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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Air Force **Date:** March 2023

Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 5: System Development & Demonstration (SDD)</i>	R-1 Program Element (Number/Name) PE 0605057F / <i>Next Generation Air-refueling System</i>
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COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	-	0.000	0.000	7.928	0.000	7.928	0.000	0.000	0.000	0.000	Continuing	Continuing
652430: <i>Next Generation Tanker Development</i>	-	0.000	0.000	7.928	0.000	7.928	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Program MDAP/MAIS Code: 387

Note
 In FY 2024, PE 0401221F, KC-46A Tanker Squadrons, Project 655271, KC-46 RDT&E, future tanker support efforts were transferred to PE 0605057F, Next Generation Air-Refueling System, Project 652430, Next Generation Tanker Development, in order to provide transparency to the pre-MDAP NGAS program. NGAS Pre-Analysis of Alternatives (AoA) activities began in FY 2023, and anticipate completion in FY 2024.

A. Mission Description and Budget Item Justification
 In FY 2024, the Department of the Air Force will break from its previous recapitalization approaches (KC-X, KC-Y, KC-Z) in favor of more agile methods, prioritizing and accelerating the right capabilities to deliver fuel to the fight. This new approach replaces KC-Z with an accelerated Next Generation Air-refueling System (NGAS) (PE 0605057F) and continues Tanker Recapitalization (PE 0605164F) between KC-46A and NGAS.

NGAS is an accelerated, advanced air refueling system that meets the future needs of the joint force. NGAS delivers upgraded capabilities in multiple types of tankers (increments) by leveraging benefits of full and open competition. NGAS is a clean sheet, purpose-built design effort that will garner advanced technologies to ensure air refueling in a contested environment to address projected future threats and needed capabilities. In FY 2024, AMC-led Analysis of Alternatives (AoA) efforts will shape requirements and determine the technology development timeline. Delivery of the first NGAS tanker increment is expected in the mid-to-late 2030s.

NGAS will provide the refueling capability to U.S. and coalition receivers via a boom or drogue system on every mission and projected to augment the airlift fleet with cargo, passenger, and aeromedical evacuation capabilities.

NGAS will operate in day/night and adverse weather conditions to enable deployment, employment, sustainment, and redeployment of U.S. and coalition forces. NGAS will have communication, navigation, and surveillance equipment for worldwide operations; the capability to perform missions in chemical and biological environments; the ability to operate in contested environments with self-defense/protection (both active and passive) capabilities; and the necessary battlespace awareness to mitigate threats (survivability).

NGAS will identify, design, develop, integrate and sustain a comprehensive range of recurring and non-recurring post-production and air vehicle enhancements to include but not limited to programmed Mobility Air Force (MAF) requirements, Combatant Commander Joint or Urgent Operational Needs (JUON/UON), non-

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<p>programmed Federal Aviation Administration (FAA) directives, requirements identified and supported by HHQ Enterprise Capability Collaboration Teams (i.e., High Value Airborne Asset [HVAA], Air Superiority 2030, and Multi-Domain Command and Control [MDC2]), or correction of field deficiencies.</p> <p>The dynamics and mission urgency of the post-production (post-DD-250) environment require the program to maintain a flexible and responsive posture to support a broad range of mission support needs. NGAS will continue to identify, design, develop, integrate, verify, certify, produce, install, field, and sustain a comprehensive range of non-recurring and recurring post-production, air vehicle enhancements and field support needs to include but not limited to programmed Mobility Air Force (MAF) requirements, Combatant Commander Joint or Urgent Operational Needs (JUON/UON), non-programmed Federal Aviation Administration (FAA) directives, requirements identified and supported by HHQ Enterprise Capability Collaboration Teams (i.e., High Value Airborne Asset [HVAA], Air Superiority 2030, and Multi-Domain Command and Control [MDC2]), or correction of field deficiencies.</p> <p>NGAS will develop, field, and sustain warfighter refueling capabilities to meet evolving threats and mission support requirements through Block or discrete modification or modernization programs depending on mission urgency, available funding, and programmatic and technical risks. Post-production requirements may include but not be limited to avionics and structural systems/architecture and subsystem updates, general mission equipment updates and procurement, general sustainment support, diminishing manufacturing sources and material shortages (DMSMS) studies and analyses, future tanker requirements, simulation and training, and correction of field deficiencies.</p> <p>NGAS budget supports Program Support Costs (PSC) activities to include but not limited to market research, acquisition planning, pre-milestone activities, Request for Proposal (RFP) development, test planning, mission planning capability development, future tanker development and various studies and analyses.</p> <p>This program element may include necessary civilian pay expenses required to manage, execute, and deliver weapon system capability. The use of such program funds would be in addition to the civilian pay expenses budgeted in program element 0605827F, 0605828F, 0605829F, 0605831F, 0605832F, 0605833F, 0605898F, 0606398F. In FY 2022, \$0.000 million was expended for civilian pay expenses in this program element, and in FY 2023 \$0.000 million is forecast for civilian pay expenses in this program element.</p> <p>The program element currently resides in the incorrect Budget Activity (BA) 5. The Air Force is processing a technical adjustment to transfer the NGAS program element from BA 5 to BA 04 to align with the correct budget activity scope. The program is currently in pre-Milestone A and is awaiting an Analysis of Alternatives to be completed.</p> <p>This program is in Budget Activity 5, System Development and Demonstration (SDD) because it has passed Milestone B approval and is conducting engineering and manufacturing development tasks aimed at meeting validated requirements prior to full rate production.</p>		

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B. Program Change Summary (\$ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	0.000	0.000	0.000	0.000	0.000
Current President's Budget	0.000	0.000	7.928	0.000	7.928
Total Adjustments	0.000	0.000	7.928	0.000	7.928
• Congressional General Reductions	0.000	0.000			
• Congressional Directed Reductions	0.000	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	0.000	0.000			
• Congressional Directed Transfers	0.000	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments	0.000	0.000	7.928	0.000	7.928

Change Summary Explanation

FY 2024 funding increase of \$7.928 million to support the Analysis of Alternatives efforts and associated studies. In FY 2023, pre-AoA efforts were funded under Project 655271, KC-46 RDT&E. FY 2024 funding is a continuation of FY 2023 efforts.

C. Accomplishments/Planned Programs (\$ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Title: Support	-	0.000	7.928	0.000	7.928
Description: NGAS Mission Support/Program Standup - Studies and analyses to support NGAS planning activities for future initiatives, future tanker replacement planning, and other Program Office support to include but not limited to an Analysis of Alternatives (AoA), market research, acquisition planning, pre-milestone activities, RFP development, test planning, and various studies and analyses.					
FY 2023 Plans: N/A					
FY 2024 Base Plans: Continuation of AoA activities to include but not limited to market research, acquisition planning, pre-milestone activities, RFP development, RFP release, test planning, and various studies and analyses for new NGAS tanker development.					
FY 2024 OCO Plans: N/A					
FY 2023 to FY 2024 Increase/Decrease Statement:					

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C. Accomplishments/Planned Programs (\$ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Funding increased due to ramp up of program office activities to support acquisition efforts.					
Accomplishments/Planned Programs Subtotals	-	0.000	7.928	0.000	7.928

D. Other Program Funding Summary (\$ in Millions)
N/A

Remarks

E. Acquisition Strategy
NGAS will be a clean sheet, purpose-built design to address projected threats and capabilities. It leverages benefits of full and open competition. The yet-to-be determined NGAS acquisition strategy will be based on a future approved CDD requirements and FAR/DFARS compliance. However, the notional acquisition approach is to award Technology Maturation Risk Reduction contracts that mature and develop key future technologies with multiple vendors. In addition, Science and Technology efforts will be funded to develop critical path technologies needed to meet attributes defined in the Advanced Air Refueling ICD to a Technology Readiness Level greater than 5.

The first NGAS delivery is expected in the mid to late 2030s.

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Exhibit R-4A, RDT&E Schedule Details: PB 2024 Air Force		Date: March 2023
Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0605057F / <i>Next Generation Air-refueling System</i>	Project (Number/Name) 652430 / <i>Next Generation Tanker Development</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
NGAS				
Analysis of Alternatives	1	2024	4	2024