Fiscal Year (FY) 2012 Budget Estimate
Missile Defense Agency

February 2011

MISSILE DEFENSE AGENCY
Operation and Maintenance, Defense-Wide
Fiscal Year (FY) 2012 Budget Estimates

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Operation and Maintenance, Defense-Wide Summary ($ in thousands)
Budget Activity (BA) 1: Operating Forces
Subactivity Group 11A

	FY 2010 Actuals	Price Change	Program Change	FY 2011 Estimate	Price Change	Program Change	FY 2012 Estimate
MDA	0	0	0	0	0	202,758	202,758

I. Description of Operations Financed:

A. Terminal High Altitude Area Defense (THAAD). THAAD is an element of the Terminal Defense Segment (TDS) of the Ballistic Missile Defense System (BMDS). The THAAD element is composed of five major components (Interceptors, Launchers, Army Navy/Transportable Radar Surveillance - Model 2 (AN/TPY-2) (THAAD Mode), THAAD Fire Control and Communications (TFCC), and Peculiar Support Equipment) which are integrated into the THAAD element and BMDS. The THAAD element provides the THAAD Interceptor Engage on AN/TPY-2 engagement sequence of the BMDS. THAAD enhances the TDS by deepening, complementing, and extending the BMDS battlespace and capability to engage ballistic targets in the late mid-course and terminal phases of their trajectory. THAAD will also be a surveillance sensor, providing sensor data to cue other elements of the BMDS.

THAAD, in conjunction with the fielded PATRIOT System, provides the TDS and supports the MDA objective of enhancing the BMDS capability. In FY 2011, THAAD batteries transfer to the Army, which will fund non-BMDS sustainment such as base operations support. THAAD O&M funds a wide range of support including field and sustainment level maintenance for all THAAD deployed equipment, spares, repair parts, and maintenance capability at the location of the deployed THAAD batteries, The contractor transportation, packaging and handling of Line Replaceable Units (LRUs) is also funded for spares and repair parts.

THAAD O&M also funds subject matter experts (SME) engineering support for the THAAD peculiar equipment and THAAD radar.

B. Ballistic Missile Defense System (BMDS) Radars. This funding provides for the Software Sustainment unique to the Missile Defense mission of Upgraded Early Warning Radars and the Cobra Dane radar. FY12 funding also provides for the daily operations and sustainment of seven AN/TPY-2 radars: four forward-based radars (OCONUS), two THAAD battery radars (1 US, 1 OCONUS), and one test asset radar (PMRF/Wake Island).

II. Force Structure Summary:

A. Terminal High Altitude Area Defense (THAAD). Army force structure for THAAD is currently set at nine batteries with three launchers operated by ninety-nine soldiers and documented on Modified Table of Organization and Equipment (MTOE) number 44693G000. The battery is organized to conduct 120-day deployments (forty-five days of entry operations (radar is continuously active) and seventy-five days of 17-hour/day combat operations (radar is in a standby mode seven hours a day). The latter operational tempo can be increased with appropriate attachments and support. The battery requires support from the Army for communications, security, common supplies, and common services. THAAD peculiar supplies are routed through a contracted logistics supply and specialized maintenance chain that is not provided by the theater. This specialized non-theater chain ends in a twelve-person contractor support team that deploys with the THAAD Battery and brings its own complement of equipment. The contractor team is documented on an Army Table of Distribution and Allowances (TDA) to facilitate movement into a war zone with the battery. Interceptors are not considered part of battery force structure and are allocated by commanders in accordance with the mission and threat. Batteries will receive an additional three launchers (total of six), upgraded Army battlefield

communications, and reduction to manning to ninety-five soldiers in the next several years. Batteries will be doctrinally assigned to the theater Army Air and Missile Defense Command. Engagements will be coordinated through the theater Air Operations Center. With the provision of specialized communications and radar software, the battery will be able to communicate directly with the Ballistic Missile Defense System Command and Control, Battle Management, and Communications (C2BMC) system making it capable of performing surveillance and tracking missions in addition to its normal active defense engagement mission.

B. Ballistic Missile Defense System (BMDS) Radars. This funding provides for the UEWR/Cobra Dane Radar Software Sustainment unique to the Missile Defense mission. The Air Force is responsible for the day to day operations and Maintenance of the UEWRs and Cobra Dane Radar. FY12 funding also provides for the daily operation and sustainment of seven AN/TPY-2 radars: four forward-based radars (OCONUS), two THAAD battery radars (1 US, 1 OCONUS), and one test asset radar (PMRF/Wake Island). These services are furnished through Centralized Contractor Logistics Support (CLS) contracts. The force structure and operational tempo are documented in the AN/TPY-2 CARD dated October 2010.

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III. Financial Summary ($ in thousands)

		FY 2011					
			Congressional Action				
A. BA Subactivities	FY 2010 Actuals	Budget Request	Amount	Percent	Appropriated	Current Estimate	FY 2012 Estimate
2. Operational Support	**0**	**0**				**0**	**202,758**
Operational Support	0	0				0	202,758
Total	**0**	**0**				**0**	**202,758**

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III. Financial Summary ($ in thousands)

B. Reconciliation Summary	**Change FY 2011/FY 2011**	**Change FY 2011/FY 2012**
Baseline Funding		
Congressional Adjustments (Distributed)		
Congressional Adjustments (Undistributed)		
Adjustments to Meet Congressional Intent		
Congressional Adjustments (General Provisions)		
Subtotal Appropriated Amount		
Fact-of-Life Changes (2011 to 2011 Only)		
Subtotal Baseline Funding		
Anticipated Supplemental		
Reprogrammings		
Price Changes		
Functional Transfers		202,758
Program Changes		
Current Estimate		**202,758**
Less: Wartime Supplemental		
Normalized Current Estimate		

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III. Financial Summary ($ in thousands)

C. Reconciliation of Increases and Decreases	**Amount**	**Totals**
FY 2011 President's Budget Request (Amended, if applicable)		
1. Congressional Adjustments		
a. Distributed Adjustments		
b. Undistributed Adjustments		
c. Adjustments to Meet Congressional Intent		
d. General Provisions		
FY 2011 Appropriated Amount		
2. War-Related and Disaster Supplemental Appropriations		
3. Fact-of-Life Changes		
FY 2011 Baseline Funding		
4. Reprogrammings (Requiring 1415 Actions)		
Revised FY 2011 Estimate		
5. Less: Item 2, War-Related and Disaster Supplemental Appropriations and Item 4, Reprogrammings		
FY 2011 Normalized Current Estimate		
6. Price Change		
7. Functional Transfers		202,758
a. Transfers In		
1) Transfer in from RDT&E Funding	202,758	
b. Transfers Out		
8. Program Increases		
a. Annualization of New FY 2011 Program		
b. One-Time FY 2012 Increases		
c. Program Growth in FY 2012		
9. Program Decreases		
a. Annualization of FY 2011 Program Decreases		
b. One-Time FY 2011 Increases		

III. Financial Summary ($ in thousands)

C. Reconciliation of Increases and Decreases	**Amount**	**Totals**
c. Program Decreases in FY 2012		
FY 2012 Budget Request		**202,758**

IV. Performance Criteria and Evaluation Summary:

A. Terminal High Altitude Area Defense (THAAD). Performance objectives are defined in the contract as the following: the contractor will receive minimal fee by maintaining all THAAD peculiar equipment at a 70% operation rate, and a maximum fee by maintaining all THAAD peculiar equipment at a 95% operational rate with 90% as the lowest acceptable rate. Operational rate is based on the current number of pieces of THAAD equipment and not the operational readiness rate reported to the Department of the Army by the deployed THAAD units. The THAAD sustainment estimate is based on the current THAAD production/deployment schedule with two batteries deployed OCONUS in support of OCONUS deployment in a peacetime OPTEMPO. All other THAAD batteries are stationed at Fort Bliss in a peace time OPTEMPO.

Tactical Unit MTOE Systems	QTY	FY10*	QTY	FY11*	QTY	FY12
Combat Supporting Pacing Teams						
THAAD Battery 1	1	*	1	*	1	25,411
THAAD Battery 2	1	*	1	*	1	25,411
Ground OPTEMPO Measures						
Number of Vehicles	100		100		100	
Average miles per vehicle budgeted	5,000		5,000		5,000	
Average operational hours budgeted	2,900		2,900		2,900	

B. Ballistic Missile Defense System (BMDS) Radars. Upgraded Early Warning Radars (UEWR) and Cobra Dane operations and sustainment are managed by Air Force Space Command and the Air Force Technical Applications Center, respectively. Their contract vehicles have specific incentives to maintain specified operational performance values. The UEWR/Cobra Dane operations and sustainment funds are for MDA developed software support/deficiencies to maintain/enhance the Missile Defense mission for these radars.

For AN/TPY-2 radars, the contractor's performance in operations and sustainment will be measured by the radars' demonstrated operational availability Ao, defined as:

$$Ao = \frac{\text{Total Time} - \text{Non Mission Capable Time}}{\text{Total Time}}$$

"Total time" is defined as 24 hours per day times the number of days in the period of performance of the task order. Performance measurement does not include contractually-defined conditions that are outside the control of the Contractor and are exceptions to Ao downtime. For AN/TPY-2 radars, performance incentives are calculated as follows:

Target Ao = 90%	
Ao > 90%	100% of Performance Incentive Pool
Ao ≥70%, <90%	Actual Ao % achieved times pool amount
Ao < 70%	Performance Fee = 0%

V. Personnel Summary	**FY 2010**	**FY 2011**	**FY 2012**	**Change FY 2010/ FY 2011**	**Change FY 2011/ FY 2012**

N/A

VI. OP 32 Line Items as Applicable (Dollars in thousands):

		Change			Change		
	FY 2010	FY 2010/FY 2011		FY 2011	FY 2011/FY 2012		FY 2012
OP 32 Line	**Actuals**	**Price**	**Program**	**Estimate**	**Price**	**Program**	**Estimate**
922 Eqt Maint Contract	0	0	0	0	0	136,368	136,368
989 Other Services	0	0	0	0	0	66,390	66,390
999 Total Other Purchases	**0**	**0**	**0**	**0**	**0**	**202,758**	**202,758**
Total	**0**	**0**	**0**	**0**	**0**	**202,758**	**202,758**

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