

Stenographic Transcript
Before the

Subcommittee on Strategic Forces

COMMITTEE ON
ARMED SERVICES

UNITED STATES SENATE

HEARING TO RECEIVE TESTIMONY ON BALLISTIC MISSILE
DEFENSE PROGRAMS IN REVIEW OF THE DEFENSE
AUTHORIZATION REQUEST FOR FISCAL YEAR 2016 AND THE
FUTURE YEARS DEFENSE PROGRAM

Wednesday, March 25, 2015

Washington, D.C.

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1 HEARING TO RECEIVE TESTIMONY ON BALLISTIC MISSILE DEFENSE
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U.S. Senate

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Subcommittee on Strategic

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Forces

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Committee on Armed Services

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Washington, D.C.

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The subcommittee met, pursuant to notice, at 3:32 p.m.

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in Room SR-222, Russell Senate Office Building, Hon. Jeff

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Sessions, chairman of the subcommittee, presiding.

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Present: Senators Sessions [presiding], Fischer,

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Sullivan, Donnelly, and King.

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1 OPENING STATEMENT OF HON. JEFF SESSIONS, U.S. SENATOR
2 FROM ALABAMA

3 Chairman Sessions: We just left an Armed Services
4 Committee briefing with President Ghani and Dr. Abdullah, so
5 some of our members are still there participating in that,
6 but I wanted to go on and get started on this important
7 hearing.

8 Thank you for being with us. Thank you for the work
9 you have been doing, which I think is smart and sound and on
10 the right path, in general.

11 Ten years ago, the United States began initial
12 operations of the Ground-Based Midcourse Defense system, our
13 homeland missile capability. And today we enjoy a good
14 measure of protection against limited ICBM threats,
15 especially from rogue nations like North Korea or,
16 potentially, Iran.

17 In 2 years, we will increase that capacity from 30 to
18 44 interceptors. I think that was a good step. In 5 years,
19 we will enhance the GMD sensor network and begin to retrofit
20 the ground-based interceptors with a high-performance,
21 Redesigned Kill Vehicle. Also, I believe it will be
22 successful, and I believe that will be a major step forward.

23 Within 10 years, the plan is, in the words of Admiral
24 Syring, to "revolutionize our missile defense architecture"
25 by placing several kill vehicles atop each GBI, increasing

1 the number of lethal objects that can be intercepted with a
2 single GBI.

3 So the important question is whether Admiral Syring has
4 sufficient funding, because the threat continues to grow.
5 As it has evolved from the Strategic Defense Initiative
6 Organization to the Ballistic Missile Defense Organization
7 to today's Missile Defense Agency, the men and women who
8 design, develop, and deploy our homeland and regional
9 missile defenses deserve the thanks of the Nation.

10 I know that we are working hard to make sure that THAAD
11 is alert and with good morale and excellent leadership.

12 Admiral Syring, in particular, deserves credit for his
13 recommendation to modernize the entire GMD system, including
14 the interceptors, the sensors, and ground components,
15 especially with the financial constraints we are under. In
16 fact, this year's 5-year spending plan for MDA is about \$6
17 billion below the spending projection provided several years
18 ago.

19 A recent memo to the Secretary of Defense from the
20 chief of Naval Operations and chief of staff warns that
21 "ballistic missile threats are increasingly capable,
22 continue to outpace our active defense systems, and exceed
23 our services' capacity to meet combatant commanders'
24 demand."

25 Two service chiefs call for long-term BMD strategy that

1 addresses homeland and regional missile defense from a more
2 holistic approach, including nonkinetic means.

3 Perhaps General Mann can explain what prompted this
4 appeal, and Mr. McKeon can shed light on the Secretary's
5 views on it. The memo does raise an important point, which
6 is, what is the future of ballistic missile defense?

7 The MDA has been so focused on deploying our current
8 missile defense capabilities that it has had little time or
9 funding available to think about the next generation of
10 missile defense capabilities that will be necessary to
11 address the growing threat, although I know all of you have
12 given thought to that.

13 As Deputy Secretary Work recently noted, we need to
14 come up with other ideas to defeat this threat. I think
15 that is a good challenge to all of us.

16 While MDA does have an advanced technology component,
17 it is too limited, in my view, and what it can hope to
18 accomplish over the next 10 years is important. Perhaps
19 what is needed is a new Strategic Defense Initiative.

20 So I turn to our ranking member for his opening
21 remarks, and look forward to hearing from our excellent
22 witnesses.

23 Without objection, all statements will be entered into
24 the record.

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1 STATEMENT OF HON. JOE DONNELLY, U.S. SENATOR FROM
2 INDIANA

3 Senator Donnelly: Thank you, Mr. Chairman. I want to
4 thank Senator Sessions for holding this hearing.

5 Let me also thank our witnesses for testifying. We
6 very much appreciate the time you took to prepare for
7 today's hearing and for the work you do for our country.

8 Protecting our country and our forward-deployed troops
9 around the world is of utmost importance. I am pleased we
10 have begun to get our missile defense systems on track so
11 they perform reliably and effectively. We should continue
12 to improve our sensor and discrimination capabilities, so we
13 have a better picture of the threats.

14 And we need to continue to conduct smart simulation and
15 testing before we commit to buying new technologies. Fly
16 before you buy has been a tough lesson learned in these
17 programs.

18 While we continue to improve our homeland defense
19 systems, we should not take our eyes off the ball when it
20 comes to protecting our deployed troops and reassuring our
21 allies and partners. The demand from our combatant
22 commanders for Aegis ships, for THAAD, and for Patriot
23 batteries remains high. We need to consider how we can best
24 allocate these systems and effectively train the warfighters
25 who will operate them to provide the protection that is

1 needed in today's budget-constrained environment.

2 Finally, I would be remiss if I didn't note the great
3 relationship between MDA and my constituents at Purdue in
4 West Lafayette. You have formed a great partnership that I
5 think adds tremendous value to our Nation, and I know that
6 the Boilermakers are glad to support MDA's mission.

7 Thank you again for coming today, and I look forward to
8 the dialogue.

9 Chairman Sessions: Thank you, Senator Donnelly.

10 We will have 6-minute rounds, and maybe we can start
11 right off.

12 Senator King, do you have an opening statement?

13 Senator King: No, Mr. Chairman.

14 Chairman Sessions: Oh, from the witnesses. Well, we
15 would like to hear your opening statements.

16 Mr. Secretary, would you like to start first?

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1 STATEMENT HON. BRIAN P. McKEON, PRINCIPAL DEPUTY UNDER
2 SECRETARY OF DEFENSE FOR POLICY, DEPARTMENT OF DEFENSE

3 Mr. McKeon: I would be happy to, Mr. Chairman.

4 Chairman Sessions: Pardon me for getting ahead of
5 myself.

6 Mr. McKeon: No worries.

7 Mr. Chairman, Senator Donnelly, Senator King, thank you
8 for the opportunity to be here today to testify on the
9 fiscal year 2016 budget request for missile defense, which
10 we regard as a critical national security priority. We are
11 grateful for your attention to and support of this critical
12 mission of defending our homeland, our partners and allies,
13 and deployed forces.

14 The President's budget requests \$9.6 billion in fiscal
15 year 2016, of which \$8.1 billion is for the Missile Defense
16 Agency to develop and deploy missile defense capabilities
17 that protect the U.S. homeland and strengthen regional
18 missile defenses.

19 Sequestration levels would, of course, be significantly
20 lower and, as Secretary Carter has said, would make the
21 Nation less secure. Even without sequestration, however, in
22 these austere times, there is not enough money to fund every
23 program that we might wish to have. We are required to
24 prioritize investments accordingly.

25 As members of this subcommittee, you are well aware of

1 the ballistic missile threats and trends. I will focus on
2 several key policy priorities for addressing these threats:
3 defending the United States against limited long-range
4 ballistic missile attacks, strengthening defense against
5 regional missile threats, fostering defense cooperation with
6 partners, and examining how to advance the missile defense
7 technology base in a cost-effective manner.

8 The U.S. homeland is currently protected against
9 potential ICBM attacks from states like North Korea and
10 Iran. To ensure that we stay ahead of the threat, we are
11 continuing to strengthen our homeland defense posture and
12 invest in technologies to better enable us to address
13 emerging threats in the next decade. This requires
14 continued improvement to the Ground-Based Midcourse Defense
15 system, including enhanced performance of the ground-based
16 interceptor and deployment of new sensors.

17 As you noted, Mr. Chairman, we are planning to deploy
18 14 additional interceptors in Alaska. We are on track to do
19 that by the end of 2017. These interceptors, along with the
20 30 currently deployed, will provide protection against both
21 North Korean and Iranian ICBM threats as they emerge and
22 evolve.

23 We have also deployed a second forward base missile
24 defense radar in Japan that is operating today thanks to the
25 hard work of MDA and the Japanese Government. This radar

1 strengthens both our homeland and regional defenses.

2 This year's budget request also reflects the
3 department's commitment to modernizing the GMD system. It
4 will move us toward a more reliable and effective defense of
5 the United States. It includes funding for development of a
6 new radar that, when deployed in Alaska, will provide
7 persistent sensor coverage and improve our discrimination
8 capabilities against North Korea. It also continues funding
9 for the redesign of the kill vehicle for the ground-based
10 interceptor.

11 As directed by the Congress, the MDA is also conducting
12 environmental impact studies at four sites in the Eastern
13 part of the United States that could host an additional GBI
14 missile field. These will be completed next year.

15 The cost of building an additional missile defense site
16 in the United States is very high. Given that the ICBM
17 threat from Iran has not yet emerged and the need to fix the
18 current GBI kill vehicles, the highest priorities for the
19 protection of the homeland are improving the reliability and
20 effectiveness of the GBI and improving the GMD sensor
21 architecture.

22 The current GMD system provides coverage of the entire
23 United States from North Korean and potential Iranian ICBMs,
24 and no decision has been made to deploy an additional
25 missile field in the United States.

1 Our request also continues to implement deployment of
2 missile defenses tailored to security circumstances in
3 Europe, the Middle East, and the Asia-Pacific. Our focus is
4 on developing and fielding missile defense capabilities that
5 are mobile and relocatable, which allow us to address crises
6 as they emerge.

7 We also encourage our allies and partners to acquire
8 missile defense capabilities and to strengthen operational
9 missile defense cooperation.

10 This year, we initiated a Joint staff-led effort to
11 update the 2012 Joint Capabilities Mix study to ensure we
12 are making the most effective regional missile defense
13 investments possible. In a regional context, we know we
14 will not be able to purchase enough interceptors to rely
15 purely on missile defense for the duration of a conflict.

16 In such a situation, we must protect our most valuable
17 assets, while also drawing on our other capabilities to
18 provide a comprehensive approach to defeating the threat
19 from ballistic missiles.

20 We must continue to look ahead. This means ensuring
21 that our investment strategy and priorities balance the
22 needs of addressing the most dangerous threats we confront
23 today while positioning us to respond to threat developments
24 in the next decade. And our budget contains various
25 technology investments in that regard.

1 In conclusion, the austere budget environment will
2 continue to compel us to make difficult choices.
3 Sequestration would undermine our ability to improve the GBI
4 fleet, place new and advanced sensors, and defend our
5 deployed forces and allies against ballistic missile attack.

6 Quite simply, it would hinder our ability to keep up
7 with the growing threat. We believe we cannot let our guard
8 down, much less in the current security environment, so we
9 urge you to focus on repealing sequestration, and we would
10 ask you to fund our request for missile defense.

11 Thank you very much.

12 [The prepared statement of Mr. McKeon follows:]

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1 Chairman Sessions: Thank you.
2 Admiral Syring?
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1 STATEMENT OF VICE ADMIRAL JAMES D. SYRING, USN,
2 DIRECTOR, MISSILE DEFENSE AGENCY DEPARTMENT OF DEFENSE

3 Admiral Syring: Thank you, Chairman Sessions, Ranking
4 Member Donnelly, Senator King, Senator Fischer. I
5 appreciate the opportunity to testify today in front of you.
6 I will be very brief in my opening statement.

7 Our budget request for fiscal year 2016 maintains the
8 commitment to operate and sustain our homeland defenses,
9 including the planned deployment of 44 GBIs by the end of
10 2017 and GBI fleet reliability enhancements. As was noted,
11 we will also continue development of the Redesigned Kill
12 Vehicle for improved reliability, availability, performance,
13 and producibility, with initial deployment after successful
14 testing planned in 2020.

15 We anticipate contract award for the long-range
16 discrimination radar development, deployment, and initial
17 operation before the end of 2015 with fielding by 2020.

18 For regional missile defense, our 2016 budget request
19 supports the continued procurement of the SM-3 IB and THAAD
20 interceptors. Also, the Aegis Ashore site in Romania will
21 be completed by the end of 2015, and we are on track to
22 deploy Aegis Ashore Poland by the end of 2018.

23 Finally, will continue our discrimination sensor,
24 weapons technology, directed energy, Common Kill Vehicle,
25 and other technology maturation initiatives at an increased

1 rate in this budget request. These investments will help us
2 deploy a future BMDS architecture more capable of
3 discriminating and killing reentry vehicles with a high
4 degree of confidence.

5 Mr. Chairman, members of the subcommittee, this is a
6 sound budget request. I believe our Nation is well-defended
7 and that our missile defense programs are on track to
8 improve protection for our deployed forces, allies, and
9 friends with the support of this budget.

10 Thank you, sir, and I look forward to your questions.

11 [The prepared statement of Admiral Syring follows:]

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1 Chairman Sessions: Thank you.

2 General Mann?

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1 STATEMENT OF LIEUTENANT GENERAL DAVID L. MANN, USA,
2 COMMANDING GENERAL, U.S. ARMY SPACE AND MISSILE DEFENSE
3 COMMAND/ARMY FORCES STRATEGIC COMMAND AND JOINT FUNCTIONAL
4 COMPONENT COMMAND FOR INTEGRATED MISSILE DEFENSE

5 General Mann: Chairman Sessions, Ranking Member
6 Donnelly, Senator King, Senator Fischer, and also your
7 staff, thank you for your continued support of the soldiers
8 and civilians and our families.

9 This is my third appearance before the subcommittee.
10 It is, indeed, an honor to testify before you today to
11 discuss the importance of missile defense to our Nation and
12 the need to maintain these capabilities in the face of a
13 maturing threat and declining budgets.

14 Today, I want to briefly summarize the missions of the
15 organizations that I represent.

16 First, the Space and Missile Defense Command Army
17 Forces Strategic Command that serves as a force provider to
18 our combatant commands. Three core tasks for this
19 organization: first, to provide trained and ready global
20 missile defenders today; to build future capabilities and
21 structure for tomorrow; and then also to evaluate critical
22 technologies to address future threats.

23 I also represent the Joint Functional Component Command
24 for Integrated Missile Defense, which supports USSTRATCOM in
25 integrating and synchronizing our global missile defense

1 operations. As many of you know, for example, today, we
2 have over 300 full-time National Guardsmen located in Fort
3 Greely, Alaska, and Vandenberg Air Force Base, California,
4 who operate the ground-based missile defense system. It
5 represents the Nation's only ground-based defense against
6 limited intercontinental ballistic missile attack. The
7 soldiers are very good at what they do, and they take their
8 mission very seriously.

9 In addition, JFCC IMD executes five key tasks. Number
10 one, we synchronize operational level planning. We support
11 ongoing operations. We integrate training exercises and
12 test activities globally. We provide recommendations on the
13 allocation of missile defense assets. And finally, we
14 advocate for future capabilities.

15 Today, the missile defense threat continues to grow
16 both in terms of numbers and sophistication. We as a Nation
17 cannot afford a decrease in our readiness or capabilities.
18 That said, we are extremely concerned about sequestration's
19 impact on our readiness, and our ability to evaluate and
20 test new technologies in order to stay ahead of the threat.

21 This committee's continued support of missile defense
22 operations, and the men and women who develop and deploy our
23 systems, is essential.

24 Again, I appreciate the opportunity to discuss our
25 Nation's missile defense capabilities, and I look forward to

1 addressing any questions you may have. Thank you.

2 [The prepared statement of General Mann follows:]

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1 Chairman Sessions: Thank you.
2 Mr. Gilmore?
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1 STATEMENT OF HON. J. MICHAEL GILMORE, DIRECTOR OF
2 OPERATIONAL TEST AND EVALUATION, DEPARTMENT OF DEFENSE

3 Mr. Gilmore: Mr. Chairman, members of the committee, I
4 will briefly summarize the highlights of my written
5 testimony.

6 Testing conducted during the past 5 years of the
7 regional theater missile defense systems -- that is Aegis,
8 Terminal High Altitude Aerial Defense, and Patriot -- have
9 demonstrated their effectiveness under an expanding set of
10 realistic operational conditions.

11 During that same period, testing of the Ground-Based
12 Midcourse Defense system has revealed a number of important
13 engineering shortfalls that needed correction, but the
14 intercept failures caused by those shortfalls precluded
15 demonstration of GMDs effectiveness under a broader set of
16 realistic operational conditions.

17 However, if we execute the integrated master test plan
18 that Admiral Syring has developed over the next several
19 years, that will expand our knowledge and demonstration of
20 the capabilities of GMD under a broader set of operational
21 conditions, to include an upcoming test against an ICBM
22 target, testing of salvos using salvos of interceptors, and
23 testing of multiple simultaneous engagements, as well as
24 testing in the presence of more realistic countermeasures.

25 As I mentioned, several Exo-Atmospheric Kill Vehicle

1 fixes that were important were demonstrated during last
2 year's developmental flight test, which successfully
3 intercepted the target. That is definite progress.

4 Nonetheless, as Admiral Syring himself has pointed out,
5 the reliability and availability of the operational ground-
6 based interceptors are less than desired. And that is why
7 the Admiral is undertaking a reliability improvement program
8 that is now funded. That is very important to improve the
9 reliability and availability of the interceptors.

10 Although, in the long run, the solution there is the
11 Redesigned Kill Vehicle based on a more rigorous systems
12 engineering process.

13 The next flight test of the GMD system will take place
14 later this year. It will be a nonintercept test of a
15 Capability Enhancement-II kill vehicle, similar to the one
16 that was just tested, to demonstrate the performance of
17 alternate different thrusters, which again are supposed to
18 help with some of the problems that have been demonstrated
19 in past tests, and the end-to-end discrimination of a
20 complex target scene including countermeasures.

21 In my view, a robust ability to discriminate is
22 critical for an effective homeland defense. And the
23 planning and analysis being conducted for this test have
24 already revealed significant issues that Admiral Syring is
25 using to plan his future program.

1 In the fourth quarter of fiscal year 2016, MDA plans to
2 conduct, as I mentioned just a moment ago, the first
3 intercept of intercontinental ballistic missile. This is a
4 critical flight test, as well as subsequent salvo tests and
5 multiple simultaneous engagement tests, because those are
6 going to be conducted under realistic conditions reflecting
7 how the system would actually be used.

8 The CE-I interceptor is the oldest in the GMD
9 inventory. Its last flight test in fiscal year 2013 was a
10 failure, so I recommend that we retest as soon as possible a
11 CE-I interceptor, CE-I equipped interceptor, incorporating
12 changes in hardware and software that are being made to
13 correct the problems that were revealed in the past flight
14 test.

15 Aegis Ballistic Missile Defense with Standard Missile-3
16 Block IB completed initial operational testing and
17 evaluation in early fiscal year 2014. Testing has
18 demonstrated Aegis is capable of defeating short-range and
19 simple separating medium-range ballistic missile threats and
20 shorter range intermediate-range threats, and its
21 effectiveness depends upon the specifics of the threat and
22 the circumstances of deployment.

23 However, there have been third stage rocket motor
24 failures common to the SM-3 IA and IB, and MDA has
25 determined that a redesign of that Third-Stage Rocket Motor

1 nozzle is needed to increase the missile's reliability. In
2 my view, the new design will have to be flight tested, not
3 just ground tested, a number of times before we can have
4 confidence that those fixes and improved reliability is as
5 desired.

6 Later this year, we are going to do Flight Test
7 Operational-02, the second operational flight test at a
8 system level, of BMDS elements. That will be important.
9 There are two events that are planned, one involving Aegis
10 Ashore, the testing facility at the Pacific Missile Range
11 Facility, as well as testing using Aegis ships in a second
12 event. Both of those events will provide information that
13 is critical to my evaluation of the effectiveness of
14 European Phased Adaptive Approach Phase 2, which the Nation
15 wants to declare operational by the end of the year.

16 In the fiscal year 2015 appropriations bill, Congress
17 reduced MDA's funding for testing and flight test targets.
18 In response, MDA, consistent with its priorities, eliminated
19 one particular Aegis BMD flight test. I would, certainly,
20 urge that MDA work with the Congress, if at all possible, to
21 restore that flight test because it is against a critical
22 ballistic missile threat. And I would be happy to elaborate
23 on the details in the appropriate setting.

24 THAAD, Terminal High Altitude Area Defense, has
25 demonstrated effectiveness against short- and medium-range

1 targets. And as part of FTO-02 later this year, it will
2 hopefully demonstrate effectiveness against complex
3 separating short-range ballistic missiles and prove the
4 effectiveness of its advanced discrimination algorithms. So
5 that test will provide important information not just about
6 Aegis, but also about THAAD.

7 In my written testimony, I discuss concerns with
8 Patriot reliability and training. I certainly recommend the
9 services and MDA work to address those concerns.

10 Finally, flight testing and modeling and simulation of
11 the regional theater BMDS systems -- that is Patriot, THAAD,
12 and Aegis -- are sufficient to support a quantitative
13 assessment of the systems performance against short- and
14 medium-range ballistic missile threats.

15 I provide those estimates, they are classified, in the
16 classified section of the annual report I just submitted to
17 Congress.

18 However, flight testing and modeling and simulation are
19 not yet sufficient. And in my judgment, based on current
20 program plans and the pace of testing, they will not be
21 until the beginning of the next decade to enable me to
22 provide a rigorous quantitative assessment of GMD
23 effectiveness.

24 Thank you.

25 [The prepared statement of Mr. Gilmore follows:]

1 Chairman Sessions: Thank you, Dr. Gilmore. I know
2 that you are the director of the Office of Test of
3 Evaluation. You take pride in your independence. You might
4 share with the committee how it is that you're structured as
5 to give you independent analysis on what we're funding and
6 the testing of it.

7 Mr. Gilmore: Well, under the law, my office reports
8 directly to the Secretary of Defense, as well as to the
9 Congress, on the effectiveness, suitability, and
10 survivability of weapon systems. And under subsequent
11 NDAA's, we were given full access to information from the
12 Missile Defense Agency, notwithstanding its removal from the
13 normal acquisition oversight process in the department.

14 I have worked very cooperatively with both Lieutenant
15 General O'Reilly and Admiral Syring. There has been a
16 complete free flow of information between our offices. I
17 have found our interactions to be very useful, and I would
18 invite Admiral Syring to make any comments he wants to make
19 in that regard, obviously.

20 But Admiral Syring and no one else in the department
21 reviews or coordinates on the reports that I write,
22 including the report that I just recently submitted to
23 Congress, which is mandated by a past NDAA, although they
24 can certainly point out if we have made any mistakes, and so
25 far, no one has done that.

1 Chairman Sessions: That is unusual.

2 Let me just say this, we have a lot to do, but I do
3 think it is important that we have an independent evaluator
4 not in the normal chain of command that reviews these key
5 activities, because they are complex, and we need to be
6 careful about it.

7 Admiral Syring, we are going to be adding the 44 GBIs,
8 and we have the plans to bring forward the newer, updated
9 CE-II kill vehicle.

10 But then again, you want to move forward with the RKV.

11 The RKV will be a new and more advanced system that could
12 defend against simultaneous attack from North Korea or Iran
13 by 2025, as I understand it.

14 So explain to us what advantages we get from the RVK.
15 Are the plans moving forward technologically as you would
16 like? Do you foresee any engineering problems that would be
17 difficult or impossible to overcome?

18 Admiral Syring: Sir, thank you.

19 The plan for the RVK was started last year, and it was
20 started because of the concerns that we have had with the
21 early design of the EKV, which has evolved over the years
22 with different versions. But essentially, the prototype
23 nature of the design has remained, in terms of it was
24 fielded very rapidly and without a complete system
25 engineering turn, which I have testified on publicly in the

1 past.

2 The RVK will allow us to take a step back with what we
3 have learned and design a kill vehicle that is modular,
4 producible, testable, before we flight test. I think that
5 is very important, to be able to have that modularity and
6 test at the component level and find issues on the ground
7 before you find them in flight, as we have experienced.

8 We need to get the reliability up of the overall GBI,
9 and the RVK will do that as we begin to field in 2020 with
10 the pace up to 2025 not yet defined. But if that is
11 successful, we will want to field that very rapidly back to
12 the older CE-I fleet and some of the older CE-IIs, and
13 upgrade all 44 in a very short amount of time, hopefully.

14 Chairman Sessions: You have 44. We are going to 44.
15 And this new kill vehicle, what can you tell us in this open
16 session about the advantages of making the 44 missile
17 interceptors more effective and valuable with this
18 Redesigned Kill Vehicle.

19 Admiral Syring: Sir, to make the best use of the 44
20 that will be in the ground by 2017, there are two
21 fundamental issues that improve our capability and capacity.

22 One is the reliability of the interceptor, and two is the
23 discrimination capability of the system. Those two
24 fundamental precepts go into defining the Northern Command
25 commanders shot doctrine and his use of interceptors to

1 defeat more threats with more complexity.

2 Chairman Sessions: Well, I will talk to you about
3 that. I think we have had closed hearings on that. I think
4 you are on the right track. I think that is a smart step.
5 It will make each one of those 44 interceptors more
6 valuable.

7 What about the Multi-Object Kill Vehicle, the MOKV?
8 You said in your prepared statement, ultimately, these
9 Multi-Object Kill Vehicles will revolutionize our missile
10 defense architecture.

11 What kind of revolutionary advance would that be? And
12 how confident are you that it can be done? And do we have,
13 at this point, the funding necessary to keep it on track?

14 Admiral Syring: Sir, let me take that in parts.

15 Several years ago, we explored technology and matured
16 technology to a point on the Multiple-Object Kill Vehicle,
17 the MKV, at the time, up to a point where the department
18 decided that the technology was not maturing fast enough.
19 The requirements were really not firm. And for a whole
20 bunch of reasons that I am not familiar with at a detailed
21 level, that was terminated. Secretary Gates was eloquent in
22 the BMDR on those reasons that are available.

23 That said, ultimately, we want to be able to get
24 Multiple Kill Vehicles into a complex discrimination scene
25 to be able to shoot less interceptors that can go after

1 multiple lethal objects. That is what the MKV, MOKV, can
2 bring to us.

3 Now, sir, we have asked for money in this year's budget
4 to ramp that effort up. It is not a program yet. We have
5 requested money to get us down the path of concept
6 development and to revisit the technology and to understand
7 where that technology is today, and then come back with a
8 program plan on how best to achieve that.

9 But I can assure you, sir, it will be done
10 independently, in terms of not concurrently with what is
11 going on with the RVK. The RVK will, certainly, inform our
12 assessment of the feasibility of an MOKV, but it is not a
13 new development effort at this point. I would characterize
14 it as a concept development effort with us doing a lot of
15 work this year to define that better.

16 Chairman Sessions: Well, thank you. The way I
17 understand this, you are talking about having a system that
18 can identify more accurately the nontargets instead of junk,
19 going after junk, having multiple kill vehicles on one
20 rocket launch vehicle, and be more effective. So it will
21 multiply the capabilities of the interceptors that we have.

22 Admiral Syring: Yes, sir.

23 Chairman Sessions: Senator Donnelly?

24 Senator Donnelly: Thank you, Mr. Chairman. And thanks
25 to all the witnesses.

1 Admiral Syring, you testified before other committees
2 on this particular topic I am going to ask you about, but
3 for the public record of this committee, does our current
4 ground-based missile defense system cover all the United
5 States, including the East Coast, against potential threats
6 from North Korea and Iran?

7 Admiral Syring: Yes, sir.

8 Senator Donnelly: You have also stated that the
9 greater priority for investment is improving your sensors,
10 your discrimination capabilities, and the overall
11 reliability of the GMD system. Could you describe how this
12 will address the evolving threat?

13 Admiral Syring: The threat is from North Korea, and
14 let me just take North Korea first.

15 The threat from North Korea is, at least at the short-
16 range level, increasing in complexity. We have to assume
17 that technology at the short- and medium-range level will
18 eventually migrate to the longer range level.

19 So the complexity of the threat must be accounted for,
20 and the potential of that to increase, and we must be
21 prepared for that. That is the whole premise of the
22 discrimination radar, to be able to better defend against a
23 more complex threat with fewer interceptors.

24 Senator Donnelly: There has been some discussion
25 regarding DIA's assessment of Iran's ICBM capability. Are

1 you familiar with this assessment? Can you clarify a little
2 bit for us?

3 Admiral Syring: Thank you for the opportunity to
4 clarify what I said at the hearing last week.

5 The DIA's assessment is that Iran is capable of flight
6 testing an ICBM in 2015. There is not a likelihood
7 expressed with that assessment. And any future assessment,
8 I will leave to DIA as they evaluate that this year.

9 Senator Donnelly: Thank you.

10 Secretary McKeon and General Mann, what is the
11 department's plan for responding to the high demand for
12 THAAD and Patriot systems? Are there options you are
13 looking at to increase the coverage or flexibility of these
14 systems?

15 Mr. McKeon: Senator Donnelly, as you are aware, we
16 have a lot of stress on the Patriot force, and we have more
17 demand from the COCOMs for Patriot battalions than we have
18 in the Army.

19 We are working on a modernization on the Patriot, which
20 will effectively allow them to deploy without the
21 headquarters unit, which will allow us to have more units
22 able to deploy. We will be able to significantly increase
23 the number of deployable battalions. So that modernization
24 program is going on over the next several years.

25 General Mann: Yes, Senator. In addition to what the

1 Secretary has also shared, as you know, there is a holistic
2 review that is taking place. There are a lot of different
3 studies that are underway, led by the Joint staff, looking
4 at how we address an evolving threat.

5 Quite frankly, it goes beyond just the number of active
6 defense platforms, whether BMD ships, or Patriot, or THAAD.
7 We really need to take a broader look at it, at the dilemma,
8 and really try to leverage, whether cyber, electronic
9 warfare, attack operations, where instead of waiting until
10 after the missile is shot, go after the archer, as Admiral
11 Gortney likes to say. So that is one of the things that we
12 are looking at.

13 Also, we are looking at nonkinetic applications, like
14 directed energy. A lot of applications, a lot of promise in
15 those technologies. They are still being developed. MDA is
16 looking at some of that directed energy and where it could
17 be applied against ballistic missiles.

18 In the Army, we are looking at how we can use directed
19 energy. We have had a lot of very, very successful tests
20 against mortars and UAVs, and how can we utilize directed
21 energy and also our indirect fire protection capability to
22 address the cruise missile threat.

23 So there are lot of modernization efforts. But also,
24 we need to look more holistically versus just the number of
25 platforms you put out there.

1 Senator Donnelly: Okay.

2 And I guess, Dr. Gilmore, this would be a follow-up to
3 that question, which is in your prepared statement, you
4 expressed concerns with the amount and quality of training
5 that our soldiers are getting on THAAD and on Patriot.

6 Could you elaborate a little bit on this? Are there
7 ways that this committee can help solve that problem?

8 And, General Mann, if you would also kick in on this.

9 Mr. Gilmore: It all comes down to resources. There
10 are a finite number of resources, in terms of training
11 capability, training aids, simulators. And the Army has a
12 plan to improve those training aids and training systems for
13 both THAAD and Patriot over the long run.

14 But as the other members of the panel have testified,
15 there is a great deal of demand for the use of these assets,
16 and there is a large number of deployments that are ongoing.
17 So the pace of training in what we have seen in tests isn't
18 keeping up with the demand and isn't keeping up with the
19 increasing complexity of the capabilities of the system as
20 they are modernizing. That is true, in particular, of
21 Patriot.

22 So I think it is a matter of resources. And in a
23 resource-constrained environment, Admiral Syring and the
24 services have to make hard judgments. And if there are high
25 demands for deploying these systems and having a larger

1 number of systems, it is possible that some of the training
2 can be given --

3 Senator Donnelly: General, I'm about out of time, if
4 you want to kick in for a few seconds?

5 General Mann: Yes. First of all, I just want to make
6 sure that I assure this committee that our soldiers are
7 properly prepared to execute operations. Naturally, it
8 would be great to have a test battalion capability that we
9 have had in the past. But because of the demand for this
10 capability, we have had to use that test battalion to meet
11 operational requirements. So I just want to make that very
12 clear to the committee.

13 We are looking at training aids and devices that we can
14 use to help with the training and getting after that. We
15 continue to raise the level of difficulty with our testing
16 and our exercises, and continue to push the envelope in
17 terms of presenting a challenging scenario for our soldiers
18 to get after.

19 This goes back to my earlier comments about the
20 importance of sequestration. I don't want to belabor the
21 point, but when you are looking at the effects of
22 sequestration, not only does it have an impact on the
23 readiness, which we are talking about, but on how we are
24 able to address some of these evolving threats that are out
25 there with new technologies. That is the reason why we are

1 very, very concerned.

2 Senator Donnelly: Thank you, General.

3 Thank you, Mr. Chairman.

4 Chairman Sessions: Senator Fischer?

5 Senator Fischer: Thank you, Mr. Chairman, and thank
6 you, gentlemen, for being here today.

7 Admiral, as we look at the threats out there, what
8 benefits do you see if we would deploy the SBX to the East
9 Coast, given the threats that we are looking at with Iran,
10 especially in 2020 into 2025? And wouldn't additional
11 sensor capabilities be beneficial, even necessary?

12 Admiral Syring: Thank you for your question, ma'am.

13 Let me start with the last. Yes, additional sensor
14 capabilities are not just nice to have but will be necessary
15 beyond what we have asked for in this budget.

16 Second, SBX is fulfilling a very important role today
17 in the Pacific, with all the testing that we do and for a
18 surge capability that we provided to the Northern Command
19 commander when the situation arises.

20 That is the importance, ma'am, of what we are doing
21 with the continued request of the long-range radar in
22 Alaska, some thinking about additional sensor capability in
23 Hawaii.

24 And I think, in that priority order, when those are
25 complete, you will see us offer the option to the Northern

1 Command commander to move SBX to the East Coast. That will
2 be his decision, and it will be predicated on the ability to
3 do our testing in the Pacific, giving comfort to him that he
4 is covered in an operation, if he needs the platform.

5 I think we have it right, in terms of the priority of
6 that order, in terms of North Korea certainly, as the DIA
7 has said, can flight test at any time. And we are focused
8 on that assessment and that very real threat today in the
9 Pacific.

10 Senator Fischer: If you would, though, be looking at
11 the possibility of deploying it to the East Coast, how much
12 lead time would you need for that?

13 Admiral Syring: The approvals would have to happen,
14 and it would be months, not years.

15 Senator Fischer: And have you broached the topic at
16 all with NORTHCOM command?

17 Admiral Syring: Not on a formal level, in any way.

18 Senator Fischer: Do you know how it would be paid for
19 and who would man it?

20 Admiral Syring: The request this year is roughly \$70
21 million a year for the limited test support that it provides
22 today in the underway time. I assume we would assess that
23 budget adequacy for the future and the operational need on
24 the East Coast.

25 Senator Fischer: And where you would say it would take

1 months, not years, to have this completed, are you
2 comfortable with that in assessing the threats that are
3 before us?

4 Admiral Syring: Yes, ma'am. I am comfortable with
5 what I understand, in terms of where Iran is today and the
6 development of their ICBM technology and that threat.

7 Senator Fischer: Thank you.

8 Mr. McKeon, has the department looked at any policy, at
9 improving the sensor capabilities, as we look to the growing
10 threats from Iran?

11 Mr. McKeon: Well, Senator, as Admiral Syring just
12 said, the SPX in the Atlantic would be an option down the
13 line, once we get our long-range discrimination radar in
14 place in Alaska to face the North Korean threat. That is
15 the focus right now, improving our sensor capability against
16 North Korea.

17 Senator Fischer: And do you agree that we would have
18 plenty of lead time with the threats from Iran that we are
19 going to be facing I think in the not too far future?

20 Mr. McKeon: Yes, I believe so. Our current system is
21 still adequate to deal with the current Iranian threat and
22 how we expect it to evolve in the next several years.

23 Senator Fischer: Is the department, though, taking any
24 formal policy discussions on this?

25 Mr. McKeon: We have not had that at my level. If

1 somebody has at a lower level, it hasn't bubbled up to me.
2 I can double check for you, Senator, but I don't think we
3 have taken a formal policy review of this question.

4 Admiral Syring: If I may, sir, there is an extensive
5 sensor AOA that the department is conducting. It is looking
6 at all sensor options for many different applications, but
7 missile defense is part of that. And it, certainly, will
8 account for our need on the East Coast in the future.

9 I would also add, if I can, that the work we have done
10 with integrated data terminal in Fort Drum, the IDT in Fort
11 Drum that will come online in 2017, helps us a lot with the
12 Iranian threat today. I'm very comfortable and the
13 warfighter is very comfortable with that increasing
14 capability that will be online here.

15 Senator Fischer: Thank you very much.

16 Thank you, Mr. Chairman.

17 Chairman Sessions: Thank you.

18 Senator King?

19 Senator King: Gentlemen, you may have heard that there
20 is an idea kicking around here to end-run the Budget Control
21 Act and the sequester by pumping up the OCO funds.

22 Have you done any analysis of how that would actually
23 work and where that money would go within the department?
24 Would that help with your issues? Talk to me about this
25 idea.

1 Mr. McKeon: Senator King, I don't know that we have
2 done a formal analysis. That would probably be the
3 comptroller who would be looking at that. In terms of
4 Admiral Syring's budget, there is not any money requested in
5 the OCO. It is all in the base. So I'm not sure it would
6 make much of a difference for missile defense.

7 Senator King: My understanding of this idea is just to
8 send a bunch of OCO money to the Pentagon and say, do with
9 it what you will. I may be incorrect.

10 Is that the way you are hearing it?

11 Chairman Sessions: That has some truth to it.

12 [Laughter.]

13 Chairman Sessions: Not completely so.

14 Senator King: All right, I don't know the details, but
15 my question is, if there was an additional \$50 billion of
16 OCO money, would it end up with you? Perhaps you just don't
17 know at this point, because we don't know the details of
18 what this proposal looks like.

19 Admiral Syring: Sir, I don't know. I don't know the
20 mechanics of that.

21 Senator King: Okay.

22 General Mann: Senator, if I could just add, though,
23 because I think there has been discussion about the
24 President's budget versus the House version of what you are
25 alluding to. I can just say that it would be very, very

1 important to really look at the base versus OCO. Because of
2 predictability and making sure that our programs are stable
3 over years versus episodic rises in the budget and falling
4 off the next year, we would be recommending that the base be
5 looked at.

6 Senator King: That is a very important point. In
7 other words, a one-time OCO infusion doesn't necessarily --
8 in fact, given your sort of by definition long-range
9 program, it would not be necessarily all that helpful. That
10 is your testimony?

11 General Mann: Obviously, we would be thankful for any
12 additional resources that we would be given, but where you
13 place them, again, I think placing them in the base would be
14 a lot more advantageous to our programs.

15 Senator King: Thank you. There are many of us trying
16 to find a way to do that.

17 How much does one GBI missile with kill vehicle cost?

18 Admiral Syring: The budget number today, in today's
19 costs, we don't have any requested this year, Senator. The
20 request for additional GBI starts out in 2018. The budget
21 number is \$75 million each, buying two per year.

22 Senator King: That leads me to my next question. You
23 mentioned directed energy. It seems to me that is a very
24 promising development, because the cost of each missile, if
25 you will, or railgun would be in the dollars instead of

1 millions dollars. Is that part of your calculus?

2 Admiral Syring: Yes, sir. We are requesting this year
3 an increase in directed energy funding, which is detailed in
4 the budget that we have submitted for continued technology
5 maturation, and then demonstration of a down-select of a
6 technology by 2018, and then a demonstration by 2020 of a
7 low-power directed energy platform.

8 Senator King: Directed energy wouldn't work at the
9 top, at the apogee. Where would it come into play? On the
10 downward slope or on the upward slope?

11 Admiral Syring: So two applications, sir, in terms of
12 how we view directed energy. There are other parts of the
13 BMDS that it will help with, and I will just leave it at
14 that, in an unclassified setting.

15 Senator King: Thank you.

16 Admiral Syring: But there is no doubt a boost phase
17 intercept concept that we pursued with airborne laser in the
18 last decade, that the technology that I am working on today
19 with electric lasers, solid-state lasers, would build upon
20 that success in a different technology.

21 Senator King: Would sequestration impact that budget
22 for this development of this directed energy program?

23 Admiral Syring: Yes, sir. It would impact everything
24 in terms of the numbers that are being talked about. I
25 cannot get all of that budget reduction out of just the new

1 start programs, which are critically important. There are
2 other parts of the MDA budget that we would have to go to
3 maintain the commitment of 44 GBIs by 2017, and our European
4 commitment as well.

5 So, no doubt, directed energy would be impacted.

6 Senator King: That would be pennywise and pound
7 foolish, in my view.

8 To what extent is this whole program reliant on
9 satellite information?

10 Admiral Syring: I will keep it unclassified, sir.

11 Senator King: To the extent you can.

12 Admiral Syring: The Overhead Persistent Infrared
13 assets, specifically the SBIR program, that brings DSP and
14 the LEO and HEO satellites, provide the initial detection of
15 the lunch at the areas that we are interested in.

16 Senator King: So the persistence and vulnerability or
17 lack thereof of our satellite assets is an important part of
18 this whole strategy?

19 Admiral Syring: Absolutely.

20 Senator King: Because we have had testimony on that
21 subject as well. I think that is something we need to pay
22 close attention to, in terms of where we go in our satellite
23 strategy.

24 Admiral Syring: I would agree.

25 Senator King: Thank you.

1 Thank you, Mr. Chairman.

2 Chairman Sessions: Senator King, I think it is still
3 incumbent on the Congress, when we appropriate money for the
4 Defense Department Overseas Contingency Operating and base
5 budget, to set forth where those monies are going to be
6 spent. So we have to pay real attention to that in our
7 authorizing and Appropriations Committee. And I think the
8 numbers that they have asked for, for this program, at the
9 President's budget, we ought to try to achieve that.

10 I think there will be a way to do that, but I
11 appreciate your concern. It is worth talking about.

12 Senator Sullivan, we are glad to have you on the
13 committee.

14 Senator Sullivan: Thank you, Mr. Chairman.

15 Chairman Sessions: You bring the Alaska perspective.

16 Senator Sullivan: Yes. As a matter fact, I was going
17 to talk a little bit about that to begin with.

18 Senator Donnelly: We are stunned to hear that, Senator
19 Sullivan.

20 [Laughter.]

21 Senator Sullivan: No rolling of the eyes, gentlemen.

22 [Laughter.]

23 Senator Sullivan: Gentlemen, first, thank you for your
24 service. I really, really appreciate it. I was looking at
25 everybody's bio and it is just decades of service to our

1 country. So I am very appreciative of that.

2 I am going to start out a little bit, and I think this
3 is important only for my constituents to hear but for the
4 Congress, the American people. You may have seen the
5 Secretary of Defense in his confirmation hearing was very
6 focused after an exchange he had with me on agreeing with
7 the famous quote from Billy Mitchell, the father of the U.S.
8 Air Force, that Alaska was the most strategic location in
9 the world.

10 Can you just give me a very quick sense, because I know
11 you can probably go on forever, but you are free to use
12 superlatives, just how important in terms of location Alaska
13 is with regard to the country's missile defense?

14 General Mann: I will go ahead and start.

15 First of all, Senator, I am a big fan of those missile
16 defenders you have up there that provide 24/7 coverage,
17 those National Guardsmen, full-time National Guardsmen. But
18 its location on the Earth, its proximity to North Korea and
19 to the polls, I think is critically important.

20 So from a strategic homeland defense standpoint, it is
21 critical, where it is located.

22 Senator Sullivan: Thank you.

23 Admiral?

24 Admiral Syring: From a material developer, technology
25 standpoint, in terms of the location of Alaska, there is a

1 reason that we are there with the GBIs at Fort Greely.
2 There is a reason that I am working with the NORTHCOM
3 commander and STRATCOM commander on putting another radar in
4 Alaska, because of that strategic importance to the threat
5 from North Korea.

6 Senator Sullivan: Great. Thank you.

7 I do want to talk about the strategic threat and follow
8 up on Senator Fischer's concerns.

9 I am sure you have seen both classified and even public
10 reports that have come out recently about both the strategic
11 threats from North Korea, from Iran. Johns Hopkins had a
12 report recently that, by 2020, North Korea could have as
13 many as 100 nuclear weapons.

14 Given the concerns that we are now seeing with regard
15 to Iran and the negotiations that some of us have a lot of
16 concerns about, are we in danger of falling behind the
17 evolving North Korean or even Iranian ICBM threat, nuclear
18 threat? And what would falling behind mean for cities like
19 Anchorage or L.A. or New York?

20 Admiral Syring?

21 Admiral Syring: Sir, let me take it.

22 The Secretary's announcement back in 2013 to increase
23 GBIs from 30 to 44 was in direct response to the escalation
24 that we see in North Korea.

25 Senator Sullivan: Okay.

1 Admiral Syring: And numbers matter in terms of what
2 that was able to provide in a very short amount time.

3 We see North Korea and Iran continuing to progress.

4 Senator Sullivan: Right.

5 Admiral Syring: In terms of not just the numbers of
6 ICBMs they may have, but the complexity of what those
7 threats may represent to us. That is why the budget request
8 this year is so important, that we get the radar built and
9 are able to stay ahead of the threat in terms of its
10 complexity, and make the best and most efficient use of the
11 44 that we have in the ground.

12 Senator Sullivan: So of course, we appreciate the 44
13 and think that is a good idea. If we see the threat
14 continuing, though, is there capacity? And do you think we
15 could possibly need at Fort Greely beyond the 44? Will we
16 need it? Let's assume this threat gets beyond what we are
17 anticipating today in 5 years.

18 Admiral Syring: The capacity, I will call it surge
19 capacity, the extra capacity in Fort Greely does exist.

20 Senator Sullivan: Okay.

21 Admiral Syring: And that would be assessed on how we
22 see the numbers, in terms of threats from North Korea
23 progressing. Certainly, that would be an option available
24 to the Secretary of Defense, to use that capability. That
25 option would be, I think, weighed in terms of how those

1 would be used versus future discrimination radar to the East
2 Coast as well, in terms of how Iran may progress, and the
3 complexity of that threat as well.

4 Senator Sullivan: Okay. You are talking radar. I do
5 want to focus for a minute on the LRDR program.

6 Can you give us just an update on the proposal, when
7 the decision on the location will be made? And who actually
8 makes that decision? Is that MDA? Is that contractors?
9 What are the tradeoffs between the two different Alaska
10 locations you are looking at?

11 Admiral Syring: First, on the program, we have
12 received proposals from the contractors, and our plan is to
13 award by the end of this fiscal year.

14 Senator Sullivan: Great.

15 Admiral Syring: That said, we do need a location
16 decision and we are working closely with NORTHCOM and
17 STRATCOM on that location. Since I am the material
18 developer, I need their warfighter input on the best
19 location for performance. And, certainly, cost and schedule
20 play to that as well.

21 Senator Sullivan: Okay.

22 I am glad you mentioned you are working because you
23 know one of the things in Alaska, we are kind of at the
24 seams. We are very important militarily but we are at the
25 seams of NORTHCOM, STRATCOM, PACOM, EUCOM. I mean, we kind

1 of fall into all those different areas.

2 Let's assume, if there were a location chosen at Clear,
3 what is the power usage that we would be looking at with
4 regard to that kind of significant radar system?

5 There is a coal facility being shut down. A lot of us
6 are questioning why that was happening, whether it was
7 strategic or whether it was some kind of clean air
8 initiative that I didn't think it belonged in the DOD
9 strategic outlook.

10 What would be the kind of power generation required for
11 that kind of radar system? And should we be looking at
12 shutting down power generation in that part of Alaska when
13 we might need a surge of power generation that is obviously
14 not happening at Clear right now?

15 Admiral Syring: Sir, in the interest of competition
16 sensitivities with the ongoing competition on the radar
17 today, I would like to take that to a closed session.

18 Senator Sullivan: Sure. And again, I am not at all
19 trying to get involved in one way or the other, in terms of
20 location. It is just a question. You probably know there
21 was a GAO study that was requested on that.

22 Admiral Syring: Yes, I do. I would be happy to share
23 my thoughts with you privately on that.

24 Senator Sullivan: Great. Thank you.

25 Thank you, Mr. Chairman.

1 General Mann: Senator, one thing, you asked about the
2 decision, where it is going to be made. I can tell you that
3 MDA and STRATCOM and NORTHCOM are working very, very closely
4 together and will provide a recommendation to the
5 department.

6 So I am sure that at very, very high levels, that is
7 where the decision is going to be made.

8 Senator Sullivan: Great. That is expected soon?

9 Admiral Syring: Sir, within the next several months.

10 Senator Sullivan: Great. Thank you.

11 Thank you, Mr. Chairman.

12 Chairman Sessions: Admiral Syring, just briefly,
13 first, I believe the money you requested is appropriate, and
14 I don't mean to suggest otherwise. But I asked you some
15 questions earlier about, could we see savings as technology
16 matures? And I thought it was some good news, colleagues.

17 Maybe you can give us some expectations as developments
18 of these systems go forward. The per copy price isn't going
19 to continue to go up, but might actually drop some.

20 And thank you for your focus on cost. It is important.

21 Admiral Syring: Sir, it is the agency's focus, and
22 they embrace it every day. It is a matter of getting the
23 results that we are after.

24 I think this is a good news story on where we believe,
25 after evaluating three of the contractors' proposals that

1 ultimately we decided to use as a team in terms of how we
2 are structured, with the government as the design authority
3 with support from the three major contractors.

4 Chairman Sessions: What project is this you are
5 talking about?

6 Admiral Syring: And all the prices were very --

7 Chairman Sessions: What project is this?

8 Admiral Syring: This is for the new kill vehicle.

9 Chairman Sessions: The new kill vehicle.

10 Admiral Syring: The Redesigned Kill Vehicle. Our
11 price objective would be in the neighborhood of \$15 million
12 for the new kill vehicle. I think that is achievable. I
13 know that is achievable. And that would be a huge savings
14 over what we pay today, which is upwards of \$35 million a
15 kill vehicle.

16 Chairman Sessions: And it will be a considerably
17 improved vehicle, too, right?

18 Admiral Syring: Yes, sir, because we have given the
19 team the runway and the space to system engineer it with the
20 right amount of time and the right effort from the
21 beginning.

22 Chairman Sessions: General Mann, have you seen any
23 ideas of that kind, SMDC or others, that save money?

24 General Mann: We continue to look at directed energy,
25 and I think, like Admiral Syring was saying, that has a lot

1 of promise. We have a high-energy laser mobile demonstrator
2 that has been very, very effective against 60 mm mortars and
3 UAVs. It also has the ability capability of the tracking
4 beyond 30 klicks, 30 km.

5 We think it has a lot of promise. Right now, it is at
6 the 10 kW level. We expect by 2017 to have it up to the 50
7 kW, giving us the capability to address cruise missiles more
8 effectively.

9 As far as from a cost savings, when you are able to use
10 directed energy or something like that versus an
11 interceptor, there is a significant cost savings. So we are
12 very encouraged by a lot of our tests.

13 Chairman Sessions: Well, good. I remember, after much
14 concern, we did not advance with the airborne laser concept,
15 but it looks like we're coming forward with some new ideas
16 that are more plausible.

17 Admiral Syring, do you want to comment on that?

18 Admiral Syring: Sir, I would say that and I would say
19 that Dr. Gilmore's organization has been very helpful in
20 helping us strive for alternatives to reduce the cost of
21 testing, in targets and test layout. We have had a close
22 relationship on that. I have to say, it is across the
23 department, in terms of focus on that.

24 Chairman Sessions: Good. That is good news.

25 We are going to have a vote at 4:45. Any other

1 questions?

2 Senator King: Just a quick question. Could you give
3 us an update on the status of the EISs for the ground-based
4 sites, U.S.-based?

5 Admiral Syring: Senator King, thank you. There are
6 four sites that are being evaluated, one in Maine, one in
7 Ohio, one in Michigan, and one in New York. Those sites are
8 well-known.

9 That activity has progressed very well. We are going
10 to need another season this summer for refinement of the
11 analysis that we took last summer, and we will go out with a
12 draft by the end of the year for public comment. I think
13 you will see us get that through the department for
14 publication in the 2016 timeframe.

15 Senator King: If you could find some excuse, I would
16 urge you to come to Maine this summer.

17 Admiral Syring: Maine is beautiful in the summertime.

18 Senator King: Yes, sir.

19 Senator Donnelly: Does that include the entire
20 committee, Mr. King?

21 Senator King: An inspection trip, yes, sir.

22 Senator Donnelly: I wanted to ask, is it your priority
23 to fix the problems in the GMD system, and to demonstrate
24 those fixes in realistic intercept tests before we build or
25 deploy any additional interceptors?

1 Admiral Syring: Yes, sir. That is the premise of the
2 entire test plan that I have laid through the FYDP.

3 Senator Donnelly: Let me ask just one other one, which
4 is the Aegis Ashore site in Poland is expected to be
5 completed by the end of 2018.

6 Is Poland asking for additional capabilities?

7 Mr. McKeon: Senator Donnelly, they have talked to us,
8 not about additional capabilities along the lines of Aegis
9 Ashore, but they have talked to us about Patriots.

10 They are investing in a big program, a big buy upwards
11 of \$10 billion in integrated air and missile defense, and
12 our Patriots are one of the competitors for that, and they
13 are going to be making that decision in the near future. We
14 have been talking to them very actively.

15 What we have said to them about their request for
16 Patriots is, as was discussed earlier with you, we don't
17 have a lot of spares in the inventory, but we have talked to
18 them about having some exercises and occasional rotations of
19 Patriots into Poland. In fact, there is an exercise going
20 on this month in Poland with the Patriot unit.

21 Senator Donnelly: Thank you.

22 Thank you, Mr. Chairman.

23 Chairman Sessions: Senator Sullivan?

24 Senator Sullivan: Mr. Chairman, I just have two quick
25 questions, follow up.

1 Gentlemen, with regard to Fort Greely and the requested
2 budget, it is a strategic location. As you know, it is also
3 an incredibly harsh environment. It is below zero there
4 much of the winter and pretty remote.

5 Are there areas that are not funded in the budget or
6 budget areas that you are focused on that focus on ground
7 system upgrades or even just capacity upgrades at Fort
8 Greely?

9 Admiral Syring: Sir, when I talk about the need to
10 modernize the GMD system, the ground system is a big part of
11 that. That is included in this year's budget request.

12 Senator Sullivan: Right.

13 Admiral Syring: Vitally important to keep up the
14 reliability of the overall system.

15 Senator Sullivan: But I am talking about any facility
16 upgrades or anything that is in addition, or that you see
17 that is not in the budget right now.

18 General Mann: Quite honestly, Senator, I have some
19 really good news because the Army has made some significant
20 investments in the infrastructure there at Fort Greely. We
21 are about to open up later on this year a medical facility
22 that is much-needed up there.

23 So we are trying to bring them up, in terms of the
24 quality-of-life. It is a very, very harsh environment, and
25 the Army is really stepping up.

1 Senator Sullivan: Great. Thank you, General.

2 And then finally, you have obviously a hugely important
3 mission. We are talking about an austere, in some ways,
4 budget environment. You have many priorities.

5 Can you just list what you would say are your top three
6 or four right now, so we have a real solid understanding of
7 that?

8 Admiral Syring: The homeland defense system and
9 everything that is being asked for in this budget, and the
10 need to get to 44 GBIs by 2017 is, certainly, my top
11 priority and the department's top priority for missile
12 defense.

13 A close second is the regional capacity and capability
14 of the European phased adaptive approach and all the other
15 regional commitments that we have made around the world.

16 Senator Sullivan: Okay.

17 General?

18 General Mann: In addition to that, I look at it two
19 ways. I look at it from homeland defense standpoint, and
20 Admiral Syring has talked a lot about the different
21 improvements to the EKV system. But we are also looking at
22 the regional, so Patriot modernization is critically
23 important. The battle command system that we have for
24 Patriot, where we get away from stovepipes and we're able to
25 bring our different systems using one command-and-control

1 system, a network, we're able to optimize our components
2 versus having to deploy, as the Secretary was talking, a
3 full Patriot battalion. Being able to use a network where
4 you can break it up into pieces, cover more space more
5 effectively and more cost informed is another thing that we
6 are getting after.

7 And then the third modernization effort that we would
8 really ask for the committee's support is the indirect fire
9 protection system. That will help us really get after the
10 cruise missile threats that are out there, as well as being
11 part of the networks.

12 So modernization efforts are critically important,
13 upgrades to the Patriot radar. This is a very, very old
14 system, as you well know, and heavily utilized.

15 Senator Sullivan: Thank you.

16 Thank you, Mr. Chairman.

17 Chairman Sessions: Thank you. That is very good. I
18 appreciate that.

19 We may submit further questions for the record.

20 [The information referred to follows:]

21 [SUBCOMMITTEE INSERT]

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1 Chairman Sessions: I believe that we have excellent
2 leadership in these programs, and we thank you for that.
3 The committee is ready to respond, if you have a new
4 breakthrough that could make us more effective and you need
5 to alter the course we are on. But in general, I believe
6 the course that you have laid out, Admiral Syring, General
7 Mann, is a sound course. Our committee has been supportive
8 and will continue to be.

9 Anything further that you would like to add before we
10 break?

11 Thank you very much. We are adjourned.

12 [Whereupon, at 4:35 p.m., the hearing was adjourned.]

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