

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2012 Army		DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT		
2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD)	PE 0603734A: Military Engineering Advanced Technology	T13: Stationary Power & Energy Tech Demonstrations (CA)		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2010	FY 2011	FY 2012
FY 2010 Accomplishments: Evaluated performance and durability of the ammonia and urea electrolyzers of 1KW prototype.				
Title: Natural Gas Firetube Boiler Demonstration		0.796	-	-
Description: This is a Congressional Interest Item.				
FY 2010 Accomplishments: Retrofitted and demonstrated a new combined water and heat fire tube boiler reclamation system (Super Boiler) with 15% higher efficiency.				
Title: Demonstration of Thin Film Solar Modules as a Renewable Energy Source		0.796	-	-
Description: This is a Congressional Interest Item.				
FY 2010 Accomplishments: Installed and demonstrated a state of the art modular thin film solar photovoltaic array at an Army installation.				
Title: Amorphous Si Flexible Photovoltaics for Grid Parity		1.592	-	-
Description: This is a Congressional Interest Item.				
FY 2010 Accomplishments: Developed and demonstrated a high speed manufacturing process for low cost building integrated photovoltaic systems.				
Title: Hybrid Energy Systems Design and Testing		1.990	-	-
Description: This is a Congressional Interest Item.				
FY 2010 Accomplishments: Assessed the technical and operational feasibility of deploying a next-generation hybrid energy system on a US Army installation to combine traditional fossil fired power with available renewable energy sources.				
Title: Zinc Flow Electrical Energy Storage		1.990	-	-
Description: This is a Congressional Interest Item.				
FY 2010 Accomplishments: Installed and demonstrated a flow battery electrical storage unit at an Army installation.				
Title: Integrated Alternative Power Systems		2.069	-	-

UNCLASSIFIED

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2012 Army		DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT		
2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD)	PE 0603734A: Military Engineering Advanced Technology	T13: Stationary Power & Energy Tech Demonstrations (CA)		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2010	FY 2011	FY 2012
<i>Description:</i> This is a Congressional Interest Item.				
FY 2010 Accomplishments: Developed and demonstrated a comprehensive power management system to integrate wind and solar power supplies into the current infrastructure including utility and legacy backup generation.				
<i>Title:</i> Pacific Command Renewable Energy Security System		2.387	-	-
<i>Description:</i> This is a Congressional Interest Item.				
FY 2010 Accomplishments: Developed and operated a sustainable system to demonstrate how the Army can grow its own fuel on its own designated lands.				
<i>Title:</i> Conversion of Municipal Solid Waste to Renewable Diesel Fuel		2.507	-	-
<i>Description:</i> This is a Congressional Interest Item.				
FY 2010 Accomplishments: Continued the waste to diesel fuel plant demonstration to include a set of trials with various waste inputs, and laboratory analyses of fuel output.				
<i>Title:</i> Internal Base Facility Energy Independence		2.547	-	-
<i>Description:</i> This is a Congressional Interest Item.				
FY 2010 Accomplishments: Demonstrated the use of alternative fuel sources to power structures located on Military bases to enhance facility operations and management, improve internal base energy security and increase cost savings.				
Accomplishments/Planned Programs Subtotals		27.417	-	-
C. Other Program Funding Summary (\$ in Millions)				
N/A				
D. Acquisition Strategy				
N/A				
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.				

UNCLASSIFIED

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2012 Army						DATE: February 2011						
APPROPRIATION/BUDGET ACTIVITY			R-1 ITEM NOMENCLATURE			PROJECT						
2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD)			PE 0603734A: Military Engineering Advanced Technology			T15: MILITARY ENGINEERING TECHNOLOGY DEMONSTRATION (CA)						
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost	
T15: MILITARY ENGINEERING TECHNOLOGY DEMONSTRATION (CA)	7.163	-	-	-	-	-	-	-	-	Continuing	Continuing	
Note												
Not applicable for this item												
A. Mission Description and Budget Item Justification												
These are Congressional Interest Items for Military Engineering Technology Demonstrations.												
B. Accomplishments/Planned Programs (\$ in Millions)												
Title: Lightweight Protective Roofing										FY 2010	FY 2011	FY 2012
Description: This is a Congressional Interest Item										1.193	-	-
FY 2010 Accomplishments:												
Investigated lightweight side wall panels for protection against both blast and fragments. This technology was transitioned to roofing components with enhanced ductility and energy absorption, providing protection from top attack munitions.												
Title: Nanotechnology for Potable Water and Waste Treatment										1.592	-	-
Description: This is a Congressional Interest Item										-	-	-
FY 2010 Accomplishments:												
Designed and benchmark-tested low cost multifunctional nanomaterials to effectively purify water for potable supply and mitigate waterborne contaminants.												
Title: University Center for Disaster Preparedness and Emergency Response										1.194	-	-
Description: This is a Congressional Interest Item.										-	-	-
FY 2010 Accomplishments:												
Continued support of the Rutgers University Center.												
Title: Enhancing the Commercial Joint Mapping Toolkit to Support Tactical Military Operations										3.184	-	-
Description: This is a Congressional Interest Item.										-	-	-

UNCLASSIFIED

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2012 Army

DATE: February 2011

APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD)	R-1 ITEM NOMENCLATURE PE 0603734A: Military Engineering Advanced Technology	PROJECT T15: MILITARY ENGINEERING TECHNOLOGY DEMONSTRATION (CA)
---	---	---

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

	FY 2010	FY 2011	FY 2012
FY 2010 Accomplishments: Provided common tools to support spatially based prediction and projection of entities within a Joint Operating Environment.			
Accomplishments/Planned Programs Subtotals	7.163	-	-

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

N/A

D. Acquisition Strategy

N/A

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.