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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Army **Date:** February 2018

Appropriation/Budget Activity
2040: Research, Development, Test & Evaluation, Army / BA 5: System Development & Demonstration (SDD)

R-1 Program Element (Number/Name)
PE 0604827A / Soldier Systems - Warrior Dem/Val

COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	-	11.929	16.127	10.395	-	10.395	6.237	3.355	1.721	1.404	Continuing	Continuing
DX7: TACTICAL COMMUNICATIONS AND PROTECTIVE SYSTEM	-	0.728	0.879	0.325	-	0.325	0.322	0.319	0.481	0.183	Continuing	Continuing
EY2: Integrated Soldier Power Data System - Core	-	0.000	6.949	2.863	-	2.863	1.439	1.243	0.000	0.000	Continuing	Continuing
EY3: Soldier Power Generator	-	0.000	0.000	0.318	-	0.318	0.323	0.330	0.337	0.303	Continuing	Continuing
EY4: Universal Battery Charger	-	0.000	1.731	1.408	-	1.408	1.434	1.463	0.903	0.918	Continuing	Continuing
S65: Soldier Power	-	11.201	6.568	5.481	-	5.481	2.719	0.000	0.000	0.000	Continuing	Continuing

A. Mission Description and Budget Item Justification

This program element contains five projects:

Project S65 - Soldier Power: Soldier Power enables dismounted Soldiers to efficiently execute missions for longer durations by reducing the logistical burden associated with fuel and primary (disposable) batteries. Platoon Power Generation (PPG) - PM E2S2: This project supports the demonstration and development of a PPG. The Small Unit Power (SUP) PPG (1kW Generator) will provide small units with sufficient portable power to sustain Modified Table of Organizational Equipment (MTOE) unit power demand in support of 48 to 72 hour missions using a common logistical fuel (JP-8). It will be used for charging batteries and powering various types of Army communications and electronics devices.

Project EY2 - Integrated Soldier Power Data System - Core: Integrated Soldier Power and Data System-Core, Conformal Wearable Battery, Squad Power Manager (SPI) fills the power and energy gaps created by the increase in mission essential, Soldier portable power consumers, such as situational awareness displays, GPS systems, weapon sensors, radios, and other devices.

Project EY3 - Soldier Power Generator (SPG) - fills the power and energy gap created by the increase in mission essential and power consuming devices, by providing a single charging solution capable of providing power to handheld communication devices and a suite of military batteries. SPG is intended for use in the most austere operating environments providing the Soldier with energy independency for extended mission duration. The system will provide the Soldier with a lightweight, worn or carried power generation capability, integrated within the warfighters combat load.

Project EY4 - Universal Battery Charger: Universal Battery Charger (UBC) fills the power and energy gap created by the increase in mission essential, Soldier portable power consumers, by providing a sole charging solution capable of providing power to handheld communication devices and a suite of military batteries.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Army				Date: February 2018		
Appropriation/Budget Activity		R-1 Program Element (Number/Name)				
2040: Research, Development, Test & Evaluation, Army / BA 5: System Development & Demonstration (SDD)		PE 0604827A / Soldier Systems - Warrior Dem/Val				
Project DX7 - Tactical Communications and Protective System (TCAPS): TCAPS enables Soldiers to communicate over radios in combat environments while simultaneously providing hearing protection from both steady state and impulse noise.						
B. Program Change Summary (\$ in Millions)		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget		12.393	16.127	12.199	-	12.199
Current President's Budget		11.929	16.127	10.395	-	10.395
Total Adjustments		-0.464	0.000	-1.804	-	-1.804
• Congressional General Reductions		-0.005	-			
• Congressional Directed Reductions		-	-			
• Congressional Rescissions		-	-			
• Congressional Adds		-	-			
• Congressional Directed Transfers		-	-			
• Reprogrammings		-	-			
• SBIR/STTR Transfer		-	-			
• Adjustments to Budget Years		-0.459	-	-1.804	-	-1.804

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Army										Date: February 2018		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604827A / Soldier Systems - Warrior Dem/Val				Project (Number/Name) DX7 / TACTICAL COMMUNICATIONS AND PROTECTIVE SYSTEM			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
DX7: TACTICAL COMMUNICATIONS AND PROTECTIVE SYSTEM	-	0.728	0.879	0.325	-	0.325	0.322	0.319	0.481	0.183	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Description: The Tactical Communications and Protective System (TCAPS) and TCAPS-Lite provide Soldiers with advanced, active hearing protection that simultaneously protects Soldiers' hearing while enabling situational awareness and mission command. TCAPS protects Soldiers against harmful impulse and steady state noises characteristic of combat environments while also enabling Soldiers to communicate with each other using voice communications over a tactical radio, while TCAPS-Lite provides protection for Soldiers without a radio. Both systems enhance survivability and situational awareness by allowing Soldiers to amplify faint sounds that would not be otherwise audible or intelligible. TCAPS and TCAPS-Lite reduces Soldiers noise induced hearing damage and includes integration and interface of products on Soldiers.

TCAPS and TCAPS-Lite contribute to the reduction of post-service disability compensation and limits lost in-service time related to hearing injuries. TCAPS Program of Record will continue to employ commercial-off-the-shelf (COTS) solutions that are evaluated periodically. The commercial solutions that meet the technical requirements and are rated the best by the Soldiers will transition to production and fielding.

Justification: FY19 RDTE funding supports continued testing and evaluation of enhanced protective hearing devices for soldiers in combat environments. Funding also supports annual efforts to relook technology for improved future capabilities.

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

	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: TCAPS testing and evaluation.	0.625	0.654	0.261	-	0.261
Description: Test articles procurement and testing & evaluation.					
FY 2018 Plans: Initiation of TCAPS-Lite Generation 2 test efforts. Vehicle Platform integration test and evaluation efforts for TCAPS interface with VIC-3 vehicle intercommunication systems.					
FY 2019 Base Plans: Conduct TCAPS-Lite Generation 2 developmental and operational testing.					
FY 2018 to FY 2019 Increase/Decrease Statement:					

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Army							Date: February 2018				
Appropriation/Budget Activity 2040 / 5			R-1 Program Element (Number/Name) PE 0604827A / Soldier Systems - Warrior Dem/Val			Project (Number/Name) DX7 / TACTICAL COMMUNICATIONS AND PROTECTIVE SYSTEM					
B. Accomplishments/Planned Programs (\$ in Millions)						FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	
Reduction of \$393 thousand since FY18 President's Budget submission due to reduced funding levels.											
Title: System Engineering and Program Management (SEPM)						0.103	0.225	0.064	-	0.064	
Description: TCAPS system engineering and program management support.											
FY 2018 Plans: Development of test scope of work and identification of vehicle platforms to support TCAPS VIC-3 interface efforts. Develop performance parameters for construction of a TCAPS-Lite Generation 2.											
FY 2019 Base Plans: Continue development of performance parameters for TCAPS-Lite Generation 2.											
FY 2018 to FY 2019 Increase/Decrease Statement: Reduction of \$161 thousand since FY18 President's Budget submission due to reduced funding levels.											
Accomplishments/Planned Programs Subtotals						0.728	0.879	0.325	-	0.325	
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
• B55510: Tactical Communications and Protective System	3.607	4.411	0.819	9.549	10.368	0.816	0.813	0.809	0.607	Continuing	Continuing
Remarks											
D. Acquisition Strategy TCAPS is an ACAT III program that leverages commercial-off-the-shelf (COTS) technology. TCAPS conducts periodic relook of commercial technology to seek improved capabilities, reduce costs and transition to production.											
E. Performance Metrics N/A											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Army												Date: February 2018			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604827A / <i>Soldier Systems - Warrior Dem/Val</i>						Project (Number/Name) DX7 / <i>TACTICAL COMMUNICATIONS AND PROTECTIVE SYSTEM</i>			
Management Services (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
SEPM	MIPR	PEO Soldier : Ft Belvoir, VA	0.571	0.103		0.225		0.064		-		0.064	Continuing	Continuing	Continuing
Subtotal			0.571	0.103		0.225		0.064		-		0.064	Continuing	Continuing	N/A
Support (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Test Articles (Engineering Assessment)	MIPR	DLA DSCP : Philadelphia, PA	0.082	-		-		-		-		-	0.000	0.082	-
Test Articles (Development Test)	MIPR	DLA DSCP : Philadelphia, PA	0.058	0.092		-		-		-		-	Continuing	Continuing	Continuing
Test Articles (OT)	MIPR	DLA DSCP : Philadelphia, PA	0.405	-		-		-		-		-	0.000	0.405	-
Subtotal			0.545	0.092		-		-		-		-	Continuing	Continuing	N/A
Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Annual Relook of Technology/Evaluation	MIPR	ATEC, AEC, OTC, ARL-SLAD : Various Locations	0.559	0.193		-		-		-		-	Continuing	Continuing	Continuing
Developmental and Operational Test	Various	ATEC, AEC, OTC, ARL-SLAD : Various Locations	0.885	0.340		0.654		0.261		-		0.261	Continuing	Continuing	Continuing
Customer Test	Various	Army Hearing Program Office : Various Locations	0.028	-		-		-		-		-	0.000	0.028	-
Subtotal			1.472	0.533		0.654		0.261		-		0.261	Continuing	Continuing	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Army											Date: February 2018				
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604827A / Soldier Systems - Warrior Dem/Val				Project (Number/Name) DX7 / TACTICAL COMMUNICATIONS AND PROTECTIVE SYSTEM						
			Prior Years	FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			2.588	0.728		0.879		0.325		-		0.325	Continuing	Continuing	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Army **Date:** February 2018

Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604827A / <i>Soldier Systems - Warrior Dem/Val</i>	Project (Number/Name) DX7 / <i>TACTICAL COMMUNICATIONS AND PROTECTIVE SYSTEM</i>
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Event Name	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Annual Relook of Technology for Evaluation/Integration for FY18 Fielding																												
Developmental and Operational Assessment for FY18																												
Annual Relook of Technology for Evaluation/Integration Test for FY19 Fielding																												
Developmental and Operational Assessment for FY19 Fielding																												
Annual Relook of Technology for Evaluation/Integration Test for FY20 Fielding																												
Developmental and Operational Assessment for FY20 Fielding																												
Annual Relook of Technology for Evaluation/Integration Test for FY21																												
Developmental and Operational Assessment for FY21 Fielding																												
Annual Relook of Technology for Evaluation/Integration Test for FY22																												
Developmental and Operational Assessment for FY22 Fielding																												
Annual Relook of Technology for Evaluation/Integration Test for FY23																												
Developmental and Operational Assessment for FY23 Fielding																												
TCAPS or TCAPS-Lite Market Survey to support follow-on evaluation																												

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Army			Date: February 2018		
Appropriation/Budget Activity 2040 / 5		R-1 Program Element (Number/Name) PE 0604827A / Soldier Systems - Warrior Dem/Val		Project (Number/Name) DX7 / TACTICAL COMMUNICATIONS AND PROTECTIVE SYSTEM	

Event Name	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Technical and User Evaluation in support of Current/Future FY Fielding																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Army			Date: February 2018
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604827A / <i>Soldier Systems - Warrior Dem/Val</i>	Project (Number/Name) DX7 / <i>TACTICAL COMMUNICATIONS AND PROTECTIVE SYSTEM</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Annual Relook of Technology for Evaluation/Integration for FY18 Fielding	1	2017	3	2017
Developmental and Operational Assessment for FY18	2	2017	4	2017
Annual Relook of Technology for Evaluation/Integration Test for FY19 Fielding	1	2018	3	2018
Developmental and Operational Assessment for FY19 Fielding	2	2018	4	2018
Annual Relook of Technology for Evaluation/Integration Test for FY20 Fielding	1	2019	3	2019
Developmental and Operational Assessment for FY20 Fielding	2	2019	4	2019
Annual Relook of Technology for Evaluation/Integration Test for FY21	1	2020	3	2020
Developmental and Operational Assessment for FY21 Fielding	2	2020	4	2020
Annual Relook of Technology for Evaluation/Integration Test for FY22	1	2021	3	2021
Developmental and Operational Assessment for FY22 Fielding	2	2021	4	2021
Annual Relook of Technology for Evaluation/Integration Test for FY23	1	2022	3	2022
Developmental and Operational Assessment for FY23 Fielding	2	2022	4	2022
TCAPS or TCAPS-Lite Market Survey to support follow-on evaluation	1	2023	4	2023
Technical and User Evaluation in support of Current/Future FY Fielding	2	2023	4	2023

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Army										Date: February 2018		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604827A / Soldier Systems - Warrior Dem/Val				Project (Number/Name) EY2 / Integrated Soldier Power Data System - Core			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
EY2: Integrated Soldier Power Data System - Core	-	0.000	6.949	2.863	-	2.863	1.439	1.243	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
Note Beginning in FY18, Integrated Soldier Power Data System - Core (ISPDS-C) funding was realigned from Program Element: 0604827A (Soldier Systems Warrior Dem/Val)/Project: S65 (Soldier Power).												
A. Mission Description and Budget Item Justification Soldier Power Integrated Soldier Power and Data System-Core, Conformal Wearable Battery, Squad Power Manager (SPI) fills the power and energy gaps created by the increase in mission essential, Soldier portable power consumers, such as situational awareness displays, GPS systems, weapon sensors, radios, and other devices. Specific systems of SPI are the Integrated Soldier Power and Data System-Core (ISPDS-C), the Conformal Wearable Battery (CWB) and the Squad Power Manager (SPM). This RDT&E line develops power sources and solutions suited for not only the individual Soldier, but for the team and squad. These power solutions are intended for use in the most austere operating environments and include, but are not limited to, individual Soldier worn systems, integrated power management, and renewable energy. SPI systems will enable dismounted Soldiers to execute their missions more efficiently, for longer durations and with fewer battery resupplies. SPI systems will also reduce the logistical burden associated with moving fuel and primary (disposable) batteries, and allow dismounted Soldiers to operate independently for longer missions without being tethered to a large generator, vehicle, or supply train. This effort is consistent with the Soldier Protection Capability Development Document (CDD) (March 2011), Operational Energy Initial Capabilities Document (26 April 2012), the Small Unit Power CDD (26 September 2013), and the SPM, ISPDS-C with Conformal Central Power Source Capability Production Document (May 2017). Justification: FY19 RDT&E continues to develop power sources and solutions suited for not only the individual Soldier, but for the team and squad. These power solutions are intended for use in the most austere operating environments and include, but are not limited to, individual Soldier worn systems, integrated power management, and renewable energy.												
B. Accomplishments/Planned Programs (\$ in Millions)								FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: Test and Evaluation								-	1.210	0.504	-	0.504
Description: Will continue to test and validate new battery chemistries and interfaces with the IPSPDS-C and SPM.												
FY 2018 Plans:												

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Army			Date: February 2018			
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604827A / Soldier Systems - Warrior Dem/Val	Project (Number/Name) EY2 / Integrated Soldier Power Data System - Core				
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Will conduct required testing to support a new contract award for the ISPDS-C. Will conduct required testing to support a new contract award for the CWB. Will test and validate new battery chemistries and interfaces with the IPSDS-C and SPM. FY 2019 Base Plans: Will continue to evaluate intra-Soldier wireless technologies. FY 2018 to FY 2019 Increase/Decrease Statement: FY18 to FY19 funding decrease due to downward funding adjustments.						
Title: System Engineering & Program Management FY 2018 Plans: Will develop and evaluate a power and data management hub that contains host control capability. Will continue to evaluate intra-Soldier wireless technologies. FY 2019 Base Plans: Will continue to evaluate intra-Soldier wireless technologies. FY 2018 to FY 2019 Increase/Decrease Statement: FY18 to FY19 funding decrease due to downward funding adjustments.		-	1.889	0.787	-	0.787
Title: ISPDS-C/CWB Capability Improvements Integration FY 2018 Plans: Conduct evaluation of new equipment for suitability and the ability to interface within the Soldier Power and Data Architecture. Will conduct integration of new lightweight, Soldier Power Generation, chargers / harvesters, and generators capable of supporting the variety of power devices used in tactical formations. FY 2019 Base Plans: Continue to conduct integration of new lightweight, Soldier Power Generation, chargers / harvesters, and generators capable of supporting the variety of power devices used in tactical formations. FY 2018 to FY 2019 Increase/Decrease Statement: FY18 to FY19 funding decrease due to downward funding adjustments.		-	3.850	1.572	-	1.572
Accomplishments/Planned Programs Subtotals		-	6.949	2.863	-	2.863

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Army									Date: February 2018		
Appropriation/Budget Activity 2040 / 5				R-1 Program Element (Number/Name) PE 0604827A / Soldier Systems - Warrior Dem/Val				Project (Number/Name) EY2 / Integrated Soldier Power Data System - Core			
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
• S65: Soldier Systems - Warrior Dem/Val (Soldier Power)	11.201	6.568	5.481	-	5.481	2.719	-	-	-	0.000	25.969
• EY4: Universal Battery Charger	-	1.731	1.408	-	1.408	1.434	1.463	0.903	0.918	0.000	7.857
• R80010: Small Unit Power Increment 1	22.014	-	0.000	-	0.000	-	-	-	-	0.000	22.014
• R09103: Universal Battery Charger	-	3.086	8.456	-	8.456	9.865	10.076	10.119	10.131	Continuing	Continuing
• EY3: Soldier Power Generator	-	-	0.318	-	0.318	0.323	0.330	0.337	0.303	Continuing	Continuing
• R08090: Integrated Soldier Power Data System - Core	-	7.370	22.318	-	22.318	17.800	20.778	22.269	18.446	Continuing	Continuing
Remarks											
D. Acquisition Strategy											
Pursue a variety of Soldier power initiatives under full and open competition. These initiatives range from Commercial-Off-The-Shelf (COTS) solutions to developmental efforts. The type of solicitation depends on the maturity of the technology. The power initiatives will be evaluated through scheduled test and evaluation events, and if successful, selected for procurement and subsequent fielding and sustainment. The acquisition strategy varies by product. For example, the SPM acquisition strategy will consist of two phases: Phase one includes the purchase of test articles using the Defense Logistics Agency (DLA) Special Operational (Spec Ops) Equipment Tailored Logistic Support Program (TLSP). Phase two includes the procurement of additional test articles through Indefinite Delivery Indefinite Quantity (IDIQ) contracts established through the Army Contracting Command (ACC). The Project Manager office will establish IDIQ contracts to support the SPI requirements over time. Each SPI system will be procured under purchase orders for production quantities that will be awarded on a Firm Fixed Price (FFP) contract. Award developmental contracts for intra-soldier wireless technology through the Army Research, Development and Engineering Command.											
E. Performance Metrics											
NA											

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Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604827A / Soldier Systems - Warrior Dem/Val				Project (Number/Name) EY2 / Integrated Soldier Power Data System - Core					
Management Services (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
System Engineering & Program Management Support	MIPR	Various : Various	-	-		1.889		0.756		-		0.756	Continuing	Continuing	-
Subtotal			-	-		1.889		0.756		-		0.756	Continuing	Continuing	N/A
Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
ISPDS-C, CWB Capability Improvements Integration	MIPR	Various : Various	-	-		3.850		1.603		-		1.603	0.000	5.453	-
Subtotal			-	-		3.850		1.603		-		1.603	0.000	5.453	N/A
Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Test & Evaluation	MIPR	Various : Various	-	-		1.210		0.504		-		0.504	0.000	1.714	-
Subtotal			-	-		1.210		0.504		-		0.504	0.000	1.714	N/A
			Prior Years	FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			-	-		6.949		2.863		-		2.863	Continuing	Continuing	N/A
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Army			Date: February 2018		
Appropriation/Budget Activity 2040 / 5		R-1 Program Element (Number/Name) PE 0604827A / <i>Soldier Systems - Warrior Dem/Val</i>		Project (Number/Name) EY2 / <i>Integrated Soldier Power Data System - Core</i>	

Event Name	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Annual Relook of Technology																												
Testing of Product Improvements																												
Annual Relook of Technology 2																												
Testing of Product Improvements 2																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Army			Date: February 2018
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604827A / <i>Soldier Systems - Warrior Dem/Val</i>	Project (Number/Name) EY2 / <i>Integrated Soldier Power Data System - Core</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Annual Relook of Technology	3	2018	4	2018
Testing of Product Improvements	3	2019	4	2019
Annual Relook of Technology 2	3	2020	4	2020
Testing of Product Improvements 2	3	2021	4	2021

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Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604827A / Soldier Systems - Warrior Dem/Val				Project (Number/Name) EY3 / Soldier Power Generator			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
EY3: Soldier Power Generator	-	0.000	0.000	0.318	-	0.318	0.323	0.330	0.337	0.303	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
Note Beginning in FY19, funding for Soldier Power Generator was realigned from Program Element: 0604827A (Soldier Systems - Warrior Dem/Val)/Project: S65 (Soldier Power).												
A. Mission Description and Budget Item Justification Soldier Power Generation (SPG) fills the power and energy gap created by the increase in mission essential and power consuming devices, by providing a single charging solution capable of providing power to handheld communication devices and a suite of military batteries. SPG is intended for use in the most austere operating environments providing the Soldier with energy independency for extended mission duration. The system will provide the Soldier with a lightweight, worn or carried power generation capability, integrated within the warfighters combat load.												
B. Accomplishments/Planned Programs (\$ in Millions)								FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: Test and Evaluation								-	-	0.318	-	0.318
Description: Test emerging technologies.												
FY 2019 Base Plans: Evaluate emerging power generation technologies.												
FY 2018 to FY 2019 Increase/Decrease Statement: Not applicable. Program funding stream starts in FY19.												
Accomplishments/Planned Programs Subtotals								-	-	0.318	-	0.318
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost	
• S65: Soldier Systems - Warrior Dem/Val (Soldier Power)	11.201	6.568	5.481	-	5.481	2.719	-	-	-	0.000	25.969	
• EY2: Integrated Soldier Power	-	6.949	2.863	-	2.863	1.439	1.243	-	-	0.000	12.494	
• EY4: Universal Battery Charger	-	1.731	1.408	-	1.408	1.434	1.463	0.903	0.918	Continuing	Continuing	

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Army									Date: February 2018		
Appropriation/Budget Activity 2040 / 5				R-1 Program Element (Number/Name) PE 0604827A / Soldier Systems - Warrior Dem/Val				Project (Number/Name) EY3 / Soldier Power Generator			
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
• R80010: Small Unit Power Increment 1	22.014	-	0.000	-	0.000	-	-	-	-	0.000	22.014
• R08090: Integrated Soldier Power Data System - Core	-	7.370	22.318	-	22.318	17.800	20.778	22.269	18.446	Continuing	Continuing
• R09103: Universal Battery Charger	-	3.086	8.456	-	8.456	9.865	10.076	10.119	10.131	Continuing	Continuing
Remarks											
D. Acquisition Strategy											
Develop and mature a range of Soldier Power Generation technologies, based on technical tests and Soldier feedback, to determine the best material solution and award a full and open competition utilizing an Indefinite Delivery Indefinite Quantity (IDIQ) production contract scheduled for award in Fiscal Year 2020.											
E. Performance Metrics											
NA											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Army												Date: February 2018					
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604827A / Soldier Systems - Warrior Dem/Val						Project (Number/Name) EY3 / Soldier Power Generator					
Management Services (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total					
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract		
System Engineering and Prgram Management (SEPM)	MIPR	PEO Soldier, Ft. Belvoir, VA : TBD	-	-		-		0.045		-		0.045	0.000	0.045	-		
Subtotal			-	-		-		0.045		-		0.045	0.000	0.045	N/A		
Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total					
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract		
Development Test	TBD	Various : TBD	-	-		-		0.273		-		0.273	0.000	0.273	-		
Subtotal			-	-		-		0.273		-		0.273	0.000	0.273	N/A		
			Prior Years	FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract		
Project Cost Totals			-	-		0.000		0.318		-		0.318	0.000	0.318	N/A		
Remarks																	

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Army																Date: February 2018												
Appropriation/Budget Activity 2040 / 5								R-1 Program Element (Number/Name) PE 0604827A / Soldier Systems - Warrior Dem/Val								Project (Number/Name) EY3 / Soldier Power Generator												
Event Name	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Test and Evaluation									[redacted] Emerging Technologies								[redacted] Power Generation Integration				[redacted] Developmental Test of Charging Solutions							
Test and Eval																												
Test and Evaluation Continued																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Army			Date: February 2018
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604827A / <i>Soldier Systems - Warrior Dem/Val</i>	Project (Number/Name) EY3 / <i>Soldier Power Generator</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Test and Evaluation	1	2019	2	2019
Test and Eval	1	2020	2	2020
Test and Evaluation Continued	2	2021	2	2021

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Army										Date: February 2018		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604827A / Soldier Systems - Warrior Dem/Val				Project (Number/Name) EY4 / Universal Battery Charger			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
EY4: Universal Battery Charger	-	0.000	1.731	1.408	-	1.408	1.434	1.463	0.903	0.918	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
Note Beginning in FY18, funding for Universal Battery Charger realigned from Program Element: 0604827A (Soldier Systems - Warrior Dem/Val)/Project S65 (Soldier Power).												
A. Mission Description and Budget Item Justification The Universal Battery Charger (UBC) fills the power and energy gap created by the increase in mission essential and power consuming devices, by providing a single charging solution capable of providing power to handheld communication devices and a suite of military batteries. The UBC charging solution is suited for the squad and platoon and intended for use in the most austere operating environments. The system can draw power from wall outlets, vehicle power, and solar power sources. The UBC enables dismounted Soldiers to execute their missions with fewer battery resupplies, thus reducing the logistical burden associated with moving fuel and primary (disposable) batteries. The UBC capability also allows dismounted Soldiers to operate independently for longer missions without being tethered to a large generator, vehicle, or supply train. Funding will develop vehicle integration kits that allow the UBC to be mounted on Light Tactical Vehicle (LTV), Family of Military Tactical Vehicles (FMTV), Light Medium Tactical Vehicle (LMTV), Mine-Resistant Ambush Protected (MRAP) and the High Mobility Multipurpose Wheeled Vehicle (HMMWV) platforms. This effort is consistent with the Operational Energy ICD (26 April 2012) and the Universal Battery Charger CPD (27 May 2015). Milestone C Full Rate Production decision occurred 17 July 2017. Justification: FY19 RDTE funding develops the Transit Case Adapter and tests UBC Lite.												
B. Accomplishments/Planned Programs (\$ in Millions)								FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: Test & Evaluation								-	1.413	1.162	-	1.162
FY 2018 Plans: Conduct vehicle integration testing of the UBC Vehicle Integration Kit (VIK) on vehicle platforms. Test and evaluate new battery chemistries and interfaces with the UBC.												
FY 2019 Base Plans: Reduction of Universal Battery Charger size and weight as well as increase the battery recharging performance.												
FY 2018 to FY 2019 Increase/Decrease Statement: FY18 to FY19 funding decrease due to downward funding adjustments.												
Title: System Engineering & Program Management								-	0.318	0.246	-	0.246
FY 2018 Plans:												

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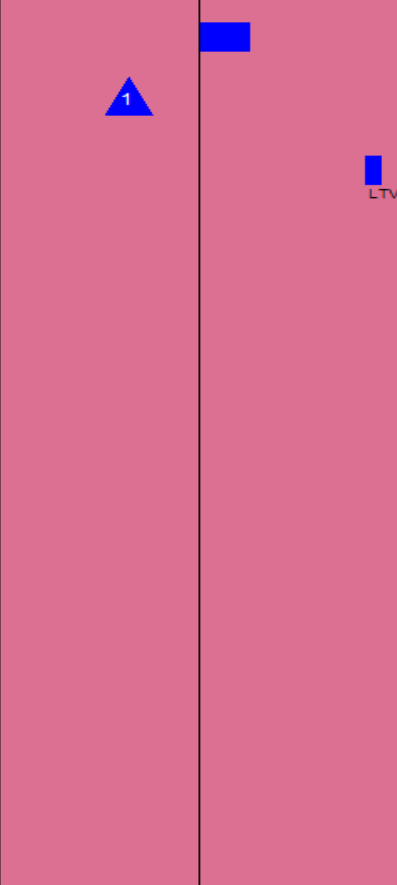

Exhibit R-2A, RDT&E Project Justification: PB 2019 Army										Date: February 2018	
Appropriation/Budget Activity 2040 / 5				R-1 Program Element (Number/Name) PE 0604827A / Soldier Systems - Warrior Dem/Val				Project (Number/Name) EY4 / Universal Battery Charger			
B. Accomplishments/Planned Programs (\$ in Millions)							FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Design and develop the UBC Vehicle Integration Kit (VIK) for vehicle platforms. Develop alternate dismounted charging solutions to reduce Soldier bulk and load.											
FY 2019 Base Plans: Continue to develop the UBC Vehicle Integration Kit (VIK) and alternate dismounted charging solutions to reduce Soldier bulk and load.											
FY 2018 to FY 2019 Increase/Decrease Statement: FY18 to FY19 funding decrease due to downward funding adjustments.											
Accomplishments/Planned Programs Subtotals							-	1.731	1.408	-	1.408
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
• R80010: Small Unit Power Increment 1	22.014	-	0.000	-	0.000	-	-	-	-	0.000	22.014
• R09103: Universal Battery Charger	-	3.086	8.456	-	8.456	9.865	10.076	10.119	10.131	0.000	51.733
• S65: Soldier Power	11.201	6.568	5.481	-	5.481	2.719	-	-	-	0.000	25.969
• EY2: Integrated Soldier Power Data System - Core	-	6.949	2.863	-	2.863	1.439	1.243	-	-	0.000	12.494
• EY3: Soldier Power Generator	-	-	0.318	-	0.318	0.323	0.330	0.337	0.303	0.000	1.611
• R08090: Integrated Soldier Power Data System - Core	-	7.370	22.318	-	22.318	17.800	20.778	22.269	18.446	0.000	108.981
Remarks											
D. Acquisition Strategy											
Using full and open competition, an Indefinite Delivery Indefinite Quantity (IDIQ) production contract was awarded 27 January 2016, in order to procure the UBC. The IDIQ contract contains First Article Testing (FAT) Contract Line Item Numbers (CLINs) to support initial testing activities. Additionally, the contracts will contain production CLINs to ensure the Project Management office can carry out production buys. The system will be procured under purchase orders for production quantities that will be awarded on a Firm Fixed Price (FFP) contract. Primary development activities for Fiscal Year 2018 (FY18) are the development of the UBC Vehicle Integration Kit (VIK). The UBC VIKs will be designed, developed, and tested in partnership with the Product Manager for AMPV (PM AMPV).											
E. Performance Metrics											
N/A											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Army												Date: February 2018			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604827A / <i>Soldier Systems - Warrior Dem/Val</i>						Project (Number/Name) EY4 / <i>Universal Battery Charger</i>			
Management Services (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
System Engineering/ Program Management Support	MIPR	Various : Various	-	-		0.318		0.246		-		0.246	0.318	0.882	-
Subtotal			-	-		0.318		0.246		-		0.246	0.318	0.882	N/A
Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Test & Evaluation	MIPR	Various : Various	-	-		1.413		1.162		-		1.162	1.139	3.714	-
Subtotal			-	-		1.413		1.162		-		1.162	1.139	3.714	N/A
			Prior Years	FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			-	-		1.731		1.408		-		1.408	1.457	4.596	N/A
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Army			Date: February 2018		
Appropriation/Budget Activity 2040 / 5		R-1 Program Element (Number/Name) PE 0604827A / <i>Soldier Systems - Warrior Dem/Val</i>		Project (Number/Name) EY4 / <i>Universal Battery Charger</i>	

Event Name	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Alternative Dismounted Charging Solutions Development																												
Universal Battery Charger (UBC) Test Report Complete																												
Vehicle Integration LTV/HMMWV																												
Vehicle Integration FMTV/HMMWV																												
Vehicle Integration FMTV/LTV																												
Vehicle Integration MRAP/LMTV																												
Evaluation of modernized battery chargers																												
Continued evaluation of modernized battery chargers																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Army			Date: February 2018
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604827A / <i>Soldier Systems - Warrior Dem/Val</i>	Project (Number/Name) EY4 / <i>Universal Battery Charger</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Alternative Dismounted Charging Solutions Development	1	2018	1	2018
Universal Battery Charger (UBC) Test Report Complete	3	2017	3	2017
Vehicle Integration LTV/HMMWV	4	2018	4	2018
Vehicle Integration FMTV/HMMWV	4	2019	4	2019
Vehicle Integration FMTV/LTV	4	2020	4	2020
Vehicle Integration MRAP/LMTV	4	2021	4	2021
Evaluation of modernized battery chargers	4	2022	4	2022
Continued evaluation of modernized battery chargers	4	2023	4	2023

Note

Beginning in FY18, funding for Universal Battery Charger was realigned from Program Element: 0604827A (Soldier Systems - Warrior Dem/Val)/Project S65/Soldier Power. Prior to this realignment Soldier and Small Unit Power initiated developmental and test power solutions for the UBC technologies.

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Army										Date: February 2018		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0604827A / Soldier Systems - Warrior Dem/Val				Project (Number/Name) S65 / Soldier Power			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
S65: Soldier Power	-	11.201	6.568	5.481	-	5.481	2.719	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Soldier and Small Unit Power (SUP) enables dismounted Soldiers to efficiently execute missions for longer durations by reducing the logistical burden associated with fuel and primary (disposable) batteries. Power solutions address energy deficits resulting from increased power demands associated with providing the Soldier with increased situational awareness displays, Global Positioning System (GPS) systems, weapon sensors, radios, and other devices. The Soldier and Small Unit Power system develops and tests power sources and solutions suited for the individual Soldier, team, squad, and platoon in the most austere operating environments, while also providing dismounted Soldiers the ability to execute their missions more efficiently, for longer durations and with fewer battery resupplies. An integrated Soldier power system will provide the Soldier with a wearable power supply that will be significantly more efficient than carrying separate batteries for each device. Soldier power systems will also reduce the logistical burden associated with moving fuel and primary (disposable) batteries, and allow dismounted Soldiers to operate independently for longer missions without being tethered to a large generator, vehicle, or supply train. SUP develops systems that consist of the Integrated Soldier Power and Data System-Core (ISPDS-C), Conformal Wearable Battery (CWB), Squad Power Manager (SPM), Universal Battery Charger (UBC), and Soldier Power Generation (SPG) Technologies. Develops and evaluates additional sources of power such as individual Soldier worn systems, renewable energy, and kinetic energy harvesting technologies. This effort is consistent with the Sep 2013 Small Unit Power CDD, the Dec 2011 Operational Energy ICD, and the Mar 2011 Soldier Protection CDD, and the Universal Battery Charger CPD (May 2015).

Justification: Soldier and Small Unit Power will continue to develop and test power solutions for the ISPDS, UBC, CWB, SPM and SPG technologies for fielding to Army Brigade Combat Teams.

Platoon Power Generator - PM E2S2: This project supports the demonstration and development of a Platoon Power Generation (PPG). The Small Unit Power PPG (1kW Generator) will provide small units with sufficient portable power to sustain Modified Table of Organizational Equipment (MTOE) unit power demand in support of 48 to 72 hour missions using a common logistical fuel (JP-8). It will be used for charging batteries and powering various types of Army communications and electronics devices. It will provide sufficient power to recharge and power all Platoon equipment and fulfill residual power gaps at the Squad and Soldier level. The generator will provide Platoon power for charging batteries when away from vehicles in all Brigade Combat Teams (Stryker, Armor and Infantry), Rangers and Special Forces in austere environments. FY 2019 funds will be used to continue the EMD Phase.

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

	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: Soldier Power Generation (SPG)	7.508	-	-	-	-
Description: Soldier portable, renewable energy solutions for Soldier Power Generation.					
Title: Soldier Power Test and Evaluation	1.404	-	-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Army										Date: February 2018	
Appropriation/Budget Activity 2040 / 5				R-1 Program Element (Number/Name) PE 0604827A / <i>Soldier Systems - Warrior Dem/Val</i>				Project (Number/Name) S65 / <i>Soldier Power</i>			
B. Accomplishments/Planned Programs (\$ in Millions)											
						FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	
Description: Integration testing and annual testing and evaluation events											
Title: Platoon Power Generation (PPG) - PM E2S2						2.289	6.568	5.481	-	5.481	
Description: Prepare for award and manage an EMD phase R&D contract for the PPG.											
FY 2018 Plans: Award EMD contract and fund applicable functional agreements											
FY 2019 Base Plans: Continue with EMD Phase. Support Critical Design Review (CDR) and Developmental Testing.											
FY 2018 to FY 2019 Increase/Decrease Statement: FY19 funding for preparation for award for EMD phase decreased very slightly (2 percent) from FY18.											
Accomplishments/Planned Programs Subtotals						11.201	6.568	5.481	-	5.481	
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
• R80010: <i>Small Unit Power Increment 1</i>	22.014	-	0.000	-	0.000	-	-	-	-	0.000	22.014
• R08090: <i>Integrated Soldier Power Data System - Core</i>	-	7.370	22.318	-	22.318	17.800	20.778	22.269	18.446	0.000	108.981
• R09103: <i>Universal Battery Charger</i>	-	3.086	8.456	-	8.456	9.865	10.076	10.119	10.131	0.000	51.733
• EY2: <i>Integrated Soldier Power Data System - Core</i>	-	6.949	2.863	-	2.863	1.439	1.243	-	-	0.000	12.494
• EY4: <i>Universal Battery Charger</i>	-	1.731	1.408	-	1.408	1.434	1.463	0.903	0.918	0.000	7.857
• EY3: <i>Soldier Power Generator</i>	-	-	0.318	-	0.318	0.323	0.330	0.337	0.303	0.000	1.611
Remarks											
D. Acquisition Strategy Soldier and Small Unit Power											

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Army		Date: February 2018
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604827A / <i>Soldier Systems - Warrior Dem/Val</i>	Project (Number/Name) S65 / <i>Soldier Power</i>
<p>In FY17 Pursued a variety of Soldier power initiatives under full and open competition. These initiatives range from Commercial-Off-The-Shelf (COTS) solutions to developmental efforts. The type of solicitation depends on the maturity of the technology. The power initiatives will be evaluated through scheduled test and evaluation events, and if successful, selected for procurement and subsequent fielding and sustainment. The acquisition strategy varies by product. For example, the SPM acquisition strategy will consist of two phases: Phase one includes the purchase of test articles using the Defense Logistics Agency (DLA) Special Operational (Spec Ops) Equipment Tailored Logistic Support Program (TLSP). Phase two includes the procurement of additional test articles through Indefinite Delivery Indefinite Quantity (IDIQ) contracts established through the Army Contracting Command (ACC). The Project Manager office will establish IDIQ contracts to support the SUP requirements over time. Each SUP system will be procured under purchase orders for production quantities that will be awarded on a Firm Fixed Price (FFP) contract. Funding realigned to Projects EY2 and EY4 starting in FY18.</p> <p>PEO CS/CSS Effort on the Platoon Power Generation - PM E2S2:</p> <p>Will use Other Transactional Agreement (OTA) contract vehicle culminating in an EMD award of up to two (2) Firm Fixed Price (FFP) contracts supporting an 18-24 month Engineering and Manufacturing Development (EMD) phase. Two selected contractors will be awarded EMD contracts and will separately fabricate and produce the minimum order of 10 Small Unit Power Platoon Power Generation (1kW Generator) systems (5 per vendor). The selected vendors will produce 5 additional systems to undergo developmental test (DT), a logistics demonstration (LD), pre-production qualification test, and limited user / operational test (LUT/OT). Upon successful completion of these tests and completion of logistics supportability, the performance data and Soldier's feedback will be utilized in preparation for Milestone C (MS C) 4th Qtr FY20</p> <p><u>E. Performance Metrics</u></p> <p>NA</p>		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Army												Date: February 2018			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604827A / Soldier Systems - Warrior Dem/Val				Project (Number/Name) S65 / Soldier Power					
Management Services (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
PM integration and oversight	MIPR	Various : Various	3.342	1.936		-		-		-		-	0.000	5.278	-
Platoon Power Generation	Various	PM E2S2 : Fort Belvoir, VA	-	-		0.225		0.230		-		0.230	0.000	0.455	-
Subtotal			3.342	1.936		0.225		0.230		-		0.230	0.000	5.733	N/A
Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Soldier Power Development and Integration	TBD	TBD : TBD	12.797	5.111		-		-		-		-	0.000	17.908	-
Platoon Power Generation	C/FFP	TBD : TBD	-	1.500		2.813		4.471		-		4.471	1.500	10.284	-
Subtotal			12.797	6.611		2.813		4.471		-		4.471	1.500	28.192	N/A
Support (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Matrix Support	MIPR	ARL, CERDEC, Various : Various	2.583	0.496		-		-		-		-	0.294	3.373	-
Platoon Power Generation	IA	TBD : TBD	0.822	0.534		1.463		0.230		-		0.230	0.600	3.649	-
Subtotal			3.405	1.030		1.463		0.230		-		0.230	0.894	7.022	N/A
Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Various Testing Organizations	MIPR	Various : Various	1.329	1.404		-		-		-		-	0.000	2.733	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Army												Date: February 2018			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0604827A / <i>Soldier Systems - Warrior Dem/Val</i>				Project (Number/Name) S65 / <i>Soldier Power</i>					

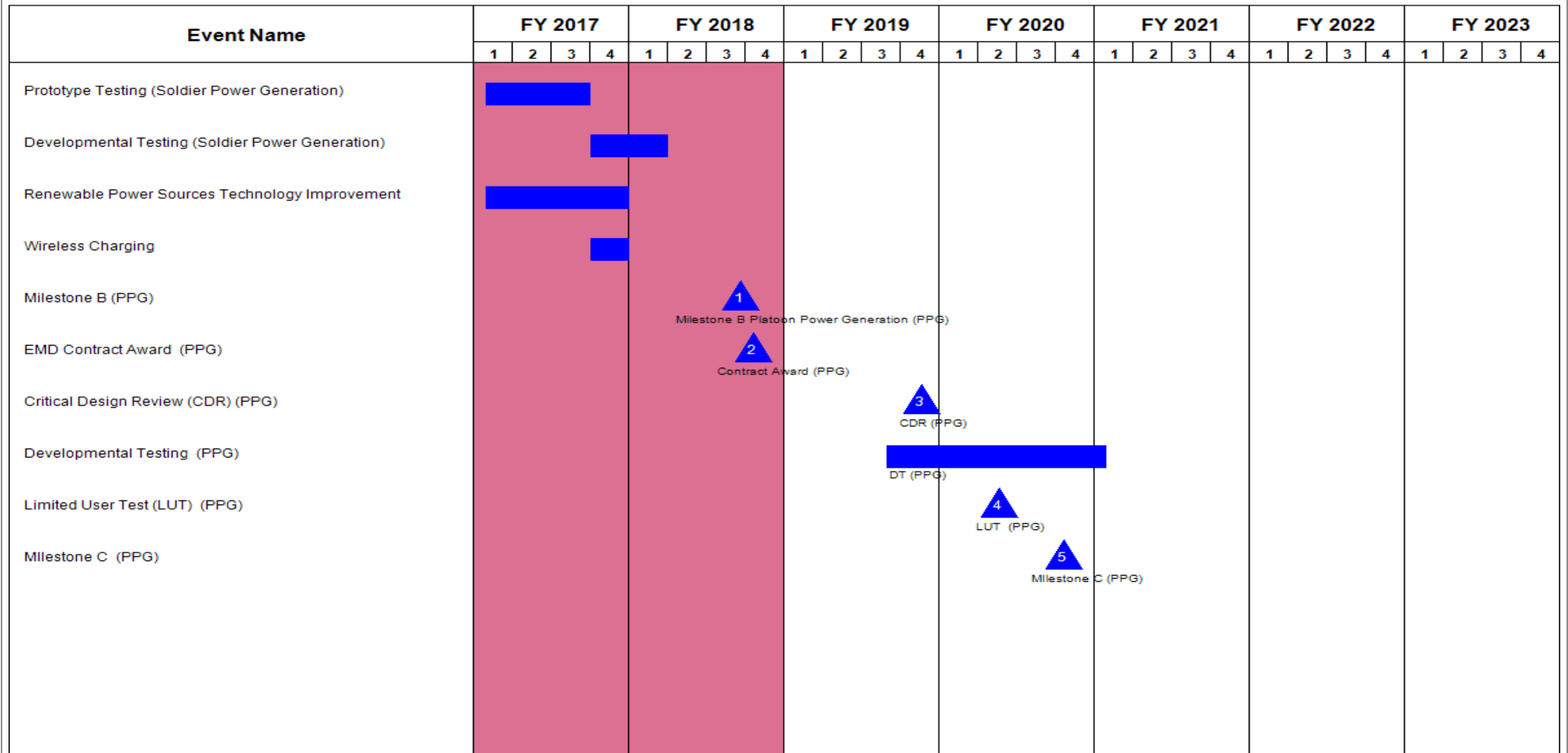
Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Platoon Power Generation	MIPR	TBD : TBD	-	0.220		2.067		0.550		-		0.550	0.220	3.057	-
Subtotal			1.329	1.624		2.067		0.550		-		0.550	0.220	5.790	N/A

	Prior Years	FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	20.873	11.201		6.568		5.481		-		5.481	2.614	46.737	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Army			Date: February 2018		
Appropriation/Budget Activity 2040 / 5		R-1 Program Element (Number/Name) PE 0604827A / <i>Soldier Systems - Warrior Dem/Val</i>		Project (Number/Name) S65 / <i>Soldier Power</i>	



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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Army			Date: February 2018
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604827A / <i>Soldier Systems - Warrior Dem/Val</i>	Project (Number/Name) S65 / <i>Soldier Power</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Prototype Testing (Soldier Power Generation)	1	2016	3	2017
Developmental Testing (Soldier Power Generation)	4	2017	1	2018
Renewable Power Sources Technology Improvement	1	2017	4	2017
Wireless Charging	4	2017	4	2017
Milestone B (PPG)	3	2018	3	2018
EMD Contract Award (PPG)	4	2018	4	2018
Critical Design Review (CDR) (PPG)	4	2019	4	2019
Developmental Testing (PPG)	3	2019	1	2021
Limited User Test (LUT) (PPG)	2	2020	2	2020
Milestone C (PPG)	4	2020	4	2020