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Exhibit R-2, RDT&E Budget Item Justification: PB 2017 Air Force **Date:** February 2016

Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0301112F / <i>Nuclear Planning and Execution System (NPES)</i>
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COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
Total Program Element	0.000	0.000	0.000	4.060	0.000	4.060	4.358	17.036	26.561	30.716	37.329	120.060
673768: <i>Nuclear Planning and Execution System (NPES)</i>	0.000	0.000	0.000	4.060	0.000	4.060	4.358	17.036	26.561	30.716	37.329	120.060
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Program MDAP/MAIS Code: 523

Note
This program, BA 07 PE 0301112F, project 673768, Nuclear Planning and Execution System (NPES) Modernization, is a new start.

A. Mission Description and Budget Item Justification
United States Strategic Command (USSTRATCOM) conducts global operations in partnership with other combatant commands, services and U.S. government agencies to deter and detect strategic attacks against the United States. USSTRATCOM is responsible for command of U.S. nuclear capabilities, space operations, global surveillance and reconnaissance, intelligence, communications, computers, global missile defense and combatting weapons of mass destruction. To enable completion of these missions, it is modernizing the Nuclear Planning and Execution System (NPES). NPES is a Chairman, Joint Chiefs of Staff system for nuclear operations and fulfillment of nuclear command and control (NC2) responsibilities. NPES supports national strategic deterrence by providing a host of NC2 execution activities as well as contingency and crisis action planning capabilities to selected joint and combatant command staffs. NPES is operated by USSTRATCOM and other specified users performing missions to deter and dissuade threats, and, when directed, defeat adversaries.

The NPES system has evolved from several single-purpose command and control systems over the past 30 years and has reached a point where it requires modernization to meet national and strategic objectives and to comply with future concepts of operation. Additionally, modernization is needed to improve cybersecurity, system effectiveness, and supportability. Modernization will also seek to lower the total cost of ownership and sustainment. The modernization program will use proven/mature software engineering, technologies, and design tenets to provide a modern, secure, interoperable and reliable NC2 software capability.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

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B. Program Change Summary (\$ in Millions)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Previous President's Budget	0.000	0.000	0.000	0.000	0.000
Current President's Budget	0.000	0.000	4.060	0.000	4.060
Total Adjustments	0.000	0.000	4.060	0.000	4.060
• 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	4.060	0.000	4.060

Change Summary Explanation

FY 2017 RDT&E increased \$4.1 million for NPES Modernization

C. Accomplishments/Planned Programs (\$ in Millions)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
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<p>Title: Nuclear Planning and Execution System (NPES) Modernization</p> <p>Description: The NPES program will use proven and mature software engineering, technologies, and design tenets to provide a modern, secure, interoperable and reliable NC2 capability for USSTRATCOM and other users as appropriate. It will update and/or replace existing system software and improve reliability and sustainability. It will also seek to reduce total ownership cost.</p> <p>FY 2015 Accomplishments: N/A</p> <p>FY 2016 Plans: N/A</p> <p>FY 2017 Base Plans: Risk Reduction Activities will outline the software architecture for development activities and identify the software build and evaluation approach for NPES modernization.</p> <ul style="list-style-type: none"> - Refine System / Subsystem Design Description (SSDD) draft - Conduct software reuse analysis - Evaluate user interface and data integration prototypes 	0.000	0.000	4.060	0.000	4.060
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C. Accomplishments/Planned Programs (\$ in Millions)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
- Generate program milestone decision products and artifacts - Complete Preliminary Design Review preparation FY 2017 OCO Plans: N/A					
Accomplishments/Planned Programs Subtotals	0.000	0.000	4.060	0.000	4.060

D. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017 Base</u>	<u>FY 2017 OCO</u>	<u>FY 2017 Total</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• N/A: N/A	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	-

Remarks

E. Acquisition Strategy

NPES will develop, test, and field a renewed Nuclear Command and Control (NC2) capability for combatant commanders using an evolutionary acquisition approach with development contracts that are negotiated and awarded in a competitive environment. Additionally, select government agencies will be used to conduct relevant analyzes and provide other required support.

The Air Force Life Cycle Management Center at Hanscom AFB, (AFLCMC/HB) and the 55th CONS at Offutt AFB will be the contracting authorities for NPES and provide necessary program management, contracts, legal, and financial management support.

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.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Air Force **Date:** February 2016

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0301112F / Nuclear Planning and Execution System (NPES)	Project (Number/Name) 673768 / Nuclear Planning and Execution System (NPES)
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Product Development (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Pre Milestone B Risk Reduction	Various	Various : Offutt AFB, NE	0.000	0.000		0.000		1.500	Jan 2017	0.000		1.500	0.000	1.500	3.500
NPES Software Dev (Spiral 1)	C/TBD	TBD : TBD	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	51.000
NPES Software Dev (Spiral 2)	C/TBD	TBD : TBD	0.000	0.000		0.000		0.000		0.000		0.000	24.000	24.000	48.000
Subtotal			0.000	0.000		0.000		1.500		0.000		1.500	24.000	25.500	102.500

Support (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Technical Engineering Services	Various	Various : Offutt AFB, NE	0.000	0.000		0.000		1.560	Jan 2017	0.000		1.560	3.500	5.060	6.060
Subtotal			0.000	0.000		0.000		1.560		0.000		1.560	3.500	5.060	6.060

Test and Evaluation (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Responsible Test Organization Support	C/CPIF	TBD : TBD	0.000	0.000		0.000		0.000		0.000		0.000	2.675	2.675	2.675
Certification and Accreditation	MIPR	JTIC : Ft Hichuaha, AZ	0.000	0.000		0.000		0.000		0.000		0.000	1.325	1.325	1.325
Subtotal			0.000	0.000		0.000		0.000		0.000		0.000	4.000	4.000	4.000

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Exhibit R-4A, RDT&E Schedule Details: PB 2017 Air Force		Date: February 2016
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Pre Milestone B Risk Reduction Analyzes	1	2017	1	2018
Development RFP Release Decision Point	1	2018	1	2018
Milestone B Decision	1	2019	1	2019
Spiral 1 Development and Test	1	2019	3	2020
Spiral 2 Development and Test	3	2020	4	2021

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