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Exhibit R-2, PB 2010 Army RDT&E Budget Item Justification								DATE: May 2009		
APPROPRIATION/BUDGET ACTIVITY 2040 - Research, Development, Test & Evaluation, Army/BA 3 - Advanced Technology Development (ATD)					R-1 ITEM NOMENCLATURE PE 0603125A Combating Terrorism - Technology Development					
COST (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	13.220	13.022	11.989						Continuing	Continuing
DF5: AGILE INTEGRATION & DEMONSTRATION	13.220	13.022	11.989						Continuing	Continuing
<u>A. Mission Description and Budget Item Justification</u>										
<p>This program element (PE)/project accelerates technologies with high payoff to address current operational shortfalls or future force capability gaps. This PE demonstrates programs requiring accelerated action to fill critical technology gaps. In addition, project DF5 includes the Rapid Equipping Force (REF) effort to develop a Transportable Hybrid Electric Power Station (THEPS) that incorporates solar technology, wind technology, advanced storage technology, and intelligent power management technology to reduce use of fossil fuel generators.</p> <p>Work in this PE is related to and fully coordinated with PE 0603710A (Night Vision Advanced Technology), PE 0602303A (Missile Technology), PE 0602105A (Materials Technology), PE 0602618A (Ballistics Technology), PE 0602601A (Combat Vehicle and Automotive Technology), PE 0603005A (Combat Vehicle and Automotive Advanced Technology) and PE 0602705A (Electronics and Electronic Devices).</p> <p>The cited work is consistent with the Director, Defense Research and Engineering Strategic Plan, the Army Modernization Strategy, and the Army Science and Technology Master Plan.</p> <p>Work in this PE is performed by the Army Research, Development, and Engineering Command (RDECOM) and efforts are executed by the appropriate Research, Development, and Engineering Centers (RDECs).</p>										

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B. Program Change Summary (\$ in Millions)

	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>
Previous President's Budget	12.978	13.064	13.184	
Current BES/President's Budget	13.220	13.022	11.989	
Total Adjustments	.242	-.042	-1.195	
Congressional Program Reductions	.000	-.042		
Congressional Rescissions	.000	.000		
Total Congressional Increases	.000	.000		
Total Reprogrammings	.605	.000		
SBIR/STTR Transfer	-.363	.000		

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COST (\$ in Millions)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
DF5: AGILE INTEGRATION & DEMONSTRATION	13.220	13.022	11.989						Continuing	Continuing

A. Mission Description and Budget Item Justification

This program element (PE)/project accelerates technologies with high payoff to address current operational shortfalls or future force capability gaps. This PE demonstrates programs requiring accelerated action to fill critical technology gaps. In addition, project DF5 includes the Rapid Equipping Force (REF) effort to develop a Transportable Hybrid Electric Power Station (THEPS) that incorporates solar technology, wind technology, advanced storage technology, and intelligent power management technology to reduce use of fossil fuel generators.

Work in this PE is related to and fully coordinated with PE 0603710A (Night Vision Advanced Technology), PE 0602303A (Missile Technology), PE 0602105A (Materials Technology), PE 0602618A (Ballistics Technology), PE 0602601A (Combat Vehicle and Automotive Technology), PE 0603005A (Combat Vehicle and Automotive Advanced Technology) and PE 0602705A (Electronics and Electronic Devices).

The cited work is consistent with the Director, Defense Research and Engineering Strategic Plan, the Army Modernization Strategy, and the Army Science and Technology Master Plan.

Work in this PE is performed by the Army Research, Development, and Engineering Command (RDECOM) and efforts are executed by the appropriate Research, Development, and Engineering Centers (RDECs).

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

	FY 2008	FY 2009	FY 2010	FY 2011
Small Business Innovative Research/Small Business Technology Transfer Programs	.000	.365	.000	
Transportable Hybrid Electric Power Station (THEPS): THEPS incorporates solar technology, wind technology, advanced storage technology, and intelligent power management technology to reduce use of fossil fuel generators. In FY08, incorporated spiral development of more efficient photovoltaic technology, wind technology, and advanced algorithms for intelligent power management that provided larger size (10kW and 15kW) for THEPS. The larger size THEPS allowed flexibility in support of remote operations tactical command posts.	5.666	4.484	3.822	

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B. Accomplishments/Planned Program (\$ in Millions)			FY 2008	FY 2009	FY 2010	FY 2011
<p>In FY09, develop and demonstrate 10-15kW and the networked THEPS to provide an intelligent power grid for more efficiencies and redundancies. In FY10, THEPS demonstration will be conducted at remote sites and operating bases and demonstrations will continue at Forward Operating Bases (FOB) with less logistics tail and more cost avoidance as a result of consuming less fossil fuel.</p>						
<p>AIDE: This effort accelerates the development and testing of capabilities that address future force needs. In FY08 completed maturation, demonstration, and evaluation of ongoing efforts. These efforts identified maturing technologies from within all Army research and development (R&D) activities and the Department of Energy (DOE), to accelerate the development of suitable technologies to the Warfighter for demonstration. Projects included the maturation, demonstration, and evaluation of overhead protection on the Gunners Protection Kit; Soldier Protection Suites; a Soldier power manager system to reduce the quantity and variety of batteries a Soldier must carry; a 3rd Generation FLIR (Forward Looking Infrared) LRAS3 (Long Range Advance Scout Surveillance System); and two projects to increase the effectiveness of the Hellfire missile system. Emphasis continued to be on those high payoff and cost effective areas that provide the operational forces increased protection and survivability, and meet the Operational Need Statements of the deployed forces in Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF). In FY09, complete maturation, demonstration and evaluation of FY08 efforts in preparation for transition to operational units. Identify and mature, through prototype development and testing, additional new technologies from all sources that can be accelerated to overcome the changing capability gaps and requirements shortfalls experienced by operational forces around the globe. In FY10, will select, mature, and demonstrate technologies focused on war fighting and counter terrorism technologies, and enhanced force protection. In addition, will introduce medical life saving projects and provide enhanced Soldier capabilities in a 6 to 12 month fielding timeline.</p>			7.554	8.173	8.167	
Total			13.220	13.022	11.989	
C. Other Program Funding Summary (\$ in Millions)						
N/A						
D. Acquisition Strategy						
N/A						

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E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

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