



MDA Fiscal Year 2012 Budget Outline

1. Executive Summary: MDA is requesting \$8.626 billion (B) in FY 2012. These resources and planned funding across the period of the Future Years Defense Program (FYDP) will complete initial fielding of the Ground-Based Midcourse Defense (GMD) system for homeland defense and enhance initial regional defenses to provide at least two intercept opportunities by two interceptors against short-, medium-, and intermediate-range ballistic missiles (SRBMs, MRBMs and IRBMs, respectively). In developing our FY 2012 request, we assumed the eventual approval of funding near the FY 2011 requested level of \$8.416B for the Agency's programs -- not the level in the continuing resolution (CR) based on the FY 2010 current level of \$7.892B that has been in effect from October 2010 through our FY 2012 submission in February 2011.

2. FY 2010 Major Achievements: MDA delivered additional capability to the Warfighter for both regional and homeland defense:

- Emplaced the 30th Ground Based Interceptor (GBI) in September 2010, thereby achieving the goal to emplace 30 GBIs by the end of FY 2010
- Delivered 25 Aegis BMD Standard Missile (SM)-3 Block IA interceptors; converted two Aegis ships to BMD capability
- Delivered Terminal High Altitude Area Defense (THAAD) battery #2 ground components and completed new-equipment and unit collective training on THAAD battery #1 at Ft. Bliss, Texas
- Accelerated the refurbishment of an Army Navy/Transportable Radar Surveillance – Model 2 (AN/TPY-2) radar for deployment to USEUCOM and prepared another AN/TPY-2 radar for deployment to USCENTCOM
- Completed on-orbit testing of STSS, demonstrating the ability of the two satellites to provide stereo, high fidelity tracking capabilities and transfer tracks into the Command and Control, Battle Management and Communications (C2BMC) system
- Verified C2BMC's capability to manage multiple sensors and demonstrated NATO-U.S. C2BMC interoperability

We also completed key BMDS tests in FY 2010:

- Achieved the first flight of a two-stage GBI booster (BVT-01)
- Participated with the Japanese Maritime Self-Defense Force (JMSDF), in cooperation with the U.S. Navy, in a test that successfully intercepted a ballistic missile target with MRBM characteristics using the SM-3 Block IA interceptor (JFTM-03, Events 1-2)
- Worked with soldiers at Ft. Bliss, Texas in a successful intercept of a unitary target with a THAAD interceptor as the soldiers conducted launcher, fire control, and radar operations using the Army's tactics, techniques, and procedures (FTT-14)
- Achieved the first successful intercept using directed energy from an airborne platform against a liquid-fueled boosting ballistic missile target

3. FY 2011 Plans: Following the December 2010 failure to achieve an intercept of a long-range ballistic missile target in the FTG-06a flight test, MDA established a Failure Review Board to investigate the causes and recommend fixes. It is our number one goal to determine the root causes and correct the problems before repeating the flight test (FTG-06b).

MDA intends to develop and deploy regional missile defenses in four phases. The first phase, *Initial Integrated Defense*, is scheduled for completion by 2011. Our goal in this phase is to achieve an initial capability against SRBMs, MRBMs, and IRBMs. Contributing to the capability will be the Aegis BMD 3.6.1 weapons system with SM-3 Block IA interceptors; forward-based AN/TPY-2 and SPY-1 radars, and the C2BMC system at Ramstein AFB in Germany. C2BMC will improve connections to NATO command and control structures. Additionally, THAAD batteries will be available for deployment in this and subsequent phases.

In support of this phase, we plan on delivering the following capability to the Warfighter in FY 2011:

- Deliver 25 THAAD interceptors for THAAD batteries #1 and #2
- Convert one ship to Aegis BMD 3.6.1 and two ships to Aegis BMD 4.0.1
- Deliver 19 SM-3 Block IA missiles and the first SM-3 Block IB missile

The following key tests are scheduled for FY 2011:

- The first THAAD multiple intercept scenario in which two THAAD interceptors will engage two SRBM targets (FTT-12)
- The first Aegis Launch on Remote test in which an SM-3 Block IA interceptor will be launched based on sensor data provided by a forward-based AN/TPY-2 radar (FTM-15)
- The first intercept test of the SM-3 Block IB interceptor (FTM-16)
- A joint Japanese Maritime Self-Defense Force (JMSDF)/U.S. test in which the Aegis BMD 4.0.1 conducts a simulated intercept of various MRBM targets (JFTM-4 Events 1-3 – Completed successfully in October 2010)

In addition, we will work with United Arab Emirates (UAE) to finalize the first Foreign Military Sales (FMS) case for missile defense. The U.S. intends to sell UAE the THAAD system, including two THAAD batteries, 96 interceptors, and support equipment.

4. FY 2012 Plans: In the area of homeland defense in FY 2012, MDA intends to:

- Execute FTG-06b successfully after incorporating Failure Review Board recommendations
- Complete the acquisition of six GBIs and continue acquiring five more GBIs
- Complete the final integration of the 14 GBI silos in Missile Field-2 at Ft. Greely, Alaska
- Deploy a second Fire Direction Center Node at Ft. Greely to allow flight and ground testing or exercises to be conducted while simultaneously maintaining an operational capability
- Purchase long-lead items for a new communications terminal on the East Coast of the United States. The new terminal will enable communications with an in-flight GBI for longer periods, resulting in a more effective defense against threat targeting the Eastern United States.
- Continue operations and sustainment of the Sea-based X-band (SBX) radar and development of algorithms for the SBX designed to provide an improved capability to discriminate between countermeasures and reentry vehicles
- Continue operations and sustainment of the Cobra Dane radar and upgraded early warning radars (UEWRs) at Fylingdales, Thule, and Beale AFB

- Begin upgrade of the Clear Early Warning Radar in Alaska to a UEWR by 2016

For regional defense, MDA plans to continue developing and deploying capabilities for the next three phases. The second phase, *Enhanced MRBM Defense*, is scheduled for completion by 2015. Towards this phase in FY 2012, we intend to:

- Procure 46 Aegis SM-3 Block IB interceptors
- Deliver final six SM-3 Block IA interceptors and 12 additional SM-3 Block IB interceptors
- Continue development of Aegis BMD 5.0, which will integrate the Aegis BMD 4.0.1 capability and SM-3 Block IB interceptor into the Navy-developed Open Architecture computing environment and ensure Aegis BMD remains compatible with the Navy as ship modernization plans are executed
- Deliver Aegis Ashore equipment (including the deckhouse and Aegis Weapons System components) for the test facility at the Pacific Missile Range Facility (PMRF) in Hawaii
- Acquire long lead material for the Aegis Ashore battery in Romania
- Conduct an Aegis Ashore system test at PMRF
- Procure 68 THAAD interceptors, six launchers and one Tactical Station Group
- Deliver 24 THAAD interceptors for THAAD batteries #1 and #2
- Operate and sustain two THAAD batteries to be deployed outside of the U.S., if necessary

The third phase, *Robust IRBM Defense*, is scheduled for completion by 2018. It supplements the Aegis Ashore site in Romania by deploying the SM-3 Block IIA interceptor at sea and at an Aegis Ashore site in Poland. System improvements include expanded shooter coordination and improved radar discrimination. The initial Precision Tracking Space System (PTSS) sensors in space will detect and track hostile missiles and enable earlier intercepts. The fourth phase, *Early Intercept and Regional ICBM Defense*, is scheduled for completion by 2020, and aims to deploy advanced discrimination technologies and the higher velocity land-based SM-3 Block IIB and enhanced command and control to intercept large raids of MRBMs, IRBMs, and non-advanced ICBMs early in flight. FY 2012 goals for successful progress on these latter two phases include:

- Continue development of SM-3 Block IIA interceptor and complete the Critical Design Review
- Complete the Safety Review Board approval of the SM-3 Block IIA missile safety design
- Complete shock and vibration testing of the SM-3 Block IIA Mark 29 missile canister
- Conduct the Preliminary Design Review of the PTSS
- Complete final designs and engineering models for the PTSS spacecraft bus, optical payload and communications payload
- Integrate the multi-waveband MTS-C Airborne Infrared (ABIR) sensor on the MQ-9 Reaper; this sensor is designed to significantly improve the ability to track cold body targets through their time of flight and enhance discrimination
- Continue risk reduction of critical components and concept development for the SM-3 IIB interceptor by three aerospace industry teams and prepare for source selection process to support product development beginning in 2013

FY 2012 Appropriation Summary (\$ in millions)

Appropriation	PE #	PE Title	FY11	FY12	FY13	FY14	FY15	FY16	FY12-16		
MILCON	0603884C	Sensors MILCON	0.0	0.0	16.4	0.0	0.0	0.0	16.4		
	0603888C	Test & Targets MILCON	0.0	8.4	3.4	3.5	9.7	10.1	35.1		
	0603890C	MDA Infrastructure MILCON	0.0	58.8	0.0	0.0	0.0	0.0	58.8		
	0604880C	Land-Based SM-3 MILCON	0.0	0.0	89.4	0.0	0.0	0.0	89.4		
	0604884C	ABIR MILCON	0.0	0.0	0.0	31.8	0.0	0.0	31.8		
MILCON Total			0.0	67.2	109.3	35.3	9.7	10.1	231.6		
O&M	O&M	THAAD	0.0	50.8	53.9	76.7	86.1	90.5	358.1		
		BMDs Radars	0.0	151.9	189.8	209.6	224.8	246.6	1022.7		
O&M Total			0.0	202.8	243.7	286.3	311.0	337.1	1380.7		
Procurement	0208866C	THAAD	858.9	833.2	728.6	921.8	955.5	745.4	4184.4		
		AEGIS BMD	94.1	565.4	675.1	737.4	807.9	1025.5	3811.4		
		BMDs AN/TPY-2 Radars	0.0	380.2	365.6	376.8	380.7	380.3	1883.6		
		Aegis Ashore Phase III	0.0	0.0	0.0	0.0	211.1	39.9	251.0		
Procurement Total			953.0	1778.7	1769.2	2036.1	2355.2	2191.1	10130.4		
RDT&E	0603175C	BMD Technology	132.2	75.0	103.8	111.7	164.4	170.9	625.8		
	0603274C	Special Programs	0.0	61.5	37.9	41.0	43.9	46.4	230.7		
	0603881C	BMD Terminal Defense	436.5	290.5	318.7	309.9	341.0	320.6	1580.7		
	0603882C	BMD Midcourse Defense	1346.2	1161.0	1040.9	925.9	856.8	876.0	4860.7		
	0603884C	BMD Sensors	454.9	222.4	357.3	336.5	318.3	348.9	1583.4		
	0603888C	BMD Test & Targets	1113.4	1071.0	898.7	790.9	787.1	878.2	4426.0		
	0603890C	BMD Enabling Programs	402.8	373.6	331.2	314.2	336.7	346.6	1702.3		
	0603891C	Special Programs	270.2	296.6	377.8	416.1	431.0	452.4	1973.9		
	0603892C	BMD Aegis	1467.3	960.3	958.0	1001.5	970.6	1033.7	4924.1		
	0603893C	STSS	112.7	96.4	53.6	47.6	32.3	34.3	264.1		
	0603895C	BMDs Space	10.9	8.0	6.8	6.5	6.5	6.9	34.6		
	0603896C	BMD C2BMC	342.6	364.1	330.3	353.1	338.8	304.2	1690.6		
	0603898C	BMD Joint Warfighter	68.7	41.2	58.1	56.0	56.5	60.7	272.4		
	0603901C	Directed Energy Research	98.7	96.3	92.0	93.1	92.3	95.0	468.7		
	0603902C	Aegis SM-3 BLK IIB	0.0	123.5	433.1	384.6	401.1	394.8	1737.2		
	0603904C	MDIOC	86.2	69.3	64.5	55.8	56.8	54.6	301.0		
	0603906C	Regarding Trench	7.5	15.8	9.1	7.0	5.5	2.1	39.4		
	0603907C	Sea Based X-Band Radar	153.1	177.1	172.6	162.6	185.9	173.6	871.8		
	0603913C	Israeli Cooperative	121.7	106.1	99.9	95.8	96.8	104.0	502.6		
	0604880C	Land-Based SM-3	281.4	306.6	149.3	60.6	41.4	154.8	712.8		
	0604881C	Aegis SM-3 Blk IIA	318.8	424.5	357.2	279.4	203.6	25.2	1289.8		
	0604883C	Precision Tracking Space Sensor	67.0	160.8	272.9	302.3	273.6	331.2	1340.9		
	0604884C	Airborne Infrared (ABIR)	111.7	46.9	49.9	49.2	33.0	34.2	213.3		
0901585C	Pentagon Reservation	20.5	0.0	0.0	0.0	0.0	0.0	0.0			
0901598C	Management Headquarters	29.8	28.9	29.1	27.7	27.8	29.9	143.5			
		RDT&E Total	7454.6	6577.1	6602.8	6229.2	6101.9	6279.4	31790.3		
BRAC	BRAC	Base Realignment and Closure	8.7	0.0	0.0	0.0	0.0	0.0	0.0		
		BRAC Total	8.7	0.0	0.0	0.0	0.0	0.0	0.0		
Grand Total			8416.3	8625.7	8725.0	8586.8	8777.8	8817.6	43533.0		
FY 2012 Buy / Delivery			Prior	FY11	FY12	FY13	FY14	FY15	FY16	Total	
GBI	Interceptors	RDT&E	Buy	47	5					52	
			Delivery	36	6	5				47	
		Refurbishments			4	1	2	1		8	
		Cumulative Deliveries	36	36	42	47	47	47	47	47	
THAAD	Interceptors	RDT&E	Buy	50						50	
			Delivery	1	25	24				50	
		Procurement	Buy	26	67	68	68	65	67	427	
			Delivery			3	36	72	65	70	246
	Cumulative Delivery	1	26	53	89	161	226	296	296		
	Battery Delivery	RDT&E / Procurement	Delivery	2		2	1			2	7
Cumulative Delivery		2	2	2	4	5	5	7	7		
AN/TPY-2	Radars	RDT&E / Procurement	Buy	8	2	2	2	2	2	18	
			Delivery	7		1	2	2	2	14	
		Cumulative Delivery	7	7	7	8	10	12	14	14	
SM-3 Block I / IA Missiles	Interceptors	RDT&E	Buy	71							
			Delivery	71							
		Procurement	Buy	42							
			Delivery	17	19	6					
Cumulative I/IA Deliveries	88	107	113	113	113	113	113	113			
SM-3 Block IB Missiles	Interceptors	RDT&E	Buy	22	12					34	
			Delivery	1	3	12	18			34	
		Procurement	Buy		8	46	62	73	82	68	339
			Delivery			8	46	62	73	73	189
Cumulative IB Deliveries	1	4	16	42	88	150	223	223			
SM-3 Block IIA Missiles	Interceptors	RDT&E	Buy				14			14	
			Delivery							5	
		Procurement	Buy							15	
			Delivery							0	
Cumulative IIA Deliveries								5			
SM-3 Block IIB Missiles	Interceptors	RDT&E	Buy					TBD	TBD	TBD	
			Delivery							TBD	
Cumulative IIB Deliveries									TBD		
Aegis SM-3	Interceptors	Cumulative SM-3 Deliveries	89	111	129	155	201	263	341	341	
Aegis BMD Ships	BMD Capable Ships	RDT&E	BMD 3.6								
			BMD 3.6.1	20	21	23	23	19	16	11	
			BMD 4.0.1	-	2	4	6	9	7	7	
			BMD 5.0	-	-	1	3	8	14	20	
		Cumulative Ship Conversions	20	23	28	32	36	37	38	38	
		USN New Ship Construction						1	3	3	
Cumulative BMD Capable Ships						38	41	41			