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Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Air Force **Date:** April 2022

Appropriation/Budget Activity 3600: Research, Development, Test & Evaluation, Air Force I BA 3: Advanced Technology Development (ATD)	R-1 Program Element (Number/Name) PE 0603273F I Science & Technology for Nuclear Re-entry Systems
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COST (\$ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
Total Program Element	-	0.000	0.000	39.431	0.000	39.431	70.162	87.945	118.933	155.791	Continuing	Continuing
634094: Next Gen Platform Dev/Demo	-	0.000	0.000	39.431	0.000	39.431	70.162	87.945	118.933	155.791	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This program supports Department of Defense (DOD) priorities for enduring nuclear science and technology (S&T) for re-entry systems. This effort will provide advanced technology development that will effectively address evolving threats and maintain operational effectiveness while also aligning with the highest level guidance for nuclear forces. This effort will contribute to preserving the viability of the nuclear deterrent in a cost-effective manner by reducing technical and programmatic risk associated with execution of the overall nuclear modernization program. These ends will be reached by developing technologies to inform future system requirements, establishing interagency partnerships for re-entry system test platform development, and coordinating with existing programs for next generation strategic system development. This program enhances and enables technology developed under the Next Gen Platform Dev/Demo Effort currently being executed under program element 0603211F, Aerospace Technology Dev/Demo, Project 634094.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver science & technology capabilities. The use of program funds in this program element would be in addition to the civilian pay expenses budgeted in program elements 0601102F, 0602020F, 0602102F, 0602201F, 0602202F, 0602203F, 0602204F, 0602602F, 0602605F, 0602788F, 0602298F, and 1206601SF.

This program is in Budget Activity 3, Advanced Technology Development because this budget activity includes development of subsystems and components and efforts to integrate subsystems and components into system prototypes for field experiments and/or tests in a simulated environment.

B. Program Change Summary (\$ in Millions)	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023 Base</u>	<u>FY 2023 OCO</u>	<u>FY 2023 Total</u>
Previous President's Budget	0.000	0.000	0.000	0.000	0.000
Current President's Budget	0.000	0.000	39.431	0.000	39.431
Total Adjustments	0.000	0.000	39.431	0.000	39.431
• 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	39.431	0.000	39.431

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Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 3: Advanced Technology Development (ATD)</i>		R-1 Program Element (Number/Name) PE 0603273F / <i>Science & Technology for Nuclear Re-entry Systems</i>		
C. Accomplishments/Planned Programs (\$ in Millions)		FY 2021	FY 2022	FY 2023
<p>Title: Re-entry System Technologies</p> <p>Description: Develop next generation hardware, software and material technologies for flight representative testing and environments for re-entry systems.</p> <p>FY 2022 Plans: Not applicable</p> <p>FY 2023 Plans: Initiate development of advanced aeroshell technologies to maintain a viable deterrent for the foreseeable future through enhanced resiliency and survivability. Initiate development of advanced fuzing solutions that are able to maintain operational effectiveness against emerging targeting challenges and develop alternative safety and surety features required for nuclear systems. Initiate development of strategic-grade, radiation-hardened guidance, navigation and control solutions for advanced systems. Initiate establishment of requisite testing infrastructure to enable nuclear re-entry S&T development activities and to evaluate component technologies in relevant environments.</p> <p>FY 2022 to FY 2023 Increase/Decrease Statement: FY 2023 increased compared to FY 2022 by \$39.431 million. Funding increased due to the stand-up of joint, enduring science and technology for nuclear re-entry systems across the DOD.</p>		-	0.000	39.431
Accomplishments/Planned Programs Subtotals		-	0.000	39.431
D. Other Program Funding Summary (\$ in Millions)				
N/A				
Remarks				
E. Acquisition Strategy				
Not applicable				