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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 Office of Secretary Of Defense **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0305125D8Z: <i>CRITICAL INFRASTRUCTURE PROTECTION (CIP)</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	15.594	16.590	10.486	0.000	10.486	14.608	14.433	13.826	14.099	Continuing	Continuing
125: <i>CRITICAL INFRASTRUCTURE PROTECTION (CIP)</i>	15.594	16.590	10.486	0.000	10.486	14.608	14.433	13.826	14.099	Continuing	Continuing

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

The Defense Critical Infrastructure Program (DCIP) is a Department of Defense (DOD) risk management program that seeks to ensure the availability of networked assets critical to DOD missions, to include DOD and non-DOD, domestic and foreign infrastructures essential to planning, mobilizing, deploying, executing, and sustaining United States military operations on a global basis. Through identifying Defense Critical Assets, assessing them to determine vulnerabilities, incorporating specific threat and hazard information and analysis, and visually displaying relevant infrastructure data and analysis, DOD will be positioned to make risk management decisions to ensure the appropriate infrastructure is available, when needed, to support DOD missions.

Specifically, Combatant Commands (COCOMs) are responsible for identifying the mission capability requirements and coordinating with the Military Departments, Defense Agencies, DOD Field Activities, and Defense Sector Lead Agents to identify and assess Defense Critical Assets. As asset owners and capability providers, the Secretaries of the Military Departments and the Directors of Defense Agencies and DOD Field Activities, coordinate with the COCOMs to identify and prioritize the assets required to support mission-essential functions. Asset owners will also assess identified Defense Critical Assets to identify vulnerabilities and apply appropriate remediation and mitigation measures. The Defense Sector Lead Agents are responsible for identifying the specific functions, systems, assets (DOD and non-DOD owned), and interdependencies within the Defense Sector infrastructure networks supporting the identified critical missions.

Each Defense Sector Lead Agent, as identified in DODD3020.40, represents one of ten (10) functional areas that provide support to the Combatant Commanders and asset owners. These functional areas are as follows: defense industrial base (DIB); financial services; global information grid (GIG); health affairs; intelligence, surveillance, and reconnaissance (ISR); logistics; personnel; public works; space; and transportation.

In addition, DCIP manages specific analytic efforts in the identification and maintenance of specific inter- and intra-dependencies DOD has on the foundational commercial infrastructure networks supporting the identified critical missions. Specific analytic efforts are focused within six (6) commercial infrastructure areas: energy (electric power, natural gas); chemicals; transportation; telecommunications; water; and petroleum, oil, lubricants (POL).

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**B. Program Change Summary (\$ in Millions)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	15.594	12.725	0.000	0.000	0.000
Current President's Budget	15.594	16.590	10.486	0.000	10.486
Total Adjustments	0.000	3.865	10.486	0.000	10.486
• Congressional General Reductions		0.000			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		4.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• other	0.000	-0.135	10.486	0.000	10.486

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

**Project: 125: CRITICAL INFRASTRUCTURE PROTECTION (CIP)**

Congressional Add: *Electrical Grid Reliability*

Congressional Add: *Disaster Response*

	<b>FY 2009</b>	<b>FY 2010</b>
	4.000	0.000
	1.200	4.000
Congressional Add Subtotals for Project: 125	5.200	4.000
Congressional Add Totals for all Projects	5.200	4.000

**Change Summary Explanation**

Note: FY09 total includes \$5.2M in Congressional Adds

Note: FY10 total includes \$4M in Congressional Adds

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<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
125: <i>CRITICAL INFRASTRUCTURE PROTECTION (CIP)</i>	15.594	16.590	10.486	0.000	10.486	14.608	14.433	13.826	14.099	Continuing	Continuing

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

The Defense Critical Infrastructure Program (DCIP) is a Department of Defense (DOD) risk management program that seeks to ensure the availability of networked assets critical to DOD missions, to include DOD and non-DOD, domestic and foreign infrastructures essential to planning, mobilizing, deploying, executing, and sustaining United States military operations on a global basis. Through identifying Defense Critical Assets, assessing them to determine vulnerabilities, incorporating specific threat and hazard information and analysis, and visually displaying relevant infrastructure data and analysis, DOD will be positioned to make risk management decisions to ensure the appropriate infrastructure is available, when needed, to support DOD missions.

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In addition, DCIP manages specific analytic efforts in the identification and maintenance of specific inter- and intra-dependencies DOD has on the foundational commercial infrastructure networks supporting the identified critical missions. Specific analytic efforts are focused within six (6) commercial infrastructure areas: energy (electric power, natural gas); chemicals; transportation; telecommunications; water; and petroleum, oil, lubricants (POL).

**B. Accomplishments/Planned Program (\$ in Millions, Articles in Whole Units)**

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<b>B. Accomplishments/Planned Program (\$ in Millions, Articles in Whole Units)</b>						
		<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
<p><i>FY 2010 Plans:</i></p> <ul style="list-style-type: none"> <li>-- Provide technical analysis and recommendations on infrastructure networks, points of service, interdependencies, and priority restoration for pre-event and post-event analysis for manmade or natural disaster incidents, and intelligence relating to possible terrorist threats.</li> <li>-- Apply risk management methodology to all identified Defense Critical Assets.</li> <li>- Perform trend analysis and develop remediation and mitigation options for addressing risks identified as part of the assessment process</li> <li>- Incorporate DOD DCIP assessment training</li> </ul> <p><i>FY 2011 Base Plans:</i></p> <ul style="list-style-type: none"> <li>-- Provide technical analysis and recommendations on infrastructure networks, points of service, interdependencies, and priority restoration for pre-event and post-event analysis for manmade or natural disaster incidents, and intelligence relating to possible terrorist threats.</li> <li>-- Apply risk management methodology to all identified Defense Critical Assets.</li> <li>- Perform trend analysis and develop remediation and mitigation options for addressing risks identified as part of the assessment process</li> <li>- Incorporate DOD DCIP assessment training</li> </ul>						
Accomplishments/Planned Programs Subtotals		10.394	12.590	10.486	0.000	10.486
		<b>FY 2009</b>	<b>FY 2010</b>			
Congressional Add: Electrical Grid Reliability  <i>FY 2009 Accomplishments:</i> This project will enhance electrical power grid modeling capabilities used for analysis of Defense Critical Infrastructure interdependencies with commercial electrical power. It will investigate other power grid models and their utility within CIPRSim and it will integrate those modes with the Real Time		4.000	0.000			

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<b>B. Accomplishments/Planned Program (\$ in Millions, Articles in Whole Units)</b>		
	<b>FY 2009</b>	<b>FY 2010</b>
Digital Simulator (RTDS©) system such that larger geographic areas can be efficiently modeled. The CIPRSim is a tool for running predictive analysis of the future of the power grid and other infrastructure components, but it does not currently tie to real power data. In addition, a current limitation of the CIPRSim is an inability to receive and display current power grid data. For effective disaster management, the analyst must be able to determine the current state of the power grid and run predictive analysis based upon the real and current state.		
Congressional Add: Disaster Response  <i>FY 2009 Accomplishments:</i> The Idaho National Lab (INL) will build upon the Critical Infrastructure Protection and Resilience Simulator (CIPRsim), developed in FY08, to create a high fidelity simulation environment for risk assessments of Defense and Task Critical Assets (DCAs and TCAs). Because electrical power and communications networks are supporting foundational infrastructure to TCAs and DCAs, the focus of this effort will be to develop a high fidelity, dynamic, agent based, simulation that links electrical power, communications networks, and their control systems for specific selected assets that will afford an opportunity to apply this capability in analyzing Defense and Task Critical Assets. The final product will be suitable for use as a risk management and decision making tool, for evaluating risk mitigation and remediation options, and for wargaming scenarios involving the loss or disruption of critical systems and assets.  <i>FY 2010 Plans:</i> The Idaho National Lab (INL) will build upon the Critical Infrastructure Protection and Resilience Simulator (CIPRsim), developed in FY08, to create a high fidelity simulation environment for risk assessments of Defense and Task Critical Assets (DCAs and TCAs). Because electrical power and communications networks are supporting foundational infrastructure to TCAs and DCAs, the focus of this effort will be to develop a high fidelity, dynamic, agent based, simulation that links electrical power, communications networks, and their control systems for specific selected assets that will afford an opportunity to apply this capability in analyzing Defense and Task Critical Assets. The final	1.200	4.000

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**B. Accomplishments/Planned Program (\$ in Millions, Articles in Whole Units)**

	FY 2009	FY 2010
product will be suitable for use as a risk management and decision making tool, for evaluating risk mitigation and remediation options, and for wargaming scenarios involving the loss or disruption of critical systems and assets.		
Congressional Adds Subtotals	5.200	4.000

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

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 0902198D8Z: <i>Critical Infrastructure Protection</i>	18.664	18.427	18.613		18.613	19.079	19.352	19.739	20.134	Continuing	Continuing

**D. Acquisition Strategy**

N/A

**E. Performance Metrics**

DCIP uses the performance metrics documented in the DCIP Program Plan. These metrics are based on the requirements and responsibilities listed in DODD 3020.40 and DODI 3020.45.

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