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**Department of Defense  
Fiscal Year (FY) 2014 President's Budget Submission**

April 2013



**Office of Secretary Of Defense**

*Justification Book*

***Defense Production Act Purchases***

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Defense-Wide  
FY 2014 President's Budget  
Exhibit P-1 FY 2014 President's Budget  
Total Obligational Authority  
(Dollars in Thousands)

26 Feb 2013

Appropriation	FY 2012 (Base & OCO)	FY 2013 Base Request with CR Adj*	FY 2013 OCO Request with CR Adj*	Emergency Disaster Relief Act of 2013	FY 2013 Total Request with CR Adj*
-----	-----	-----	-----	-----	-----
Defense Production Act Purchases	174,964	171,004			171,004
Total Defense-Wide	174,964	171,004			171,004

P-1C: FY 2014 President's Budget (Published Version), as of February 26, 2013 at 08:24:31

\* Reflects the FY 2013 President's Budget with an undistributed adjustment to match the Annualized Continuing Resolution funding level by appropriation.

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Defense-Wide  
FY 2014 President's Budget  
Exhibit P-1 FY 2014 President's Budget  
Total Obligational Authority  
(Dollars in Thousands)

26 Feb 2013

Appropriation -----	FY 2014 Base -----
Defense Production Act Purchases	25,135
Total Defense-Wide	25,135

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Defense-Wide  
 FY 2014 President's Budget  
 Exhibit P-1 FY 2014 President's Budget  
 Total Obligational Authority  
 (Dollars in Thousands)

26 Feb 2013

Appropriation: Defense Production Act Purchases

Budget Activity	FY 2012 (Base & OCO)	FY 2013 Base Request with CR Adj*	FY 2013 OCO Request with CR Adj*	Emergency Disaster Relief Act of 2013	FY 2013 Total Request with CR Adj*
-----	-----	-----	-----	-----	-----
01. Defense Production Act Purchases	174,964	89,189			89,189
20. Undistributed		81,815			81,815
Total Defense Production Act Purchases	174,964	171,004			171,004

P-1C: FY 2014 President's Budget (Published Version), as of February 26, 2013 at 08:24:31

\* Reflects the FY 2013 President's Budget with an undistributed adjustment to match the Annualized Continuing Resolution funding level by appropriation.

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Defense-Wide  
FY 2014 President's Budget  
Exhibit P-1 FY 2014 President's Budget  
Total Obligational Authority  
(Dollars in Thousands)

26 Feb 2013

Appropriation: Defense Production Act Purchases

Budget Activity -----	FY 2014 Base -----
01. Defense Production Act Purchases	25,135
20. Undistributed	
Total Defense Production Act Purchases	25,135



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Defense-Wide  
 FY 2014 President's Budget  
 Exhibit P-1 FY 2014 President's Budget  
 Total Obligational Authority  
 (Dollars in Thousands)

26 Feb 2013

Appropriation: 0360D Defense Production Act Purchases

Line No	Item Nomenclature	Ident Code	FY 2012 (Base & OCO)		FY 2013 Base Request with CR Adj*		FY 2013 OCO Request with CR Adj*		Emergency Disaster Relief Act of 2013		FY 2013 Total Request with CR Adj*		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
Budget Activity 01: Defense Production Act Purchases													
-----													
Defense Production Act Purchases													
1	Defense Production Act Purchases	A		174,964		89,189						89,189	U
Total Defense Production Act Purchases				174,964		89,189						89,189	
Budget Activity 20: Undistributed													
-----													
Undistributed													
2	Adj to Match Continuing Resolution					81,815						81,815	U
Total Undistributed						81,815						81,815	
Total Defense Production Act Purchases				174,964		171,004						171,004	

P-1C: FY 2014 President's Budget (Published Version), as of February 26, 2013 at 08:24:31

\* Reflects the FY 2013 President's Budget with an undistributed adjustment to match the Annualized Continuing Resolution funding level by appropriation.

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Defense-Wide  
FY 2014 President's Budget  
Exhibit P-1 FY 2014 President's Budget  
Total Obligational Authority  
(Dollars in Thousands)

26 Feb 2013

Appropriation: 0360D Defense Production Act Purchases

Line No	Item Nomenclature	Ident Code	FY 2014 Base Quantity	S e c -
Budget Activity 01: Defense Production Act Purchases				
-----				
Defense Production Act Purchases				
1	Defense Production Act Purchases	A	25,135	U
Total Defense Production Act Purchases			25,135	
Budget Activity 20: Undistributed				
-----				
Undistributed				
2	Adj to Match Continuing Resolution			U
Total Undistributed				
Total Defense Production Act Purchases			25,135	

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**Line Item Table of Contents (by Appropriation then Line Number)**

***Appropriation 0360D: Defense Production Act Purchases***

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<b>Line #</b>	<b>BA</b>	<b>BSA</b>	<b>Line Item Number</b>	<b>Line Item Title</b>	<b>Page</b>
1	01	10	TitleIII	Defense Production Act Purchases.....	1

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**Line Item Table of Contents (Alphabetically by Line Item Title)**

<b>Line Item Title</b>	<b>Line Item Number</b>	<b>Line #</b>	<b>BA</b>	<b>BSA</b>	<b>Page</b>
Defense Production Act Purchases	TitleIII	1	01	10.....	1

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**Exhibit P-40, Budget Item Justification Sheet:** PB 2014 Office of Secretary Of Defense **Date:** April 2013

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 0360D: Defense Production Act Purchases / BA 01: Defense Production Act Purchases / BSA 10: Defense Production Act Purchases	<b>P-1 Line Item Nomenclature:</b> TitleIII - Defense Production Act Purchases
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ID Code (A=Service Ready, B=Not Service Ready) :	Program Elements for Code B Items: 0902199D8Z	Other Related Program Elements:
--	---	---------------------------------

**MDAP/MAIS Code(s):**

Resource Summary	Prior Years	FY 2012	FY 2013 <sup>#</sup>	FY 2014 Base	FY 2014 OCO <sup>##</sup>	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	55.315	174.964	89.189	25.135	-	25.135	25.256	25.606	20.817	21.125	Continuing	Continuing
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P1) ( <i>\$ in Millions</i> )	55.315	174.964	89.189	25.135	-	25.135	25.256	25.606	20.817	21.125	Continuing	Continuing
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>55.315</b>	<b>174.964</b>	<b>89.189</b>	<b>25.135</b>	<b>-</b>	<b>25.135</b>	<b>25.256</b>	<b>25.606</b>	<b>20.817</b>	<b>21.125</b>	<b>Continuing</b>	<b>Continuing</b>

*(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)*

Initial Spares ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost ( <i>Units in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost ( <i>Units in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-

<sup>#</sup> FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

<sup>##</sup> The FY 2014 OCO Request will be submitted at a later date

**Description:**

Title III of the Defense Production Act (DPA) provides the Department of Defense (DoD) with a powerful tool to ensure the timely creation and availability of domestic production capabilities for technologies that have the potential for wide-ranging impact on the operational capabilities and technological superiority of U.S. defense systems. DPA Title III is unique in that it is the sole DoD program focused on creating, maintaining, protecting, expanding or restoring domestic production capacity to strengthen domestic industry and to establish the industrial base capacity for essential national defense capabilities.

The Defense Production Act is authorized by 50 U.S.C. App. 2061 et seq. This budget includes essential transformational initiatives using the authorities of Title III of the DPA. FY 2014 requested funding will be used for continuation of five projects. These are multi-year projects that will incentivize domestic sources to establish, strengthen, and expand domestic industrial base capabilities for key technologies that support transformational initiatives and maintain the technological superiority of U.S. defense systems. Brief descriptions of these projects are provided below.

In accordance with the provisions of the Defense Production Act of 1950, as amended, (50 U.S.C. App. 2061 et seq.), notification to Congress of the intent of the DoD to execute any of the projects described in this exhibit to correct domestic industrial base shortfalls for technologies and/or materials essential for the execution of the national security strategy of the United States will be provided via letter notification before the referenced projects are initiated.

The funding profile includes the following major increases:

FY 2012: \$150 million Congressional Program Increase

FY 2013: \$70 million for application to Advanced Drop-In Biofuel Production

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**Exhibit P-40, Budget Item Justification Sheet:** PB 2014 Office of Secretary Of Defense **Date:** April 2013

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 0360D: Defense Production Act Purchases / BA 01: Defense Production Act Purchases / BSA 10: Defense Production Act Purchases	<b>P-1 Line Item Nomenclature:</b> TitleIII - Defense Production Act Purchases
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ID Code (A=Service Ready, B=Not Service Ready) :	Program Elements for Code B Items: 0902199D8Z	Other Related Program Elements:
--	---	---------------------------------

**MDAP/MAIS Code(s):**

Item Schedule		ID CD	Prior Years			FY 2012			FY 2013			FY 2014 Base			FY 2014 OCO			FY 2014 Total		
Item Nomenclature*	Exhibits		Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
1 - Defense Production Act Purchases	P5, P5A				55.315			174.964			89.189			25.135			-			25.135
<b>Total Gross/Weapon System Cost</b>				<b>55.315</b>			<b>174.964</b>			<b>89.189</b>			<b>25.135</b>			<b>-</b>			<b>25.135</b>	

\*Item Nomenclature represents Item Number, DODIC, and Item Name for the P40A and P5; Name for the P18 and P23; Modification Number and Modification Title for the P3A; Item Number and Item Name for the P10.

Note: Totals in this Exhibit P-40 set may not be exact or add due to rounding.

**Justification:**

FY 2014 resources:

Projects will be executed at the following values within FY 2014 resources. The multi-year cost phasing of these projects is addressed in the P5 exhibit. Four of these projects are part of the National Security Space (NSS) Industrial & Supply Base (ISB) Risk Mitigation Program described below.

- (1) NSS ISB: Next Generation Star Tracker System \$4.18 million
- (2) NSS ISB: Read Out Integrated Circuit (ROIC) Foundry Improvement and Sustainability \$2.2 million
- (3) NSS ISB: Space Qualified Solar Cell Supply Chain \$.92 million
- (4) NSS ISB: Critical Space Industrial Base Investment \$7.2 million
- (5) Advanced Structural Materials \$5.209 million
- (6) Electronic Materials and Device Production \$5.426 million

The National Security Space (NSS) Industrial & Supply Base (ISB) Risk Mitigation Program was developed by the DoD to formulate a systematic process to fund mitigation efforts to rectify shortcomings in the space industrial and supply base (SISB). The objective is to ensure access to critical technologies and capabilities in the quality, quantity, and timeframes required to support U.S. Government space programs. Projects in this program are addressing cross-platform, multi-agency/Service requirements using the authorities of DPA Title III. To date, seven multi-year project technologies have been identified for funding through FY 2016. The projects addressed within these exhibits are:

- (1) Read Out Integrated Circuit (ROIC) Foundry Improvement and Sustainability
- (2) Space Qualified Solar Cell Supply Chain
- (3) Traveling Wave Tube Amplifiers (TWTA)
- (4) Complementary Metal Oxide Semiconductor (CMOS) Focal Plane Arrays (FPA) for Visible Sensors for Star Trackers
- (5) Lithium Ion Batteries for Space
- (6) Next Generation Star Tracker System (added using previous funding for the Cadmium Zinc Telluride (CdZnTe) Substrate Production Project)
- (7) Critical Space Industrial Base Investment

(The Cadmium Zinc Telluride (CdZnTe) Substrate Production which was identified in previous budgets was not executed and its planned funding has been re-allocated to the NSS ISB projects listed above.)

The Advanced Structural Materials project will correct industrial shortfalls arising as a result of increased defense and commercial demand for low cost, low weight, high strength materials. These materials are demanded for production, modification, or repair of equipment and structures essential for defense and other uses. They will be enabling technologies for the lighter, stronger, safer, lower cost vehicles and structures demanded in the future.



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<b>Exhibit P-40, Budget Item Justification Sheet:</b> PB 2014 Office of Secretary Of Defense		<b>Date:</b> April 2013
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 0360D: Defense Production Act Purchases / BA 01: Defense Production Act Purchases / BSA 10: Defense Production Act Purchases		<b>P-1 Line Item Nomenclature:</b> TitleIII - Defense Production Act Purchases
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>Program Elements for Code B Items:</b> 0902199D8Z	<b>Other Related Program Elements:</b>
<b>MDAP/MAIS Code(s):</b>		
<p>The Electronic Materials and Device Production project will address industrial shortfalls arising as advanced electronic materials and devices mature from research and development and require accelerated production capacity to enable these technologies to quickly transition into military and commercial systems and products. These materials and devices are demanded for use across a very broad spectrum of applications, including power electronics for military applications including smart grid switching and control; power generation and control in field and remote military staging areas and remote combat locations; and they will be enabling technologies for the faster, smaller, lower cost systems demanded in the future.</p> <p>The Gallium Nitride (GaN) Radar and Electronic Warfare Monolithic Microwave Integrated Circuits (MMIC) project, executing through FY 2013, is expanding domestic sources for critical high power radar system antenna elements and electronic warfare systems. The expansion will address advanced technology elements. Unique authorities of the DPA Title III program will enable expansion of production capacity for low cost, high power electronic circuit elements critical to Missile Defense Agency and Service radar, electronic warfare, and missile systems.</p> <p>FY 2012 Program Increase: Funding of \$150 million for the "Program Investments Strengthening the Nation's Industrial Base" project was included as a Program Increase in the FY 2012 Consolidated Appropriations Act, (P.L. 112-74). The following projects will be addressed with these funds:</p> <p>(1) \$100 million for the Advanced Drop-In Biofuel Production project initiated in FY 2012 for a Government-industry partnership for the construction or retrofit of multiple domestic commercial or pre-commercial scale advanced drop-in biofuel plants and refineries.</p> <p>(2) \$33 million for investments in metal fabrication, information/communication technology, power and energy applications, based on findings of the Defense Production Act Committee (DPAC), a Cabinet level interagency body chaired by the Secretary of Defense. Planned projects address industrial production shortfalls in: (2a) Heavy Forging Production Capacity Improvement: \$18 million (2b) Information/Communications Technologies: \$15 million</p> <p>(3) \$17 million for Title III investment projects on-going from prior years. These project technologies are: (3a) Advanced Carbon Nanotube Volume Production Facility: \$4 million (3b) Conductive Composites Nano-Materials Scale-Up Initiative: \$3 million (3c) Light-weight Ammunition &amp; Armor Initiative: \$2 million (3d) Low Cost Military GPS: \$3.6 million (3e) Reactive Plastic CO2 Absorbent Production Initiative: \$2.4 million (3f) Lithium Ion Space Battery Production: \$2 million</p>		

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<b>Exhibit P-5, Cost Analysis: PB 2014 Office of Secretary Of Defense</b>		<b>Date:</b> April 2013
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 0360D: Defense Production Act Purchases / BA 01: Defense Production Act Purchases / BSA 10: Defense Production Act Purchases	<b>P-1 Line Item Nomenclature:</b> TitleIII - Defense Production Act Purchases	<b>Item Nomenclature (Item Number - Item Name, DODIC):</b> 1 - Defense Production Act Purchases

<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2012</b>	<b>FY 2013<sup>#</sup></b>	<b>FY 2014 Base</b>	<b>FY 2014 OCO<sup>##</sup></b>	<b>FY 2014 Total</b>
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	55.315	174.964	89.189	25.135	-	25.135
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P1) (\$ in Millions)	55.315	174.964	89.189	25.135	-	25.135
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>55.315</b>	<b>174.964</b>	<b>89.189</b>	<b>25.135</b>	<b>-</b>	<b>25.135</b>

*(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)*

Initial Spares (\$ in Millions)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (Units in Millions)	-	-	-	-	-	-

<sup>#</sup> FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

<sup>##</sup> The FY 2014 OCO Request will be submitted at a later date

<b>Cost Elements</b> († indicates the presence of a P-5A)	<b>ID CD</b>	<b>All Prior Years</b>			<b>FY 2012</b>			<b>FY 2013</b>			<b>FY 2014 Base</b>			<b>FY 2014 OCO</b>			<b>FY 2014 Total</b>		
		<b>Unit Cost (\$ M)</b>	<b>Quantity (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ M)</b>	<b>Quantity (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ M)</b>	<b>Quantity (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ M)</b>	<b>Quantity (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ M)</b>	<b>Quantity (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ M)</b>	<b>Quantity (Each)</b>	<b>Total Cost (\$ M)</b>
Hardware - National Security Space (NSS) Industrial & Supply Base (ISB) Risk Mitigation Program Cost																			
Non Recurring Cost																			
† NSS ISB: Next Generation Star Trackers		-	-	-	-	-	-	0.290	3	0.900	4.180	1	4.180	-	-	-	4.180	1	4.180
† NSS ISB: Read Out Integrated Circuit (ROIC) Foundry Improvement and Sustainability		0.600	1	0.600	1.550	2	3.100	1.150	2	2.300	1.100	2	2.200	-	-	-	1.100	2	2.200
† NSS ISB: Space Qualified Solar Cell Supply Chain		2.580	1	2.580	3.000	1	3.000	-	-	-	0.920	1	0.920	-	-	-	0.920	1	0.920
† NSS ISB: Traveling Wave Tube Amplifiers		1.980	1	1.980	3.520	1	3.520	-	-	-	-	-	-	-	-	-	-	-	-
† NSS ISB: Comp Metal Oxide Semiconductor Focal Plane Arrays for Visible Sensors for Star Trackers		3.300	1	3.300	3.880	1	3.880	2.810	1	2.810	-	-	-	-	-	-	-	-	-

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<b>Exhibit P-5, Cost Analysis: PB 2014 Office of Secretary Of Defense</b>														<b>Date:</b> April 2013					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 0360D: Defense Production Act Purchases / BA 01: Defense Production Act Purchases / BSA 10: Defense Production Act Purchases							<b>P-1 Line Item Nomenclature:</b> TitleIII - Defense Production Act Purchases							<b>Item Nomenclature (Item Number - Item Name, DODIC):</b> 1 - Defense Production Act Purchases					

Cost Elements († indicates the presence of a P-5A)	ID CD	All Prior Years			FY 2012			FY 2013			FY 2014 Base			FY 2014 OCO			FY 2014 Total		
		Unit Cost (\$ M)	Quantity (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Quantity (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Quantity (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Quantity (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Quantity (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Quantity (Each)	Total Cost (\$ M)
† NSS ISB: Critical Space Industrial Base Investment		-	-	-	-	-	-	2.490	1	2.490	7.200	1	7.200	-	-	-	7.200	1	7.200
<i>Total Non Recurring Cost</i>				8.460			13.500			8.500			14.500			-			14.500
<i>Total Hardware - National Security Space (NSS) Industrial &amp; Supply Base (ISB) Risk Mitigation Program Cost</i>				8.460			13.500			8.500			14.500			-			14.500
Hardware - Program Investments Strengthening the Nation's Industrial Base (FY12 Appropriated Increase) Cost																			
Non Recurring Cost																			
† Advanced Carbon Nanotube Volume Production Facility		-	-	-	4.000	1	4.000	-	-	-	-	-	-	-	-	-	-	-	-
† Advanced Drop-In Biofuel Production - Phase I		-	-	-	5.000	6	30.000	-	-	-	-	-	-	-	-	-	-	-	-
† Advanced Drop-In Biofuel Production - Phase II		-	-	-	70.000	1	70.000	70.000	1	70.000	-	-	-	-	-	-	-	-	-
† Conductive Composites Nano-Materials Scale-Up Initiative		-	-	-	3.000	1	3.000	-	-	-	-	-	-	-	-	-	-	-	-
† Heavy Forging Production Capacity Improvement		-	-	-	18.000	1	18.000	-	-	-	-	-	-	-	-	-	-	-	-
† Information/ Communications Technology		-	-	-	15.000	1	15.000	-	-	-	-	-	-	-	-	-	-	-	-
† Light-weight Ammunition & Armor Initiative		-	-	-	2.000	1	2.000	-	-	-	-	-	-	-	-	-	-	-	-
† Low Cost Military GPS		-	-	-	3.600	1	3.600	-	-	-	-	-	-	-	-	-	-	-	-
† Reactive Plastic CO2 Absorbent Production Initiative		-	-	-	2.400	1	2.400	-	-	-	-	-	-	-	-	-	-	-	-
† Lithium Ion Space Battery Production		-	-	-	2.000	1	2.000	-	-	-	-	-	-	-	-	-	-	-	-

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<b>Exhibit P-5, Cost Analysis: PB 2014 Office of Secretary Of Defense</b>														<b>Date:</b> April 2013					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 0360D: Defense Production Act Purchases / BA 01: Defense Production Act Purchases / BSA 10: Defense Production Act Purchases							<b>P-1 Line Item Nomenclature:</b> TitleIII - Defense Production Act Purchases							<b>Item Nomenclature (Item Number - Item Name, DODIC):</b> 1 - Defense Production Act Purchases					

Cost Elements († indicates the presence of a P-5A)	ID CD	All Prior Years			FY 2012			FY 2013			FY 2014 Base			FY 2014 OCO			FY 2014 Total		
		Unit Cost (\$ M)	Quantity (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Quantity (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Quantity (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Quantity (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Quantity (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Quantity (Each)	Total Cost (\$ M)
<i>Total Non Recurring Cost</i>				-			150.000			70.000			-			-			-
<i>Total Hardware - Program Investments Strengthening the Nation's Industrial Base (FY12 Appropriated Increase) Cost</i>				-			150.000			70.000			-			-			-
Hardware - Other Cost																			
Non Recurring Cost																			
† Lithium Ion Space Battery Production		13.909	1	13.909	0.770	1	0.770	-	-	-	-	-	-	-	-	-	-	-	-
† Advanced Structural Materials		-	-	-	-	-	-	5.419	1	5.419	5.209	1	5.209	-	-	-	5.209	1	5.209
† Electronic Materials and Device Production		-	-	-	-	-	-	0.239	1	0.239	5.426	1	5.426	-	-	-	5.426	1	5.426
<i>Total Non Recurring Cost</i>				13.909			0.770			5.658			10.635			-			10.635
<i>Total Hardware - Other Cost</i>				13.909			0.770			5.658			10.635			-			10.635
Hardware - Gallium Nitride (GaN) Monolithic Microwave Integrated Circuit (MMIC) Cost																			
Non Recurring Cost																			
† GaN Advanced Electronic Warfare MMICs		7.168	1	7.168	2.321	1	2.321	-	-	-	-	-	-	-	-	-	-	-	-
† GaN Radar & Electronic Warfare MMICs		12.789	2	25.778	4.186	2	8.373	2.515	2	5.031	-	-	-	-	-	-	-	-	-
<i>Total Non Recurring Cost</i>				32.946			10.694			5.031			-			-			-
<i>Total Hardware - Gallium Nitride (GaN) Monolithic Microwave Integrated Circuit (MMIC) Cost</i>				32.946			10.694			5.031			-			-			-
<b>Gross Weapon System Cost</b>				<b>55.315</b>			<b>174.964</b>			<b>89.189</b>			<b>25.135</b>			<b>-</b>			<b>25.135</b>

**P-5 Remarks:**

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**Exhibit P-5A, Budget Procurement History and Planning:** PB 2014 Office of Secretary Of Defense **Date:** April 2013

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 0360D: Defense Production Act Purchases / BA 01: Defense Production Act Purchases / BSA 10: Defense Production Act Purchases	<b>P-1 Line Item Nomenclature:</b> TitleIII - Defense Production Act Purchases	<b>Item Nomenclature:</b> 1 - Defense Production Act Purchases
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Cost Elements	O C O	FY	Contractor and Location	Method/Type, or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$ M )</i>	Specs Avail Now?	Date Revsn Avail	RFP Issue Date
NSS ISB: Next Generation Star Trackers, TIA1		2013	TBD / TBD	C / TIA	WPAFB, Dayton, OH	Mar 2013	Jun 2013	2	0.250			
NSS ISB: Next Generation Star Trackers, TIA2		2013	TBD / TBD	C / TIA	WPAFB, Dayton, OH	Jun 2014	Sep 2014	1	0.400			
NSS ISB: Next Generation Star Trackers		2014	TBD / TBD	C / TIA	WPAFB, Dayton, OH	Jan 2014	Jan 2014	1	4.180			
NSS ISB: Read Out Integrated Circuit (ROIC) Foundry Improvement and Sustainability, TIA2		2012	TBD / TBD	C / TIA	WPAFB, Dayton, OH	Jan 2013	Apr 2013	1	2.000			
NSS ISB: Read Out Integrated Circuit (ROIC) Foundry Improvement and Sustainability, TIA1		2012	ON Semiconductor / Pocatello, ID	C / TIA	WPAFB, Dayton, OH	Dec 2012	Feb 2013	1	1.100			
NSS ISB: Read Out Integrated Circuit (ROIC) Foundry Improvement and Sustainability, TIA2		2013	TBD / TBD	C / TIA	WPAFB, Dayton, OH	Jan 2013	Apr 2013	1	1.200			
NSS ISB: Read Out Integrated Circuit (ROIC) Foundry Improvement and Sustainability, TIA1		2013	ON Semiconductor / Pocatello, ID	C / TIA	WPAFB, Dayton, OH	Dec 2012	Apr 2013	1	1.100			
NSS ISB: Read Out Integrated Circuit (ROIC) Foundry Improvement and Sustainability, TIA2		2014	TBD / TBD	C / TIA	WPAFB, Dayton, OH	Jan 2014	Jan 2014	1	1.100			
NSS ISB: Read Out Integrated Circuit (ROIC) Foundry Improvement and Sustainability, TIA1		2014	ON Semiconductor / Pocatello, ID	C / TIA	WPAFB, Dayton, OH	Jan 2014	Jan 2014	1	1.100			
NSS ISB: Space Qualified Solar Cell Supply Chain		2012	Sylarus Technologies, LLC / St. George, UT	SS / TIA	WPAFB, Dayton, OH	Dec 2012	Dec 2012	1	3.000			
NSS ISB: Space Qualified Solar Cell Supply Chain		2014	Sylarus Technologies, LLC / St. George, UT	SS / TIA	WPAFB, Dayton, OH	Jan 2014	Jan 2014	1	0.920			
NSS ISB: Traveling Wave Tube Amplifiers		2012	L-3 Comm Electron Tech Inc / Torrance, CA	SS / TIA	WPAFB, Dayton, OH	Dec 2012	Feb 2013	1	3.520			
NSS ISB: Comp Metal Oxide Semiconductor Focal Plane Arrays for Visible Sensors for Star Trackers		2012	ON Semiconductor / Pocatello, ID	C / TIA	WPAFB, Dayton, OH	Dec 2012	Jan 2013	1	3.880			
NSS ISB: Comp Metal Oxide Semiconductor Focal Plane Arrays for Visible Sensors for Star Trackers		2013	ON Semiconductor / Pocatello, ID	C / TIA	WPAFB, Dayton, OH	Jan 2013	Jan 2013	1	2.810			
NSS ISB: Critical Space Industrial Base Investment		2013	TBD / TBD	C / TIA	WPAFB, Dayton, OH	Jan 2014	Mar 2014	1	2.490			

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**Exhibit P-5A, Budget Procurement History and Planning:** PB 2014 Office of Secretary Of Defense **Date:** April 2013

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Cost Elements	O C O	FY	Contractor and Location	Method/Type, or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$ M)	Specs Avail Now?	Date Revsn Avail	RFP Issue Date
NSS ISB: Critical Space Industrial Base Investment		2014	TBD / TBD	C / TIA	WPAFB, Dayton, OH	Jan 2014	Jan 2014	1	7.200			
Advanced Carbon Nanotube Volume Production Facility		2012	Nanocomp Technologies Inc. / Concord, NH	SS / TIA	WPAFB, Dayton, OH	Jul 2013	Sep 2013	1	4.000			
Advanced Drop-In Biofuel Production - Phase I		2012	TBD / TBD	C / TIA	WPAFB, Dayton, OH	May 2013	Aug 2013	6	5.000			
Advanced Drop-In Biofuel Production - Phase II		2012	TBD / TBD	C / TIA	WPAFB, Dayton, OH	May 2014	Aug 2014	1	70.000			
Advanced Drop-In Biofuel Production - Phase II		2013	TBD / TBD	C / TIA	WPAFB, Dayton, OH	May 2015	Aug 2015	1	70.000			
Conductive Composites Nano-Materials Scale-Up Initiative		2012	Conductive Composites Company / Heber City, UT	SS / TIA	WPAFB, Dayton, OH	Jul 2013	Sep 2013	1	3.000			
Heavy Forging Production Capacity Improvement		2012	Lehigh Heavy Forge / Lehigh, PA	SS / TIA	WPAFB, Dayton, OH	Jul 2013	Sep 2013	1	18.000			
Information/Communications Technology		2012	TBD / TBD	C / TIA	WPAFB, Dayton, OH	Jul 2013	Jan 2014	1	15.000			
Light-weight Ammunition & Armor Initiative		2012	MAC, LLC / Bay St. Louis, MS	SS / TIA	WPAFB, Dayton, OH	Jul 2013	Sep 2013	1	2.000			
Low Cost Military GPS		2012	Rockwell Collins / Cedar Rapids, IA	SS / TIA	WPAFB, Dayton, OH	Jul 2013	Sep 2013	1	3.600			
Reactive Plastic CO2 Absorbent Production Initiative		2012	Micropore, Inc. / Elkton, MD	SS / TIA	WPAFB, Dayton, OH	Jul 2013	Sep 2013	1	2.400			
Lithium Ion Space Battery Production		2012	Quallion / Sylmar, CA	C / TIA	WPAFB, Dayton, OH	Feb 2012	Feb 2012	1	0.770			
Lithium Ion Space Battery Production		2012	Quallion, Inc / Sylmar, CA	C / TIA	WPAFB, Dayton, OH	Jul 2013	Sep 2013	1	2.000			
Advanced Structural Materials		2013	TBD / TBD	C / TIA	WPAFB, Dayton, OH	Jan 2014	Mar 2014	1	5.419			
Advanced Structural Materials		2014	TBD / TBD	C / TIA	WPAFB, Dayton, OH	Jan 2014	Mar 2014	1	5.209			
Electronic Materials and Device Production		2013	TBD / TBD	C / TIA	WPAFB, Dayton, OH	Jan 2014	Mar 2014	1	0.239			
Electronic Materials and Device Production		2014	TBD / TBD	C / TIA	WPAFB, Dayton, OH	Jan 2014	Mar 2014	1	5.426			
GaN Advanced Electronic Warfare MMICs		2012	Northrup Grumman Aerospace Sys / Redondo Beach, CA	C / TIA	WPAFB, Dayton, OH	Dec 2012	Mar 2013	1	2.321			
GaN Radar & Electronic Warfare MMICs, TIA2		2012	TriQuint, Inc / Richardson, TX	C / TIA	WPAFB, Dayton, OH	Feb 2012	Feb 2012	1	4.187			

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<b>Exhibit P-5A, Budget Procurement History and Planning:</b> PB 2014 Office of Secretary Of Defense								<b>Date:</b> April 2013				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 0360D: Defense Production Act Purchases / BA 01: Defense Production Act Purchases / BSA 10: Defense Production Act Purchases				<b>P-1 Line Item Nomenclature:</b> TitleIII - Defense Production Act Purchases				<b>Item Nomenclature:</b> 1 - Defense Production Act Purchases				

<b>Cost Elements</b>	<b>O C O</b>	<b>FY</b>	<b>Contractor and Location</b>	<b>Method/Type, or Funding Vehicle</b>	<b>Location of PCO</b>	<b>Award Date</b>	<b>Date of First Delivery</b>	<b>Qty (Each)</b>	<b>Unit Cost (\$ M )</b>	<b>Specs Avail Now?</b>	<b>Date Revsn Avail</b>	<b>RFP Issue Date</b>
GaN Radar & Electronic Warfare MMICs, TIA1		2012	Cree / Durham, NC	C / TIA	WPAFB, Dayton, OH	Feb 2012	Feb 2012	1	4.186			
GaN Radar & Electronic Warfare MMICs, TIA2		2013	TriQuint, Inc / Richardson, TX	C / TIA	WPAFB, Dayton, OH	Jan 2013	Mar 2013	1	2.516			
GaN Radar & Electronic Warfare MMICs, TIA1		2013	Cree / Durham, NC	C / TIA	WPAFB, Dayton, OH	Mar 2013	Mar 2013	1	2.515			

**Footnotes:**

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