- the work that the government has asked me to execute.

BROOKS:

So even if the government shutdown was two to three weeks, something relatively short sometime in April, you would prefer to have a C.R. off and on for the remainder of the year rather than risk a two- to three-week shutdown, that would be easy for you to operate under?

O'REILLY:

That's the worst of two evils but at least we got some -- we're accomplishing some work. If we completely shutdown, then there is a lot of also inefficiencies associated with that, with having to terminate and start up activities.

BROOKS:

Do you have a judgment as to whether you would qualify as an essential function and thereby MBA (ph) be exempt from the shutdown?

O'REILLY:

Sir, there are functions that we do that are in direct support of the combatant commanders. And it would affect, for example, our homeland defense system. We need to continue that operation in the oversight and the government participation of GMD. And it is an operational system, and there's many others at the regional level that I would deem are in direct support of combat operations or ongoing military operations.

BROOKS:

The GMD program, as you know, seeing signs of a budget cuts in the past three years, and the FY budget request further reduces the GMD program by \$185 million. How are these reductions impact in GMD operations sustainment in any modernization activities?

O'REILLY:

During this period of time, the operations' aspects are actually increasing over time in that budget. What those budget reductions primarily reflect is is the completion of a lot of construction up at the Fort Greely that was originally intended, and now that work has come to an end.

However, we are starting new work. The upgrade of the Clear Radar, for example, that's about \$200 million -- that is for the purpose of enhancing the homeland defense. So there are a lot of other activities that are being initiated which, in fact, support homeland defense but aren't part of the GMD program.

But for O&S, we are increasing over time because we have a greater operation as more assets become operational, so thus the need to maintain the system. And -- but primarily, those reductions were associated with power plants and other infrastructure, which we are now completing.

BROOKS:

OK. I'm just about out of time, but in view of the most recent test that were unsuccessful, does the FY12 budget request still reflect your funding requirements for GMD?

O'REILLY:

Sure, they do, but some of that funding has -- some of the activity we will have to defer and accomplish in future budget request. Specifically, we have stopped the production of the enhanced kill vehicles at this time so that -- because we don't know exactly what the solution is. We want to verify the solution and the correction and then upgrade those kill vehicles, make those corrections and then continue the production line.

So we do have a stop of about -- for seven kill vehicles that are currently in production at this time, and because we are not completing it, there is a reduction in our need -- our funding, and we're using that funding in order to support these other activities to return to flight testing.

BROOKS:

Thank you, General O'Reilly, the other members of the panel, and Mr. Chairman. I yield the remainder of my time.

TURNER:

Ms. Sanchez?

SANCHEZ:

Thank you, Mr. Chairman.

General O'Reilly and Dr. Gilmore, what do you consider will be the most demanding developments in term of technology improvements required for the PAA Phase 2 and 4. I'm sorry, Phase 2, 3, 4.

GILMORE:

To some extent, the most demanding technologies -- the most demanding capabilities for Phase 2, 3, 4 common to all of missile defense, first of all, you have to demonstrate that you can actually discriminate if the threat comes with countermeasures because if you can't, that's obviously the problem. You won't be able to intercept what you need to intercept. That's a problem as you move towards trying to mitigate longer range threats in particular, and as we move in later phases of the Phased Adaptive Approach, that could become a greater problem as time goes by.

Another thing that has to be demonstrated is the capability to do Engage on Remote. So you have forward-based sensors and forward-based radars that are doing the tracking, which then provide that information over communications on that and through Battle Management, Command and Control System to the actual platform that will launch an interceptor. And that intercept will sometimes have to occur outside the field of view of the radar that might be organic to the intercept platform. That's another important capability that has to be demonstrated in order to realize all of the protection that would be provided by the Phased Adaptive Approach.

Those are just two things that come to mind. But, General O'Reilly, if you care to say something else?

O'REILLY:

I believe the individual development of the individual components -- the sensors, the command and control processors, the missiles -- they are not inherently more difficult to develop than the ones we are developing and have successfully developed today.

I believe the real challenge in two, three, and four is each time we moved to a new level of capability with missile defense, they become more -- those capabilities become more interdependent on each other so that we can -- the Aegis ship, for example, in Phase 2 doesn't need to see the missile before we go ahead and launch the missile because we are relying on some other radar -- so it's the integration.

And just to give an idea at the end of -- in the next two years, the operational test, for example, that Dr. Gilmore has referred to earlier, it's actually going to have two medium-range missiles in the air simultaneously, an Aegis ship in a position to shoot it down. But if it doesn't, that has to be right behind it ready to shoot it down and we're going to fire another missile at that simultaneously during that period of time that it has to worry about. And just when it is most difficult, we're going to launch a third missile so that a Patriot system underneath it that has to operate with all the effects of the other intercepts.

So as we continue to become more and more complex, operate live fire testing is important but the accreditation of our models and sims so that we have confidence in them is going to become more important. All of these is geared towards the complexities.

Phase 3, we're now reaching out twice the range we were before. So not only do you have more complex scenarios, but they are spread out over a greater period of time.

But Phase 4 actually becomes easier because if you're going to -- it's just like our laser interceptions last year of a boosting missile, the targets don't cost very much because there is no target -- there's no payload because we're trying to destroy it early in the flight, or if it is, it's a simplistic payload.

And the infrastructure -- the range infrastructure, all of that is very -- is much smaller because the entire flight in which we are trying to destroy the missile occurs in two or three minutes rather than 30 minutes over a much smaller piece of land. So that capability of the SM-3 2B will actually drive us to more cost-effective missile defense and to a more cost-effective testing and deployment. So I believe the challenge is for Phase 2 and 3, primarily to demonstrate all of the integration, which is necessary.

TURNER:

Mr. Larsen?

LARSEN:

Thank you, Mr. Chairman.

Mr. Ahern, with regards to -- is it MEADS or MEADS? How do you pronounce that? I've heard a million...

AHERN:

MEADS is the way I do it, sir.

LARSEN:

OK. All these MEADS that we're talking the same way. At least, e will start of talking on the same page here.

At least from the staff memo, it says the penalty on the termination is \$846 million, is that right?

AHERN:

As I was trying to describe earlier, that's a subtraction between our original MOU commitment in what we've already provided, and that's about the right number today. Yes, sir.

LARSEN:

All right. And then the '12 and '013 budget is anticipated about \$104 million -- \$804 million.

AHERN:

Yes, sir.

LARSEN:

So a difference of about \$42 million between terminating today and what we plan on spending over the next two budget cycles that are up, right?

AHERN:

Yes. So the maximum termination liability \$846, and that's just was based on the snapping time.

LARSEN:

Right.

AHERN:

And the request for the budget is based on our MOU commitment for '12 and '13. So within that range -- yes, sir -- those numbers are correct.

LARSEN:

When does the MOU commitment end, and the threat of a termination penalty end with it?

AHERN:

I'm not an attorney but I'm going to tell you my understanding is when the money has expired, then the MOU is over. I think I have the MOU available.

I will take the question for the record but I want -- this is an opportunity to do this. We have no obligation to put more money into the MEADS program after we have executed '12 and '13. So from the standpoint of are you worried that I'll be back again asking for money in '14 or '15 for MEADS -- no, sir. It would require an amendment to that MOU in order to have to put more -- in order to be able to put more money into it.

We have no intention of amending that MOU. Had we decided to go forward with what I described in my opening statement as the third option of adding the additional funding, that would have required an amendment. So I think that my right answer to your questions is, there is no termination liability when the last dollar on the last contract is expended.

LARSEN:

Well, if you are planning to come up here '14 and ask for more money, I'd make sure that the Chair whoever it was didn't invite you so you couldn't come up here and ask for more money because -- as I am half joking -- but it just seems that between the penalty and what are put in the budget, it's almost the same.

But I'm just trying to understand better the decision-making process to get us this point but I think you've also -- give you just one issue so when does this end because we've been -- we haven't really dealt into MEADS too much over the last several years as much as we've done in other parts of the Missile Defense Agency budget. And it might be worth us maybe doing a look back on MEADS a little bit on this side of the microphone.

AHERN:

Sir, I'm not sure -- I can't go with -- I'm not sure what the questions is, but I think that the effort going forward, how the decision...

LARSEN:

Yes.

AHERN:

...was made is I described to -- I tried to describe. If it was that, go through the rationale of our commitment to our allies, what we had accomplished, what we had expect to accomplish, the affordability aspect of it because where are we to commit to continuing, there was that billion

dollar bill plus really an implicit in Dave Ahern's mind. If you're going to do that, you really have to commit to production. We're not ready to do that. There's a recognition of the risk.

So I think that's all wrapped up there. And it's a fact, our maximum termination liability is within reason with the small estimating whatever percentage that is -- what our obligation in the contract is. But I don't think -- I don't think that was wasn't what I was thinking of anyway, and I'm not the decision-maker, but certainly I was involved in it. I think it was those four reasons.

What you're close, you got the CDR, you got allies, do what you can but recognize you're not going to go any farther, so I won't be up here in '14, sir.

Then also, you're taking some risks...

LARSEN:

Yes.

AHERN:

...with the rest of the portfolio.

LARSEN:

And, if I may, Mr. Chairman. So -- but I understand -- what I understand from the decision that was made with regards in MEADS though is we go forward for the next two years on this. And then we end up with a set of -- a prototype that provides a set of capabilities that could be used for something else later. Is that -- I gathered from your written testimony, at least?

AHERN:

Yes, sir. A written -- and let me make one correction. The MDEB had nothing to do with the decision on MEADS.

LARSEN:

OK.

AHERN:

As a straightforward army, OSD going forward to -- up to (inaudible) decision.

LARSEN:

Yeah. OK. Got it, OK. Yes.

AHERN:

But at the end of the two years, we will have -- 2-1/2 years, we will have demonstrated if the plan works as we expected and that's part of my job is to ensure sure that we do.

We'll have a fire control radar. We'll have shot a couple of live shots with the MSE missiles. We will use the command and control system. We'll have done, as Dr. Gilmore mentioned, one of their systems and engage on remote so there are some realistic, focused achievements in the system of systems kind of aspect for MEADS to demonstrate that it is -- that the concept is proven and then there will be technologies.

Our technology is a big phased array or not that big phased array -- antennas, mobile, lightweight, in X-band and in UHF band. So -- and they are modern electronics so it's both the system and the system is on the technology that we have been demonstrating -- available not only to the United States but also to Germany and Italy.

LARSEN:

Thank you. And one more question Mr. Chairman. This is for Dr. Roberts. And it has to do with the Phased Adaptive Approach whether it's EPAA or APAA or where -- you know, the regional aspect of this and having to do with the numbers of destroyer platforms that you anticipate will be there.

Well, can you talk to us a little bit about coordination of your policy shop with the U.S. Navy and how you anticipate having the adequate number of Aegis destroyer platforms to implement this? Plus knowing for all we've got a lot of other things our destroyers need to do.

ROBERTS:

Well, the missing voice today on your -- on this panel is the joint staff. And Admiral Macy, I believe, is on foreign travel and is not available today.

But fundamentally, the answer to that question comes from them, meaning, the joint staff is responsible for adjudicating competing request from combatant commanders for scarce resources. And our function has been to set some policy goals to support the development of an acquisition strategy that grows capability as rapidly as we can afford, and to provide what policy context is needed for the joint staff to adjudicate these competing demands.

And I think that's -- it's fundamentally a responsibility of the joint staff.

LARSEN:

Thanks. We'll follow up with him, thank you.

Thank you, Mr. Chairman.

TURNER:

Well, thank you, gentlemen. I want to thank you for your dedication and your expertise. I want to personally thank Dr. Roberts and General O'Reilly for your work with the committee, both in the 101 sessions and in the private briefings that we've had and the cross-site briefings.

I can tell you that, you know - the substantial partners that has been made from -- you know, our hearings a couple of years ago, I think, certainly -- and the European allies were all very impressed with what has occurred and what has been achieved there and their support for the Phased Adaptive Approach. I appreciate you working cooperatively with the committee.

I think -- you know, what this has allowed us to do is to hone in on what the remaining items are, what the to-do list is, those items where we might need to exchange additional information. But I do gratefully appreciate the way and the manner in which you're working with the committee and the members, so I think it really helps.

By the time we get to this committee hearing, a lot of the questions that we have, have a whole lot of background that's been exchanged in between us and that really helps. So thank you very much.

With that, we'll be adjourned.

CQ Transcriptions, March 31, 2011

List of Panel Members and Witnesses PANEL MEMBERS:

REP. MICHAEL R. TURNER, R-OHIO CHAIRMAN

REP. TRENT FRANKS, R-ARIZ.

REP. DOUG LAMBORN, R-COLO.

REP. MO BROOKS, R-ALA.

REP. WILLIAM M. MAC THORBERRY, R-TEXAS

REP. MIKE D. ROGERS, R-ALA.

REP. JOHN FLEMING, R-LA.

REP. SCOTT RIGELL, R-VA.

REP. AUSTIN SCOTT, R-GA.

REP. HOWARD P. BUCK MCKEON, R-CALIF. EX OFFICIO

REP. LORETTA SANCHEZ, D-CALIF. RANKING MEMBER

REP. JIM LANGEVIN, D-R.I.

REP. RICK LARSEN, D-WASH.

REP. MARTIN HEINRICH, D-N.M.

REP. JOHN GARAMENDI, D-CALIF.

REP. C.A. DUTCH RUPPERSBERGER, D-MD.

REP. BETTY SUTTON, D-OHIO

REP. ADAM SMITH, D-WASH. EX OFFICIO

WITNESSES:

BRADLEY ROBERTS, DEPUTY ASSISTANT SECRETARY OF DEFENSE FOR NUCLEAR
AND MISSILE DEFENSE POLICY

LIEUTENANT GENERAL PATRICK O'REILLY, DIRECTOR OF THE MISSILE DEFENSE
AGENCY

DAVID AHERN, DEPUTY ASSISTANT SECRETARY OF DEFENSE FOR PORTFOLIO
SYSTEMS ACQUISITION

MICHAEL GILMORE, DIRECTOR OF OPERATIONAL TEST AND EVALUATION