

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Air Force **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605221F: <i>KC-46, Next Generation Aerial Refueling Aircraft</i>
--	--

COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
Total Program Element	538.875	877.084	1,815.588	-	1,815.588	1,576.063	1,097.980	567.054	345.007	Continuing	Continuing
655271: <i>KC-46 RDT&E</i>	538.875	877.084	1,815.588	-	1,815.588	1,576.063	1,097.980	567.054	345.007	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

The KC-46 program entered source selection on 9 Jul 2010 and awarded the KC-46 Engineering Manufacturing and Development (EMD) contract on 24 Feb 2011. The program schedule and budget request presented in these documents represent a restructure from the FY 2012 President's Budget (PB) based on this 24 Feb 2011 contract award.

In FY 2009, PE 0401221F, KC-X Replacement Tanker efforts were transferred to PE 0605221F, KC-46 Next Generation Aerial Refueling Aircraft, BPAC 655271, KC-46 RDT&E, in order to move funds to Budget Activity (BA) 05 to correctly represent the phase of the KC-46 Program.

The FY 2010 Defense Appropriations Bill directed the following: (1) reduced the FY 2010 President's Budget request by \$132.9M in RDT&E, AF, (2) moved \$291.715M of FY2010 RDT&E, AF into the Tanker Replacement Transfer Fund (TRTF), and (3) left \$15.0M in RDT&E, AF to support program office and source selection activities. On 6 Jan 2011, \$291.615M from TRTF was moved into FY 2010 RDT&E, AF per SECAF Memo to Congress, dated 2 Nov 2010. These funds have been used to fund the KC-46 EMD effort and for program support activities.

The FY 2011 Defense Appropriations Bill directed the following: (1) reduced the FY 2011 PB request by \$325M in RDT&E, AF, (2) moved \$538.875M of FY2011 RDT&E, AF into the TRTF, and (3) left nothing in RDT&E, AF. On 15 Jun 2011, \$538.875M from TRTF was moved into FY 2011 RDT&E, AF per SECAF Memo to Congress, dated 5 May 2011. These funds are being used to fund the KC-46 EMD effort and for program support activities.

The Cost to Complete and Total Cost for MDAP projects in this program element are documented in the R3. The Cost to Complete and Total Cost on the R2 are entered as "Continuing" and not reflective of the total cost for MDAP projects since the R2 does not account for prior years funding.

A. Mission Description and Budget Item Justification

Replacement of the legacy KC-135 fleet will take place in three stages, known as the KC-X (now the KC-46), KC-Y, and the KC-Z. The initial KC-46 increment will replace roughly a third of the current capability with the purchase of 179 aircraft. The Air Force completed an Analysis of Alternatives (AoA) in Apr 2006 to determine the most appropriate strategy to recapitalize the aging fleet of KC-135 aerial refueling aircraft. Based on this analysis, the Air Force concluded that a strategy of full and open competition to select a commercial derivative replacement tanker aircraft would result in a best value tanker contract. To initiate the first phase of the KC-135 replacement, the KC-46 program released a final Request for Proposal (RFP) on 24 Feb 2010, and entered source selection on 9 Jul 2010. The KC-46 program held a Milestone B Defense Acquisition Board (DAB) on 23 Feb 2011, received approval to enter EMD from OSD AT&L on 24 Feb 2011, and awarded the KC-46 EMD contract to Boeing on 24 Feb 2011 to develop and procure 179 KC-46 aircraft.

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Air Force **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE
3600: <i>Research, Development, Test & Evaluation, Air Force</i>	PE 0605221F: <i>KC-46, Next Generation Aerial Refueling Aircraft</i>
BA 5: <i>Development & Demonstration (SDD)</i>	

The KC-46 will provide fuel to joint and coalition receivers via a boom or drogue system on every mission and will also augment the airlift fleet with cargo, passenger and aeromedical evacuation capabilities. The KC-46 will be able to operate in day/night and adverse weather conditions to enable deployment, employment, sustainment and redeployment of U.S. joint, allied, and coalition forces. The KC-46 will have communication, navigation and surveillance equipment for world-wide operations; will have the capability to perform missions in chemical and biological environments; will have the capability to operate in low-to-medium threat areas and near-high threat areas with self-defense/protection (both active and passive) capabilities; and will have necessary battle space awareness to mitigate survivability threats.

The KC-46 development effort will also procure the necessary ground and flight test assets to support development/operational test. The program plans to procure four RDT&E aircraft for integration and demonstration of capability that will ultimately be operationally fielded after a successful operational test phase. In addition, both aircrew and maintenance Training System Requirement Analyses (TSRA) are being conducted to determine training requirements. Aircrew and maintenance training systems will be developed and procured via a future trainer-specific source selection, using KC-46 funding. A business case analysis will also be conducted to determine if the engines for the production aircraft will be government furnished or contractor furnished. Initial training and sustainment efforts will be provided via Interim Contractor Support (ICS). KC-46 funding will also support various studies and analyses including the five-nation Future Technology for Aerial Refueling (FTAR) project, and KC-Y/KC-Z planning activities.

This program is in Budget Activity 05, System Development and Demonstration (SDD) because it has passed Milestone B and is conducting engineering and manufacturing development tasks aimed at meeting validated requirements prior to full-rate production.

B. Program Change Summary (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget	863.875	877.084	1,150.032	-	1,150.032
Current President's Budget	538.875	877.084	1,815.588	-	1,815.588
Total Adjustments	-325.000	-	665.556	-	665.556
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-325.000	-	665.556	-	665.556

Change Summary Explanation

The FY 2010 Defense Appropriations Bill directed the following: (1) reduced the FY 2010 President's Budget request by \$132.9M in RDT&E, AF, (2) moved \$291.715M of FY2010 RDT&E, AF into the Tanker Replacement Transfer Fund (TRTF), and (3) left \$15.0M in RDT&E, AF to support program office and source selection activities. On 6 Jan 2011, \$291.615M from TRTF was moved into FY 2010 RDT&E, AF per SECAF Memo to Congress, dated 2 Nov 2010. These funds have been used to fund the KC-46 EMD effort and for program support activities.

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Air Force	DATE: February 2012
--	----------------------------

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605221F: <i>KC-46, Next Generation Aerial Refueling Aircraft</i>
--	--

The FY 2011 Defense Appropriations Bill directed the following: (1) reduced the FY 2011 PB request by \$325M in RDT&E, AF, (2) moved \$538.875M of FY2011 RDT&E, AF into the TRTF, and (3) left nothing in RDT&E, AF. On 15 Jun 2011, \$538.875M from TRTF was moved into FY 2011 RDT&E, AF per SECAF Memo to Congress, dated 5 May 2011. These funds are being used to fund the KC-46 EMD effort and for program support activities.

The FY 2012 PB was submitted prior to the KC-46 Engineering Manufacturing and Development (EMD) contract award on 24 Feb 2011.

In accordance with the KC-46 Acquisition Decision Memorandum dated 24 Feb 2011, the KC-46 budget in FY 2013 PB has been adjusted to reflect the Service Cost Position and Boeing's development strategy.

FY 2011 funding table note: Adjustments (Cong Directed Transfers -\$325M) are reflected in Other Adjustments.

C. Accomplishments/Planned Programs (\$ in Millions)

	FY 2011	FY 2012	FY 2013
<p>Title: KC-46 Aircraft Product Development</p> <p>Description: To begin re-capitalizing the aging KC-135 fleet, EMD activities will be conducted to include the following types of activities: Develop a commercial 767-2C aircraft upon which the KC-46 is based; develop the KC-46 military capability and integrate it into the aircraft; build 4 EMD aircraft; procure live fire assets; procure any required Government Furnished Equipment; procure simulator and maintenance data; develop technical manuals and Type 1 training; conduct development and operational testing.</p> <p>FY 2011 Accomplishments: Contract awarded 24 Feb 11, initiating the EMD phase of the program, which includes the development, integration, and demonstration of KC-46 capability.</p> <p>FY 2012 Plans: Continue EMD activities, including the development, integration, and demonstration of KC-46 capability.</p> <p>FY 2013 Plans: Continue EMD activities, including the development, integration, and demonstration of KC-46 capability.</p>	532.306	835.517	1,682.814
<p>Title: KC-46 Trainer Product Development</p> <p>Description: To begin re-capitalizing the aging KC-135 fleet, Trainer Development activities will be conducted to include the following types of activities: Develop an Aircrew Training System; Develop a Maintenance Training System.</p> <p>FY 2011 Accomplishments:</p>	-	16.165	92.751

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Air Force		DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 5: <i>Development & Demonstration (SDD)</i>		R-1 ITEM NOMENCLATURE PE 0605221F: <i>KC-46, Next Generation Aerial Refueling Aircraft</i>		
C. Accomplishments/Planned Programs (\$ in Millions)		FY 2011	FY 2012	FY 2013
Develop solicitation for KC-46 Aircrew & Maintenance Training Systems. FY 2012 Plans: Continue solicitation of KC-46 Aircrew & Maintenance Training System, and award KC-46 Aircrew Training System EMD contract. FY 2013 Plans: Continue solicitation of KC-46 Maintenance Training System, award KC-46 Maintenance Training System EMD contract, and continue activities associated with Aircrew Training System development.				
Title: KC-46 Direct Mission Support Description: Studies and Analysis activity associated with the development, integration, and demonstration of KC-46 capability. In addition, planning activities for future efficiency initiatives, business case analyses, KC-Y & KC-Z planning, and misc. program office support & planning. FY 2011 Accomplishments: KC-46 Studies and Analysis activities. FY 2012 Plans: Continue KC-46 Studies and Analysis activities FY 2013 Plans: Continue KC-46 Studies and Analysis activities		1.355	3.344	3.410
Title: KC-46 Test & Evaluation Description: To begin re-capitalizing the aging KC-135 fleet, Test & Evaluation activities will be conducted to include the following types of activities: Development Test & Evaluation support; Operational Test & Evaluation; Receiver Qualification; Federal Aviation Administration (FAA) support, and other test planning and organizational support. FY 2011 Accomplishments: KC-46 Test & Evaluation activities. FY 2012 Plans: Continue KC-46 Test & Evaluation Activities FY 2013 Plans: Continue KC-46 Test & Evaluation Activities		0.015	7.069	20.030
Title: KC-46 Program Office Support		5.199	14.989	16.583

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Air Force	DATE: February 2012
--	----------------------------

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605221F: <i>KC-46, Next Generation Aerial Refueling Aircraft</i>
--	--

C. Accomplishments/Planned Programs (\$ in Millions)	FY 2011	FY 2012	FY 2013
<p>Description: Program Office Support activity associated with the development, integration, and demonstration of KC-46 capability. Includes requirements such as travel, office supplies, training courses, and service contracts.</p> <p>FY 2011 Accomplishments: Continue KC-46 Program Office Support activity (ASC).</p> <p>FY 2012 Plans: Continue KC-46 Program Office Support activity (ASC)</p> <p>FY 2013 Plans: Continue KC-46 Program Office Support activity (ASC)</p>			
Accomplishments/Planned Programs Subtotals	538.875	877.084	1,815.588

D. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2011	FY 2012	FY 2013	FY 2013	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
			Base	OCO	Total						
• PE 0401221F, KC-46, APAF: <i>KC-46 Aircraft Procurement</i>	0.000	0.000	0.000	0.000	0.000	0.000	1,657.014	2,660.216	3,335.285	32,710.832	40,363.347
• PE 0401221F, KC-46, MILCON: <i>KC-46 Military Construction</i>	0.000	0.000	0.000	0.000	0.000	255.700	263.760	306.196	261.152	3,227.719	4,314.527

E. Acquisition Strategy

The KC-46 Program acquisition strategy is to procure an existing commercial, Federal Aviation Administration (FAA) certified aircraft modified to meet USAF requirements. The KC-46 program released a final Request for Proposal (RFP) on 24 Feb 2010, and entered source selection on 9 Jul 2010. The KC-46 program held a Milestone B Defense Acquisition Board (DAB) on 23 Feb 2011, received approval to enter EMD from OSD AT&L on 24 Feb 2011, and awarded the KC-46 contract to Boeing on 24 Feb 2011 to develop and procure 179 KC-46 aircraft. The KC-46 contract procurement was conducted via a full and open competition per Federal Acquisition Regulation (FAR) Part 15, and resulted in a FY 2011 EMD Fixed Price Incentive Firm (FPIF) contract. The EMD phase will develop, build, and test four KC-46 aircraft, and will qualify receiver aircraft.

Production will begin in FY 2015 with two Low-Rate Initial Production (LRIP) lots (Firm Fixed Priced (FFP)) and then Full-Rate Production (FRP) options (FFP with Not to Exceed (NTE) + Economic Price Adjustment (EPA)). The LRIP and FRP options will be exercised following successful completion of Operational Assessments (OAs) for the LRIP decisions, and a successful completion of Initial Operational Test and Evaluation (IOT&E) for the FRP decision.

The Government plans to compete the development, deployment, and sustainment of both the aircrew and maintenance training systems separately.

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Air Force **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605221F: <i>KC-46, Next Generation Aerial Refueling Aircraft</i>
--	--

Based on the market research and a cost effectiveness analysis, the engines will be procured as contractor furnished equipment (CFE) for EMD. Following EMD, the Government will assess the potential of breaking out the engines as a separate procurement based on an updated market analysis.

The KC-46 Program is responsible for the development, testing, and production of a drogue-equipped, wing-mounted refueling system to meet Capability Development Document (CDD) thresholds and objectives, for simultaneous refueling of two probe-equipped receivers. The system can be installed or removed from the KC-46 as mission needs dictate.

The long-term support concept for the KC-X is organic two-level maintenance (2LM): organization level (O-level) and depot level (D-level). For the purposes of this program, all maintenance other than O-level shall be referred to as D-level. The product support strategy will use a Contractor Supported Weapon System (CSWS) to provide interim support (Interim Contractor Support (ICS)), during the transition to a Government organic maintenance and supply support capability. Performance Based Logistics (PBL) solutions will be evaluated during EMD as viable approaches to facilitate the transition.

This acquisition strategy requires sufficient aircraft to be designed, tested, and delivered to meet a Required Assets Available (RAA) date of 78 months after contract award. RAA is defined as 18 aircraft meeting final production configuration with all required training and support in place. Initial Operational Capability (IOC) will be attained when the Commander, Air Mobility Command (AMC/CC) determines the unit is operationally war ready – AMC has not yet determined an IOC date. Full Operational Capability (FOC) is expected approximately 24 months after IOC.

F. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Air Force **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605221F: <i>KC-46, Next Generation Aerial Refueling Aircraft</i>	PROJECT 655271: <i>KC-46 RDT&E</i>
--	--	--

Product Development (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
KC-46 aircraft non-recurring development, integration, and testing, 4 RDT&E tanker aircraft and support	C/FPIF	The Boeing Company:Seattle, WA	812.355	835.517		1,682.814		-		1,682.814	3,233.382	6,564.068	4,393.857
Develop an Aircrew Training System; Develop a Maintenance Training System	C/FPIF	TBD:TBD,	-	16.165		92.751		-		92.751	239.068	347.984	TBD
Subtotal			812.355	851.682		1,775.565		-		1,775.565	3,472.450	6,912.052	

Remarks
The KC-46 aircraft row's "Target Value on Contract" represents the \$4.4B target price of the prime contract. \$4.9B (includes several additional, small dollar Fixed Price contract line item numbers (CLINs)) is the Government's maximum financial liability on the prime contract. Aircrew and Maintenance Trainer Systems contract dates and information will be provided after Aircrew and Maintenance trainer source selections are completed.

Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Studies and Analysis associated with the development, integration, and demonstration of KC-46 capability & future planning	Various	Various:Various,	8.593	3.344		3.410		-		3.410	10.778	26.125	0.000
Subtotal			8.593	3.344		3.410		-		3.410	10.778	26.125	0.000

Remarks
These contracts are on an as needed basis, with various contract types and performing activities.

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Air Force **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605221F: <i>KC-46, Next Generation Aerial Refueling Aircraft</i>	PROJECT 655271: <i>KC-46 RDT&E</i>
--	--	--

Test and Evaluation (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Testing and Planning support of development & operational test, FAA & military certification, and aircraft qualification activities	Various	Various:Various,	12.346	7.069		20.030		-		20.030	115.249	154.694	0.000
Subtotal			12.346	7.069		20.030		-		20.030	115.249	154.694	0.000

Remarks
Testing and planning activities are performed by Government organizations, with some A&AS support, therefore, the contract information section of this cost category is N/A.

Management Services (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Administration	Various	KC-46 Program Office:Dayton, W-P AFB, OH	29.841	14.989		16.583		-		16.583	39.927	101.340	0.000
Subtotal			29.841	14.989		16.583		-		16.583	39.927	101.340	0.000

Remarks
Multiple A&AS contracts over \$1M: FY 2011 (total cost \$2.701M); FY 2012 (total cost \$7.774M); FY 2013 (total cost: \$9.471M). All competitive, various contract types, and various locations.

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals		863.135	877.084		1,815.588		-	1,815.588	3,638.404	7,194.211	

Remarks

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Air Force		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605221F: <i>KC-46, Next Generation Aerial Refueling Aircraft</i>	PROJECT 655271: <i>KC-46 RDT&E</i>

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Air Force		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605221F: <i>KC-46, Next Generation Aerial Refueling Aircraft</i>	PROJECT 655271: <i>KC-46 RDT&E</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
MS B	2	2011	2	2011
EMD Contract Award	2	2011	2	2011
EMD: KC-46 Aircraft	2	2011	4	2017
Integrated Baseline Review	4	2011	4	2011
Preliminary Design Review	2	2012	2	2012
Critical Design Review	4	2013	4	2013
Test & Evaluation	2	2011	1	2017
Operational Assessment #1	1	2013	2	2013
767-2C First Flight	3	2014	3	2014
Tanker First Flight	2	2015	2	2015
Operational Assessment #2	1	2015	3	2015
Integrated Operational Test & Evaluation	3	2016	4	2016
Low Rate Initial Production - Lot 1	4	2015	4	2016
Low Rate Initial Production - Lot 2	3	2016	4	2017
Full Rate Production - Lot 3	3	2017	4	2017
Pre-Operational Support & Depot Planning	2	2011	4	2017
Training System Requirements Analysis	1	2011	4	2011
Aircrew / Maintenance Training System Development & Updates	3	2012	4	2017