### **Congress and Defense Funding Webinar**

Sponsored by the National Armaments Consortium



Presented by

Thorn Run Partners
Greg Lankler

**BG** Wright

The Halcrow Group

Stephanie Halcrow

#### **Discussion Agenda**

### Part I – Timeline for consideration of the DoD Bills, Understanding the Budget Request, Working with your Representatives and Senators

- 1) Calendar year overview of the Defense Appropriations and Authorization Process
  - a) Discussion of the **Defense Bills Timeline (PDF)** to include critical milestones and timing to engage with Member offices.
- 2) The President's Budget Request
  - a) Working with your Program Office to know where your funding is coming from
  - b) Important reference links

https://comptroller.defense.gov/Budget-Materials/Budget2024/

- c) Understanding OSD & Service Justification materials
  - i) Reviewing programmatic budget justifications (Army LRPF Budget Justification Example (PDF))
  - ii) Understanding funding request impacts to your program
- 3) The Member Request Process
  - a) Timeline (Feb-April Defense Bills Timeline (PDF))
  - b) Finding your Representative and Senators

https://www.house.gov/

https://www.senate.gov/senators/index.htm

- c) Member Request Forms
  - i) Locating the request forms, completing, and submitting

https://strong.house.gov/services/appropriations-requests

ii) Discussion of the Generic Member Request Form (Word Document)

Senator Van Hollen NAC Request Example (Word Document)

- d) Following up with the Member/Senator/Staff
  - i) Engaging with the DC Office and MLAs (in person/Zoom Meetings)
  - ii) Engaging with the District Office
  - iii) Requesting/Coordinating site visits with MLAs/Schedulers/District Office

#### **Additional Materials:**

CRS Report: The Appropriations Process: A Brief Overview

(https://crsreports.congress.gov/product/pdf/R/R47106)

CRS Report: The House Appropriations Process: Opportunities for Member Participation

(https://crsreports.congress.gov/product/pdf/R/R47031)

CRS Report: Defense Primer: The NDAA Process (https://crsreports.congress.gov/product/pdf/IF/IF10515)

#### COMING IN APRIL: PART II: Defense Appropriations and Authorization Markup and Floor Process

- 1. Tracking Committee Activity
- 2. FY25 Defense bills Cong. Defense Committee Bill and Report Resources
- 3. Floor Consideration and Amendments Process

**COMING IN SEPTEMBER**: PART III: The Conference Process and Enactment of the Congressional Defense Bills.

## Timeline for Consideration of the Defense Appropriations Bill

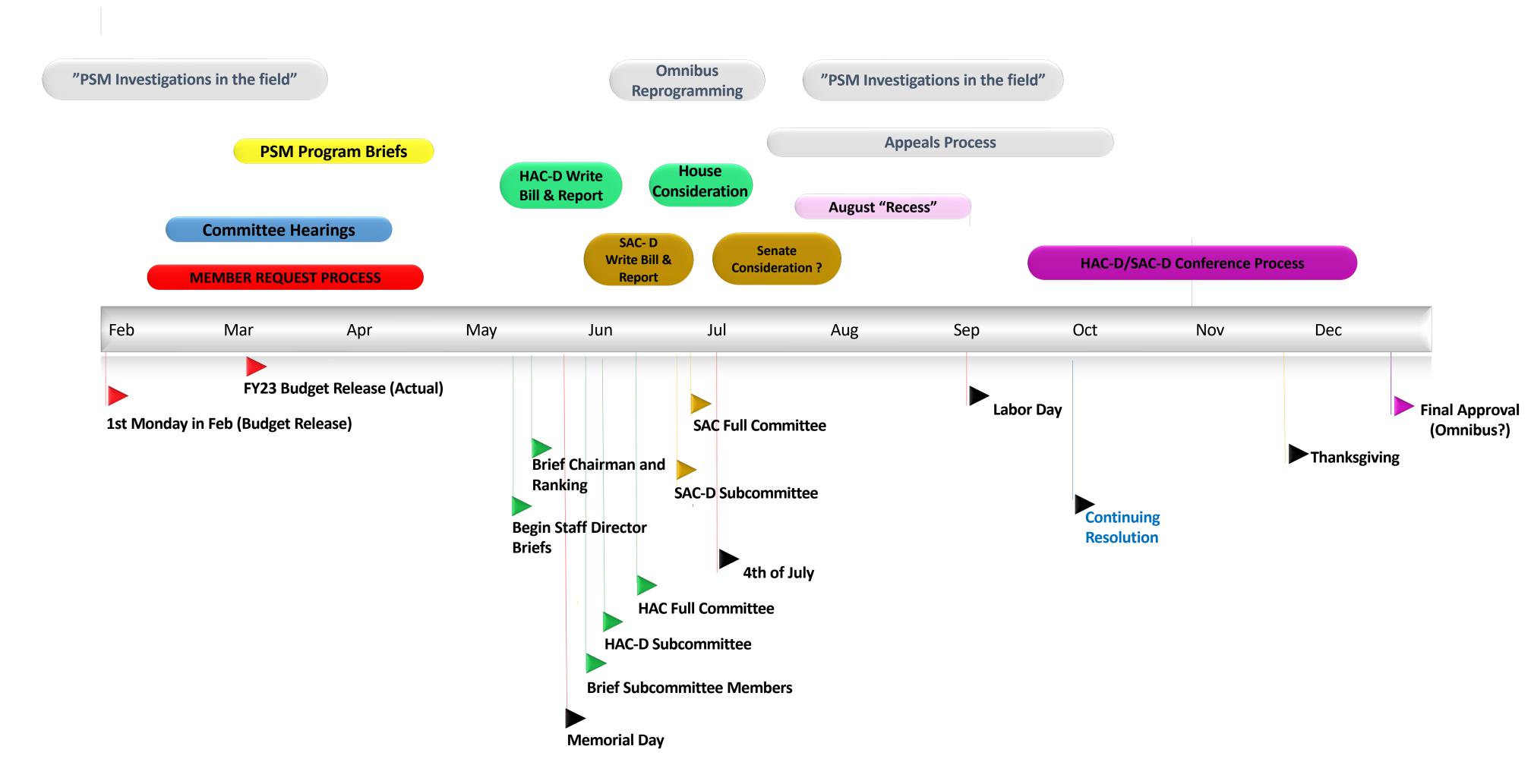


Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Army

R-1 Program Element (Number/Name)

Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army I BA 3: Advanced

anced DE

PE 0603464A I Long Range Precision Fires Advanced Technology

R-1 Line #46

Technology Development (ATD)

recommences beverapment (711b)												
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	-	138.482	202.830	153.024	-	153.024	127.982	131.428	119.292	119.789	0.000	992.827
AE8: Land-Based Anti-Ship Missile (LBASM) Advanced Tech	-	15.125	12.150	-	-	-	-	-	-	-	0.000	27.275
AF2: Long Range Maneuverable Fires (LRMF) Advanced Tech	-	-	4.663 Significan	62.661 t increase	in funding	62.661 from FY23	50.970 to FY24	50.126	1.311	1.658	0.000	171.389
AG3: Extended Range Cannon Artillery (ERCA) Adv Tech	-	3.003	3.354	-	-	-	6.480	9.418	11.309	11.432	0.000	44.996
AG5: Extended Range Artillery Munition Suite Adv Tech	-	32.594	27.461	23.484	-	23.484	9.726	-	10.197	8.243	0.000	111.705
AG7: Energetic Materials and Adv Processing Adv Tech	-	2.020	1.954	-	-	-	-	-	-	-	0.000	3.974
BO8: Long Range Precision Fires Advanced Tech (CA)	-	48.000	102.000 All Fundi	ng is Con	gressiona	- I Adds	-	-	-	-	0.000	150.000
BY2: Advanced Hypersonic Technology	-	37.740	36.517	64.136	-	64.136	49.592	50.808	50.835	51.633	0.000	341.261
CE9: Armaments Advanced Technology*	-	-	-	-	-	-	8.406	10.844	12.362	13.516	0.000	45.128
CZ8: PrSM Modular Payload Advanced Development	-	-	14.731 Not a de	2.743 crease, fi	۔ unding is ا	2.743 realigned		10.232 AF2	33.278	33.307	0.000	97.099

<sup>\*</sup>This project's R-2a exhibit has been suppressed due to funding not beginning until after FY 2024

#### A. Mission Description and Budget Item Justification

This Program Element (PE) matures and demonstrates Long Range Precision Fires (LRPF) technologies to destroy, neutralize, or suppress the enemy by cannon artillery and missile fire and enable integration of fire support assets into combined arms operations. Major Focus Areas for LRPF Science and Technology include: Missiles, Cannon Artillery, and Supporting LRPF Technologies covering Strategic, Operational and Tactical Lines of Effort. LRPF Missiles Advanced Development matures and demonstrates a broad range of Missile technologies to enhance Army integrated LRPF capabilities at extended range. Cannon Artillery Advanced Development matures and demonstrates critical technologies to increase range, precision, and both point and area effects for cannon artillery. Supporting LRPF Technologies Advanced Development matures and demonstrates a broad range of component technologies to address weapon cost drivers and enhance performance of future LRPF munitions and systems.

UNCLASSIFIED

Date: March 2023

Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Army

Appropriation/Budget Activity

R-1 Program Element (Number/Name)

2040: Research, Development, Test & Evaluation, Army I BA 3: Advanced Technology Development (ATD)

PE 0603464A I Long Range Precision Fires Advanced Technology

Research in this Program Element (PE) complements PE 0602147A Long Range Precision Fires Technology.

This PE is directly aligned to the Army Long Range Precision Fires (LRPF) Modernization Priority.

The cited research is consistent with the Under Secretary of Defense for Research and Engineering priority focus areas and the Army Modernization Strategy.

Research is performed by the United States Army Futures Command (AFC).

B. Program Change Summary (\$ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	141.909	100.830	133.252	-	133.252
Current President's Budget	138.482	202.830	153.024	-	153.024
Total Adjustments	-3.427	102.000	19.772	-	19.772
<ul> <li>Congressional General Reductions</li> </ul>	-	-			
<ul> <li>Congressional Directed Reductions</li> </ul>	-	-			
<ul> <li>Congressional Rescissions</li> </ul>	-	-			
<ul> <li>Congressional Adds</li> </ul>	-	102.000			
<ul> <li>Congressional Directed Transfers</li> </ul>	-	-			
<ul> <li>Reprogrammings</li> </ul>	-3.427	-			
SBIR/STTR Transfer	-	-			
<ul> <li>Adjustments to Budget Years</li> </ul>	-	-	19.772	-	19.772

#### Congressional Add Details (\$ in Millions, and Includes General Reductions)

Project: BO8: Long Range Precision Fires Advanced Tech (CA)

Congressional Add: Program Increase - Hypervelocity Projectile Extended Range

Congressional Add: Extended Range Artillery Munitions Suite

Congressional Add: Program Increase - Maneuvering Submunitions for Precision Strike Missile

Congressional Add: Program Increase - AFT COMBUSTOR RAMJET PROPULSION

Congressional Add: Program Increase - DEVELOPMENT AND TESTING OF PROPELLANTS USING ADVANCED

*MANUFACTURING* 

Congressional Add: Program Increase - HYPERSONIC AND STRATEGIC MATERIALS AND STRUCTURES

Congressional Add: Program Increase - HYPERSONIC METAL ALLOYS

Congressional Add: Program Increase - MISSILE MULTI AGENT EXTENSIBLE ENGAGEMENT SERVICES

Congressional Add: Program Increase - SUPER RAMJET ARTILLERY MISSION

FY 2022	FY 2023
25.000	25.000
20.000	-
3.000	9.000
-	10.000
-	5.000
-	8.000
-	2.000
-	15.000
-	8.000

R-1 Line #46

UI	NCLASSIFIED		
Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Army	Da	te: March 2023	
Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army I BA 3: Advanced Technology Development (ATD)	R-1 Program Element (Number/Name) PE 0603464A I Long Range Precision Fires Advanced Tech	nology	
Congressional Add Details (\$ in Millions, and Includes General Re	eductions)	FY 2022	FY 2023
Congressional Add: Program Increase - XM1155 GUIDED FLIGHT	「 PROJECTILE	-	20.000
	Congressional Add Subtotals for Project: BO	48.000	102.000
	Congressional Add Totals for all Project	48.000	102.000
Change Summary Explanation Funding increase in FY24 reflects planned program development and thermal protection materials for the Common Hypersonic Glide Body (		es and supports	transition of

Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023		
Appropriation/Budget Activity 2040 / 3	•				PE 0603464A I Long Range Precision Fires				Project (Number/Name) AE8 I Land-Based Anti-Ship Missile (LBASM) Advanced Tech			le
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
AE8: Land-Based Anti-Ship Missile (LBASM) Advanced Tech	-	15.125	12.150	-	-	-	-	-	-	-	0.000	27.275
Quantity of RDT&E Articles	-	-	-	-	-	-	_	-	-	-		

#### A. Mission Description and Budget Item Justification

This Project directly supports Long Range Precision Fires Modernization Priority capabilities by maturing and demonstrating critical technologies to detect, engage, and defeat moving land or maritime surface targets under all conditions.

Research in this Project complements Program Element (PE) 0602147A (Long Range Precision Fires Technology).

The cited research is consistent with the Under Secretary of Defense for Research and Engineering priority focus areas and the Army Modernization Strategy.

Research in this Project is performed by the United States Army Futures Command (AFC).

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2022	FY 2023	FY 2024
Title: Land Based Anti-Ship Missile (LBASM) Advanced Technology	15.125	11.826	-
<b>Description:</b> Matures and demonstrates technologies that enable high-mobility artillery rocket system (HIMARS) and multiple-launch rocket system (MLRS) rocket/missile artillery systems to destroy enemy air defenses in the land and the maritime domains.			
FY 2023 Plans: Will end demonstrations and data evaluation of multi-mode seeker technologies in a surrogate missile system. Will mature concepts for re-factoring multi-mode seeker technologies into PrSM form factor. Will demonstrate multi-mode seeker technologies as part of the PrSM form factor through hardware-in-the-loop to verify operation when integrated with other PrSM components.			
FY 2023 to FY 2024 Increase/Decrease Statement: Funding change reflects conclusion of this effort			
Title: SBIR/STTR Transfer	-	0.324	-
Description: Funding transferred in accordance with Title 15 USC §638			
FY 2023 Plans: Funding transferred in accordance with Title 15 USC §638			
FY 2023 to FY 2024 Increase/Decrease Statement:			

PE 0603464A: Long Range Precision Fires Advanced Tech... Army

**UNCLASSIFIED** Page 4 of 20

Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: March 2023
Appropriation/Budget Activity	R-1 Program Element (Number/Name)	Project (Number/Name)
2040 / 3	PE 0603464A I Long Range Precision Fires	AE8 I Land-Based Anti-Ship Missile
	Advanced Technology	(LBASM) Advanced Tech

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2022	FY 2023	FY 2024
Funding transferred in accordance with Title 15 USC §638			
Accomplishments/Planned Programs Subtotals	15.125	12.150	-

#### C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

#### D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023			
Appropriation/Budget Activity 2040 / 3				, ,				Project (Number/Name) AF2 I Long Range Maneuverable Fires (LRMF) Advanced Tech					
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	
AF2: Long Range Maneuverable Fires (LRMF) Advanced Tech	-	-	4.663	62.661	-	62.661	50.970	50.126	1.311	1.658	0.000	171.389	
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-			

#### A. Mission Description and Budget Item Justification

This Project directly supports Long Range Precision Fires Modernization Priority capabilities by developing, maturing and demonstrating next generation Multi-Domain Operations extended range weapon system technology for Precision Strike Missile to increase survivability, penetration, and range in complex Anti Access/Area Denial (A2/AD) and denied environments. This Project also includes both the maturation and demonstration of advanced extended range missile technology and autonomous, unmanned launcher technology. The combination of these technologies offers the potential to dramatically increase force projection through increases in range, firepower, and magazine depth.

Research in this Project complements Program Element (PE) 0602147A (Long Range Precision Fires Technology).

The cited research is consistent with the Under Secretary of Defense for Research and Engineering priority focus areas and the Army Modernization Strategy.

Research in this Project is performed by the United States Army Futures Command (AFC).

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2022	FY 2023	FY 2024
Title: Long Range Maneuverable Fires (LRMF) Advanced Tech	-	4.493	62.661
<b>Description:</b> Matures and demonstrates next generation Multi-Domain Operations extended range weapon system technology for Precision Strike Missile to increase survivability, penetration, and range in complex A2/AD and denied environments. Includes maturation and demonstration of advanced extended range missile technology and autonomous, unmanned launcher technology.			
FY 2023 Plans: Will develop and mature combined cycle extended range missile propulsion engine and autonomous unmanned launcher designs and perform critical sub-system assessments in preparation for system level integration.			
FY 2024 Plans:  Will mature system detailed design that integrates combined cycle extended range missile propulsion engine and other critical component technologies such as navigation, guidance and control subsystems and perform subsystem and system level testing through laboratory, wind tunnel, and field tests. Mature development of modeling and simulation and hardware in the loop (HWIL) capability for evaluation of component design and system performance predictions. Will complete system level integration and test			

Page 6 of 20

Exhibit R-2A, RDT&E Project Justification: PB 2024 Army	Date: March 2023					
Appropriation/Budget Activity 2040 / 3	R-1 Program Element (Number/Name) PE 0603464A I Long Range Precision Fires Advanced Technology	<b>Project (Number/Name)</b> AF2 I Long Range Maneuverable Fires (LRMF) Advanced Tech				
B. Accomplishments/Planned Programs (\$ in Millions) of an autonomous unmanned launcher and conduct field demonstr munition live fire.	ations of vehicle autonomy and remote launch pod control	FY 2022	FY 2023	FY 2024		
FY 2023 to FY 2024 Increase/Decrease Statement: Funding increase to support Army high priority effort for agile accel TRL 6 in FY26. Significant ramp up in level of effort as the project r critical component and subsystem development on a compressed t launcher system integration and demonstration efforts. FY24 fundi 0603464ACZ8 (PrSM Modular Payload Advanced Development).	moves from the extended range missile design activity to timeline, executed in parallel with autonomous unmanned					
Title: SBIR/STTR Transfer		-	0.170	-		
Description: Funding transferred in accordance with Title 15 USC	§638					
FY 2023 Plans: Funding transferred in accordance with Title 15 USC §638						
FY 2023 to FY 2024 Increase/Decrease Statement: Funding transferred in accordance with Title 15 USC §638						
	Accomplishments/Planned Programs Sub	totals -	4.663	62.661		

#### C. Other Program Funding Summary (\$ in Millions)

N/A

**Remarks** 

#### D. Acquisition Strategy

N/A

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: March 2023			
Appropriation/Budget Activity 2040 / 3	PE 06				PE 060346	PE 0603464A I Long Range Precision Fires				Project (Number/Name) AG3 I Extended Range Cannon Artillery (ERCA) Adv Tech			
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	
AG3: Extended Range Cannon Artillery (ERCA) Adv Tech	-	3.003	3.354	-	-	-	6.480	9.418	11.309	11.432	0.000	44.996	
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-			

#### A. Mission Description and Budget Item Justification

This Project directly supports Long Range Precision Fires (LRPF) Modernization Priority capabilities. This Project matures and demonstrates artillery technologies including light weight cannon and mount structures, high efficiency recoil cylinders, common lower power fire control hardware, improved fire control software, and improved sensor to shooter communications which will increase range and accuracy without an increase in platform weight. This Project also develops a collaborative environment with analytic capabilities to support Fires and Intel Soldiers.

The cited research is consistent with the Under Secretary of Defense for Research and Engineering priority focus areas and the Army Modernization Strategy.

Research in this Project is performed by the United States Army Futures Command (AFC).

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2022	FY 2023	FY 2024
Title: Synchronized High Op-Tempo (SHOT) Targeting for LRPF	3.003	3.232	-
<b>Description:</b> This effort develops a collaborative environment with analytic capabilities to support Fires and Intel Soldiers in organizing planning products, and analytics that automate data discovery and development of targets and streamlining workflows that support Course of Action development.			
FY 2023 Plans: Will mature software and technical documentation including drawings, concept of operation, and standard operating procedures.  I. Will mature and optimize draft training technology package concepts. Will demonstrate targeting cycle support technologies in an operationally relevant exercise environment. Will mature all technology components for validation and demonstration in an integrated targeting data system.			
FY 2023 to FY 2024 Increase/Decrease Statement: Funding decrease reflects the planned lifecycle of this effort as the demonstration of targeting technologies will be completed in FY23.			
Title: SBIR/STTR Transfer	-	0.122	-
<b>Description:</b> Funding transferred in accordance with Title 15 USC §638			

PE 0603464A: Long Range Precision Fires Advanced Tech...

Page 8 of 20

Wolume 1c - 371

Exhibit R-2A, RDT&E Project Justification: PB 2024 Army			Date: N	March 2023	
Appropriation/Budget Activity 2040 / 3	t (Number/I Extended Ra ) Adv Tech	Name) ange Cannon	Artillery		
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2022	FY 2023	FY 2024
FY 2023 Plans: Funding transferred in accordance with Title 15 USC §638					
FY 2023 to FY 2024 Increase/Decrease Statement: Funding transferred in accordance with Title 15 USC §638					
	Accomplishments/Planned Programs Sub	totals	3.003	3.354	_

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2024 Army								Date: Marc	ch 2023			
Appropriation/Budget Activity 2040 / 3				R-1 Program Element (Number/Name) PE 0603464A I Long Range Precision Fires Advanced Technology Project (Number/Name) AG5 I Extended Range Artillery M Suite Adv Tech				lunition				
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
AG5: Extended Range Artillery Munition Suite Adv Tech	-	32.594	27.461	23.484	-	23.484	9.726	-	10.197	8.243	0.000	111.705
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

#### A. Mission Description and Budget Item Justification

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

This Project directly supports Long Range Precision Fires Modernization Priority capabilities. This Project matures and demonstrates extended range artillery technologies including advanced projectile propulsion and guidance technologies to increase range and accuracy.

The cited research is consistent with the Under Secretary of Defense for Research and Engineering priority focus areas and the Army Modernization Strategy.

Research in this Project is performed by the United States Army Futures Command (AFC).

		1 1 2020	1 1 2027
Title: Extended Range Artillery Munition Suite Advanced Technology	32.594	25.113	20.272
<b>Description:</b> Matures and optimizes long range unitary artillery projectile systems in the areas of range, precision, countermeasure, and payload technologies.			
FY 2023 Plans:  Continue demonstration of long-range unitary artillery projectile designs to validate system modeling and simulation (M&S), architectures, and component capabilities. Validate configurations of projectile technologies for increased performance. Demonstrate gun launched munition survivability and aeroballistic stability. Mature advanced range extending propulsion technologies. Complete demonstration of integrated technologies in extended range artillery projectiles including: guidance algorithms, sensors, propulsion, and range extension technologies. Mature extended range airframe concepts for conventional and cargo munitions for advanced effects compatible with current and future artillery systems. Demonstrate payload concepts and configurations for extended range gun-launched airframe delivered effects to include sub-munition dispensing techniques and survivability.			
FY 2024 Plans: Will demonstrate advanced range extension through in flight propulsion systems, optimized aeroballistic airframe geometries and precision technologies. Will optimize airframe architectures for integration of components to enable target seeking missions. Will demonstrate extended range munition concepts for conventional coordinate- seeking and cargo munitions. Will optimize payload integration for extended range gun-launched airframes to include sub-munition dispensing techniques and survivability.			

**UNCLASSIFIED** 

FY 2022

R-1 Line #46

FY 2023

FY 2024

	ONOLAGON ILD			
Exhibit R-2A, RDT&E Project Justification: PB 2024 Army		Date: I	March 2023	
Appropriation/Budget Activity 2040 / 3	R-1 Program Element (Number/Name) PE 0603464A I Long Range Precision Fires Advanced Technology	Project (Number/Name)  AG5 I Extended Range Artillery M Suite Adv Tech		Munition
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023	FY 2024
Will optimize extended range projectile airframes to maximize range a platforms and propelling charge systems.	nd effectiveness across current and developmental we	apon		
FY 2023 to FY 2024 Increase/Decrease Statement: Funding decrease reflects planned lifecycle of this effort as the demon	nstration of extended range technologies will be comple	ted.		
Title: Optionally Manned Artillery Advanced Technology		-	1.802	3.212
<b>Description:</b> Develop automated cannon artillery solutions for fuze-se rate of fire and out-pace future near-peer, high operational-tempo (OP		se		
FY 2023 Plans: Mature technologies for OPTEMPO long range fires concepts to include and fire control and diagnostics. Mature modeling and simulation M&S performance, effectiveness, and current and future operations of autor	S concepts and analytical system trades to improve: the			
FY 2024 Plans: Will demonstrate technologies to improve the rate of fire of artillery system and re-supply, and fire control and diagnostics. Will validate modeling performance of cannon artillery systems.	<u> </u>	l l		
FY 2023 to FY 2024 Increase/Decrease Statement: Funding increase reflects planned lifecycle of this effort to cover the de	emonstration of integrated technologies.			
Title: SBIR/STTR Transfer		-	0.546	-
<b>Description:</b> Funding transferred in accordance with Title 15 USC §6	38			
FY 2023 Plans: Funding transferred in accordance with Title 15 USC §638				
FY 2023 to FY 2024 Increase/Decrease Statement: Funding transferred in accordance with Title 15 USC §638				
	Accomplishments/Planned Programs Sub	totals 32.594	27.461	23.484

#### C. Other Program Funding Summary (\$ in Millions)

N/A

**Remarks** 

**UNCLASSIFIED** 

Page 11 of 20 R-1 Line #46

Exhibit R-2A, RDT&E Project Justification: PB 2024 A	rmy	Date: March 2023
Appropriation/Budget Activity 2040 / 3	R-1 Program Element (Number/Name) PE 0603464A I Long Range Precision Fires Advanced Technology	Project (Number/Name) AG5 I Extended Range Artillery Munition Suite Adv Tech
D. Acquisition Strategy N/A		

PE 0603464A: Long Range Precision Fires Advanced Tech... Army

UNCLASSIFIED
Page 12 of 20

Exhibit R-2A, RDT&E Project Ju	ıstification	: PB 2024 A	Army							Date: Mar	ch 2023	
Appropriation/Budget Activity 2040 / 3							Range Prec	Number/Name) nge Precision Fires AG7 I Energetic Materials and Adv Processing Adv Tech			,	
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
AG7: Energetic Materials and Adv Processing Adv Tech	-	2.020	1.954	-	-	-	-	-	-	-	0.000	3.974
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

#### A. Mission Description and Budget Item Justification

This Project directly supports Long Range Precision Fires Modernization Priority capabilities. This Project matures and demonstrates the performance of energetic materials ranging from medium caliber through large caliber weapons.

The cited research is consistent with the Under Secretary of Defense for Research and Engineering priority focus areas and the Army Modernization Strategy.

Research in this Project is performed by the United States Army Futures Command (AFC).

Title: Scale-up of Insensitive Energetic Materials  Description: This effort matures and demonstrates the performance and insensitivity of energetic materials ranging from 25mm medium caliber (direct fire) through 155mm large caliber (indirect fire) weapons.  FY 2023 Plans: Will optimize energetic materials concepts and advanced processing methods to increase scale of manufacture designs and obtain higher throughput of ingredients and formulations. Will validate high-energy explosive and propellant formulations with advanced ignition components in representative applications. Will mature and validate high energy density formulations and		FY 2023	FY 2024
medium caliber (direct fire) through 155mm large caliber (indirect fire) weapons.  FY 2023 Plans: Will optimize energetic materials concepts and advanced processing methods to increase scale of manufacture designs and obtain higher throughput of ingredients and formulations. Will validate high-energy explosive and propellant formulations with	2.020	1.908	-
Will optimize energetic materials concepts and advanced processing methods to increase scale of manufacture designs and obtain higher throughput of ingredients and formulations. Will validate high-energy explosive and propellant formulations with			
material characterization of various insensitive energetic materials.			
FY 2023 to FY 2024 Increase/Decrease Statement: Funding change reflects planned conclusion of this effort			
Title: SBIR/STTR Transfer	-	0.046	-
Description: Funding transferred in accordance with Title 15 USC §638			
FY 2023 Plans: Funding transferred in accordance with Title 15 USC §638			
FY 2023 to FY 2024 Increase/Decrease Statement:			

UNCLASSIFIED
Page 13 of 20

Exhibit R-2A, RDT&E Project Justification: PB 2024 Army			Date: March 2023
Appropriation/Budget Activity	R-1 Program Element (Number/Name)	Project (N	umber/Name)
2040 / 3	PE 0603464A I Long Range Precision Fires	AG7 I Ene	rgetic Materials and Adv
	Advanced Technology	Processing	g Adv Tech

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2022	FY 2023	FY 2024
Funding transferred in accordance with Title 15 USC §638			
Accomplishments/Planned Programs Subtotals	2.020	1.954	- 1

#### C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

#### D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2024 Army										Date: Mare	ch 2023	
Appropriation/Budget Activity 2040 / 3	R-1 Program Element (Number/Name) PE 0603464A I Long Range Precision Fires Advanced Technology Project (Number/Name) BO8 I Long Range Precision Advanced Technology											
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
BO8: Long Range Precision Fires Advanced Tech (CA)	-	48.000	102.000	-	-	-	-	-	-	-	0.000	150.000
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

#### **Note**

Congressional Interest Item funding provided for Long Range Precision Advanced Technology.

#### A. Mission Description and Budget Item Justification

Congressional Interest Item funding provided for Long Range Precision Advanced Technology.

The cited work is consistent with the Under Secretary of Defense for Research and Engineering priority focus areas and the Army Modernization Strategy.

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2022	FY 2023
Congressional Add: Program Increase - Hypervelocity Projectile Extended Range	25.000	25.000
<b>FY 2022 Accomplishments:</b> Congressional Interest Item funding provided for Hypervelocity Projectile Extended Range		
FY 2023 Plans: Congressional Interest Item funding provided for Hypervelocity Projectile Extended Range		
Congressional Add: Extended Range Artillery Munitions Suite	20.000	-
<b>FY 2022 Accomplishments:</b> Congressional Interest Item funding provided for Extended Range Artillery Munitions Suite		
Congressional Add: Program Increase - Maneuvering Submunitions for Precision Strike Missile	3.000	9.000
<b>FY 2022 Accomplishments:</b> Congressional Interest Item funding provided for Maneuvering Submunitions for Precision Strike Missile		
<b>FY 2023 Plans:</b> Congressional Interest Item funding provided for Maneuvering Submunitions for Precision Strike Missile		
Congressional Add: Program Increase - AFT COMBUSTOR RAMJET PROPULSION	-	10.000

Exhibit R-2A, RDT&E Project Justification: PB 2024 Army	Date: March 2023	
Appropriation/Budget Activity 2040 / 3	R-1 Program Element (Number/Name) PE 0603464A I Long Range Precision Fires Advanced Technology	Project (Number/Name)  BO8 I Long Range Precision Fires Advanced Tech (CA)
B. Accomplishments/Planned Programs (\$ in Millions)	FY 2022	P FY 2023

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2022	FY 2023
FY 2023 Plans: Congressional Interest Item funding provided for AFT COMBUSTOR RAMJET PROPULSION		
Congressional Add: Program Increase - DEVELOPMENT AND TESTING OF PROPELLANTS USING ADVANCED MANUFACTURING	-	5.000
FY 2023 Plans: Congressional Interest Item funding provided for DEVELOPMENT AND TESTING OF PROPELLANTS USING ADVANCED MANUFACTURING		
Congressional Add: Program Increase - HYPERSONIC AND STRATEGIC MATERIALS AND STRUCTURES	-	8.000
FY 2023 Plans: Congressional Interest Item funding provided for HYPERSONIC AND STRATEGIC MATERIALS AND STRUCTURES		
Congressional Add: Program Increase - HYPERSONIC METAL ALLOYS	-	2.000
FY 2023 Plans: Congressional Interest Item funding provided for Hypersonic Metal Alloys		
Congressional Add: Program Increase - MISSILE MULTI AGENT EXTENSIBLE ENGAGEMENT SERVICES	-	15.000
FY 2023 Plans: Congressional Interest Item funding provided for MISSILE MULTI AGENT EXTENSIBLE ENGAGEMENT SERVICES		
Congressional Add: Program Increase - SUPER RAMJET ARTILLERY MISSION	-	8.000
FY 2023 Plans: Congressional Interest Item funding provided for SUPER RAMJET ARTILLERY MISSION		
Congressional Add: Program Increase - XM1155 GUIDED FLIGHT PROJECTILE	-	20.000
FY 2023 Plans: Congressional Interest Item funding provided for XM1155 GUIDED FLIGHT PROJECTILE		
Congressional Adds Subtotals	48.000	102.000

C. Other Program Funding Summary (\$ in Millions)

N/A

**Remarks** 

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2024 Army												
Appropriation/Budget Activity 2040 / 3					R-1 Program Element (Number/Name) PE 0603464A I Long Range Precision Fires Advanced Technology  Project (Number/Name) BY2 I Advanced Hypersonic Technology				nology			
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
BY2: Advanced Hypersonic Technology	-	37.740	36.517	64.136	-	64.136	49.592	50.808	50.835	51.633	0.000	341.261
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

#### A. Mission Description and Budget Item Justification

This Project directly supports Long Range Hypersonic Precision Fires Modernization Priority capabilities by developing and maturing critical technologies for strategic missiles. Technology development includes critical technologies to improve strategic missile components such as advanced structures and materials, thermal protection systems, navigation systems, data links, and seekers/terminal sensors.

The cited research is consistent with Under Secretary of Defense for Research and Engineering Science and Technology priority focus areas and the Army Modernization Strategy.

Research in this Project is performed by the United States (U.S.) Army Futures Command (AFC) in coordination with the United States Army Rapid Capabilities and Critical Technologies Office (RCCTO).

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2022	FY 2023	FY 2024
Title: Hypersonics Advanced Technology	37.740	35.184	64.136
<b>Description:</b> This effort matures and demonstrates new subsystems and components of a hypersonic weapon delivery system to defeat Anti Access/Area Denial (A2/AD) capabilities, suppress adversary Long Range Fires, and engage other payoff/ time critical targets.			
FY 2023 Plans: Will optimize candidate Common Hypersonic Glide Body (CHGB) thermal protection materials and material processing techniques to support critical material decisions for hypersonic weapon applications; will mature simulation tools for optimization of vehicle flight performance; will mature Guidance Navigation & Control (GN&C) technology to reduce both size, weight, and power (SWAP) / packaging and reliance on GPS for navigation accuracy and will mature seeker / terminal sensor technologies.			
FY 2024 Plans: Will complete development and transition of 2D/3D carbon-carbon thermal protection materials and material processing techniques and standards to design agent and industry partners in support of critical material decisions for the Common Hypersonic Glide Body (CHGB). Will demonstrate guidance, navigation and control technology to reduce both size, weight, and power (SWAP) packaging and reliance on GPS for navigation accuracy in contested environments. Will mature and demonstrate			

UNCLASSIFIED
Page 17 of 20

Exhibit R-2A, RDT&E Project Justification: PB 2024 Army			Date: March 2023
Appropriation/Budget Activity 2040 / 3	R-1 Program Element (Number/Name) PE 0603464A I Long Range Precision Fires Advanced Technology	, ,	umber/Name) anced Hypersonic Technology

B. Accomplishments/Planned Programs (\$ in Millions) seeker and terminal sensor component technologies to include seeker window, antenna, and transceiver for hypersonic weapon	FY 2022	FY 2023	FY 2024
socker and terminal conser component technologies to include socker window, antenna, and transceiver for hypersonic weapon			
applications.			
FY 2023 to FY 2024 Increase/Decrease Statement:			
Funding increase in FY24 reflects planned program development and demonstration of seeker and navigation component			
technologies and supports transition of thermal protection materials for the Common Hypersonic Glide Body (CHGB) and the Long			
Range Hypersonic Weapon system.			
Title: SBIR/STTR Transfer	-	1.333	-
FY 2023 Plans:			
Funding transferred in accordance with Title 15 USC §638			
FY 2023 to FY 2024 Increase/Decrease Statement:			
Funding transferred in accordance with Title 15 USC §638			
Accomplishments/Planned Programs Subtotals	37.740	36.517	64.136

#### C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

#### D. Acquisition Strategy

N/A

PE 0603464A: Long Range Precision Fires Advanced Tech... Army

UNCLASSIFIED
Page 18 of 20

R-1 Line #46

Exhibit R-2A, RDT&E Project Justification: PB 2024 Army								ch 2023				
2040 / 3 PE				PE 060346		ment (Number/Name) Ing Range Precision Fires CZ8 I PrSM Modular Payload Advanced Development				anced		
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
CZ8: PrSM Modular Payload Advanced Development	-	-	14.731	2.743	-	2.743	2.808	10.232	33.278	33.307	0.000	97.099
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

#### A. Mission Description and Budget Item Justification

This Project directly supports Long Range Precision Fires Modernization Priority capabilities by maturing and demonstrating critical technologies for autonomous, Cluster Munition policy compliant, enhanced lethality payloads deployed from Precision Strike Missile to autonomously and cooperatively find and engage the full spectrum of deep moved, moving, dispersed, and poorly located targets in areas with contested access at extended ranges.

Research in this Project complements Program Element (PE) 0602147A (Long Range Precision Fires Technology).

The cited research is consistent with the Under Secretary of Defense for Research and Engineering priority focus areas and the Army Modernization Strategy.

Research in this Project is performed by the United States Army Futures Command (AFC).

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2022	FY 2023	FY 2024
Title: Precision Strike Missile (PrSM) Advanced Development/PrSM Modular Payload	-	14.193	2.743
<b>Description:</b> Mature and demonstrate critical technologies for the delivery of distributed and enhanced lethality capabilities via extended range missiles. Technology examples include: sensor and associated signal processing technologies for target acquisition, identification, and engagement; datalink and communications technologies to transmit targetable data; compact propulsion technologies to enable dwell time on station; payload dispensing technologies for deploying these payloads from high speed long range missiles; and advanced extended range missile propulsion and guidance technologies.			
FY 2023 Plans: Continue enhanced lethality payload designs, initiate sub-system testing verifying expected component performance, begin development of advanced extended range missile propulsion and guidance technologies, and update high fidelity simulations to assess integrated missile performance.			
FY 2024 Plans: Will continue to mature critical component technologies and integrate payload enhanced lethality models and autonomy algorithms in high fidelity simulation to optimize missile terminal engagement performance.			
FY 2023 to FY 2024 Increase/Decrease Statement:			

UNCLASSIFIED Page 19 of 20

Exhibit R-2A, RDT&E Project Justification: PB 2024 Army			Date: March 2023
Appropriation/Budget Activity 2040 / 3	R-1 Program Element (Number/Name) PE 0603464A I Long Range Precision Fires Advanced Technology	, ,	•

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2022	FY 2023	FY 2024
FY24 funding reduced (-\$16.118M) and realigned to PE 0603464/Project AF2 Long Range Maneuverable Fires to accelerate			
advanced technologies for PrSM Increment IV extended range capabilities, Army priority effort.			
Title: SBIR/STTR Transfer	-	0.538	-
Description: Funding transferred in accordance with Title 15 USC §638			
FY 2023 Plans:			
Funding transferred in accordance with Title 15 USC §638			
FY 2023 to FY 2024 Increase/Decrease Statement:			
Funding transferred in accordance with Title 15 USC §638			
Accomplishments/Planned Programs Subtotals	-	14.731	2.743

#### C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

#### D. Acquisition Strategy

N/A

PE 0603464A: Long Range Precision Fires Advanced Tech... Army

R-1 Line #46

#### **Appropriations Programmatic/Language Request Form** Fiscal Year 2025 Appropriations Cycle **Section: 1 (Organization Information) Organization Name: Street Address:** City: State: **Zip Code: Phone Number:** Website: Type of Entity: **Co-sponsoring** If your request has multiple sponsors, please enter them here. **Organizations: Section: 2 (Contact Information)** Point person at your organization who our staff may contact regarding this request (please note that our staff may need to contact this person outside of normal business hours). First Name: **Last Name:** Street Address: City: State: Zip Code: **Business Phone Number: Cell Phone Number:** E-mail Address: Head of your organization (if different than your point person) First Name: Last Name: Street Address: City: State: **Zip Code: Business Phone Number: Cell Phone Number:** E-mail Address: DC based point of contact. First Name:

Last Name:

Organization/Firm:

**Street Address:** 

City: State:

Zip Code:

**Business Phone Number:** 

**Cell Phone Number:** 

E-mail Address:

Lobbyist for Organization (if represented by third party)
Name: Title: Phone: Email:
Section 3: Request Details
1) Please give a short title to your request
2) Clearly state what this programmatic/language request would do in one sentence
3) Problem/Issue Statement (Max 150 words)
4) Request description (Max 150 words)
5) Programmatic Request (if this is only a bill or report language request, please skip to question 6)
<ul> <li>Indicate YES next to which category this request is included (all that apply):</li> <li>a. Support Enacted Level</li> <li>b. Support President's Budget Request If filling this out before the President's budget has been released please leave blank.</li> <li>c. Request Specific Funding Amount</li> <li>d. General Programmatic Support</li> <li>e. N/A (This is only a request for bill or report language)</li> <li>f. President's budget not yet released</li> </ul>
Program Name and Federal Agency
Amount included in the President's FY2024 Budget
Current enacted FY24 funding level Please enter the amount included for this program for the latest enacted funding bill
Amount included in the President's FY2025 Budget
Amount you would like to either increase or decrease the President's FY2025 Budget, or total amount you are requesting for FY2025
Is this Authorized: YES NO
At what Level:

If this is a defense focused request, please provide the specific account and PE/Line Number for the program

Agency and Point of Contact you've been in contact with about your request (as applicable outside of Defense requests):

6)	Bill or Report Language Request (if this is only a programmatic request, please skip to question 7)
	In the Report:

7)	Please list other House members or Senato	rs to whom	you are submitting	vour request.
,,	Fiease list other mouse incliners of senato	is to wildili	YOU are submitting	, your request.

- 8) What other organizations might be in favor of this request?
- 9) What organizations might be opposed to this request?
- 10) Has this, or any similar request, been submitted in prior years? If so, please specify for what fiscal years and to which House and Senate Offices.
- 11) This is priority request #\_\_\_ of \_\_\_ requests submitted to this office.
- 12) This is priority request #\_\_\_ of \_\_\_ requests in this bill.
- 13) Has this funding/language been included in previous Fiscal Years? If so, please provide reference information below.

Fiscal Year	Bill	Division	Title	Section	Page Number
FY					
FY					
FY					

**14) Provide previously enacted funding levels/language.** Key: PB (President's Budget), HAC (House Appropriations Committee reported level), SAC (Senate Appropriations Committee reported level), CONF (Final Appropriations Conference Report)

	РВ	HAC	SAC	CONF
FY2024				
FY2023				
FY2022				

- 1) Project Description (Max 150 words)
- 2) Importance (Max 150 words)
- 3) Why is this an Appropriate Use of Federal Funds(Max 150 words)
- 4) Clearly describe the most direct positive impacts this request will have on the Congressional District, surrounding area, and the Nation. (Max 150 words)
- 5) What jobs are created, supported, or impacted by the program? If the program supports jobs in multiple Congressional districts, please include the approximate number of jobs by Congressional District.
- 6) Quote from requesting organization supporting this funding:
- 7) Press Contact:

E-mail:

**Business Phone Number:** 

**Cell Phone Number:** 



# Senator Van Hollen's FY24 Appropriations Request Form (NOT FOR CONGRESSIONALLY DIRECTED SPENDING) (National Energetic Program Activity)

Name & Contact Info Greg Lankler Mobile: 202-227-9835 glankler@thornrun.com **Mailing Address** 100 M Street, SE Suite 750 Washington DC 20003

**Permanent Address** 100 M Street, SE Suite 750 Washington DC 20003

\* indicates a required field.

### Section 1. Contact Information for Submitting Organization

This section must be completed and may not include lobbyist contact information.

1. Submitting Organization \*

National Armaments Consortium

2. Name of Primary Point of Contact at Submitting Organization \*

Charlie Zisette

3. Email for Primary Point of Contact at Submitting Organization \*

czisette@nacconsortium.com

4. Phone for Primary Contact at Submitting Organization \*

Direct line or cell phone. Please do not provide the main line for your company or organization.

540-239-0762

### Section 2. Outside Counsel/Lobbyist Contact Information (if applicable)

1. Full name

Greg Lankler

2. Firm

Thorn Run Partners

3. Email

glankler@thornrun.com

4. Phone

2022279835

### **Section 3. Request Information**

1. Request type \*

You may make more than one selection for a single request. For example, if you are requesting funding and report language to encourage a specific use for the funding, you would check "programmatic" and "report language."

Programmatic (funding request),

2. Title of Request \*

National Energetics Program Activity

3. Subcommittee \*

Defense

4. Department or Agency \*

Department of Defense, Office of the Secretary of Defense

5. Program or Account \*

RDTE, Defense-Wide

6. Item/Project Name \*

National Energetics Program Activity

7. Bill Title (if applicable) e.g. Title VII -- General Provisions

Title IV, Research, Development, Test and Evaluation

8. Line or PE Title (if applicable)

Joint Munitions Advanced Technology

9. Line Number (if applicable)

Line 28

10.PE Number (if applicable)

0603000D8Z

11. Previous Fiscal Year Enacted Level

**For programmatic funding requests only.** This is the total amount provided for this item/project/line/PE in the previous year's enacted appropriations bill.

34065000

12.President's Budget Request

For programmatic funding requests only.

37706000

13. Additional Amount Requested

**For programmatic funding requests only.** This is the amount you are requesting be <u>added</u> above the President's budget for the fiscal year. For example, if the President's budget requests \$5 million and you are requesting an additional \$1 million, you would write 1000000, not 6000000.

5000000

14.Bill or Report Language Requested

No answer.

15. Have you met with Senator Van Hollen's staff about this request? \* If not, please email the relevant staffer or call 202-224-4654 to reach the front desk.

No

15.1 Please give the name(s) of the staffer(s) and the date of your meeting.

No answer.

# **Section 4. Justification**

1. Please explain why Senator Van Hollen should support this request, including how it will benefit the nation in general and Maryland in particular. \*

This effort will provide for increased activity in the energetics industrial sector, locate new Companies and Industry Partners in the Indian Head region, provide for enhance education and training for the future work force, increase job opportunities in the Indian Head region and provide for State-of-the-Art energetic materials technologies and energetic systems in support of the U.S. warfighter.

With more than 1000 members, the National Armaments Consortium represents both traditional and non-traditional defense contractors and academia providing research, development and prototyping in armaments and energetics. Our members are present in every state and nearly every congressional district in the nation. Thus, a focused, strategic effort to rejuvenate the workforce of the Energetics Materials (EM) enterprise will create jobs across the United States. DoD support for academic institutions in the discovery of new energetic molecules will provide new options for defense applied research and development of new EM, and train new scientists and engineers who can be hired by the DoD and industry to work in the EM field.

The request would enable the Office of the Secretary of Defense to address the most significant energetics, energetic systems, and explosive ordnance disposal challenges. Funding would support program establishment and program management, the execution of Requirements Identification through Table Top Exercises (TTXs) and Industry Engagement through Technology Grand Challenge Events, and rapid prototyping and testing of EMS technologies for rapid fielding activities. Funding will ensure that a FY24 scheduled Pilot Program is executed, to include the production of a responsive energetic prototypes, developed by Industrial Base partners, concluding with a government lead demonstration and test evenst. This proof of concept will be leveraged in FY25-30 to prototype and demonstrate future energetic technologies for rapid fielding, providing the US Warfighter with state-of-the-art energetic materials and energetic systems for deployment.

The U.S. military has long ignored the essential role of energetic materials (EM) in the lethality of its weapons systems and has instead focused on greater precision to achieve desired effects against targets in low-intensity forward environments. Propellants and explosives developed nearly a century ago continue to serve as the mainstays of U.S. systems and were sufficient as long as U.S. forces enjoyed significant advantages in precision and delivery from forward-deployed platforms. But

the strategic context has changed. Competitors operate systems capable of denying U.S. forces the access necessary for their current weapons. U.S. forces require the additional margin in range and destructive effect that improved energetics can provide.

Placing greater emphasis on energetics research within DoD focuses greater attention on this challenge and will help to restore the U.S. advantage in energetic materials ensuring that the lethality of the military's weapons systems exceed those of the

nation's adversaries.

Section 5. \*\*THANK YOU FOR YOUR APPLICATION\*\*