

TITLE IV

RESEARCH, DEVELOPMENT, TEST AND EVALUATION

Funds appropriated under this title provide the resources required to conduct a program of research, development, test and evaluation, including research in basic science, applied research, advanced technology development, demonstration and validation, engineering and manufacturing development, and operational systems development.

The President's fiscal year 2015 budget requests a total of \$63,533,947,000 for research, development, test and evaluation appropriations.

SUMMARY OF COMMITTEE ACTION

The Committee recommends research, development, test and evaluation appropriations totaling \$62,566,834,000 for fiscal year 2015. This is \$967,113,000 below the budget estimate.

Committee recommended research, development, test and evaluation appropriations for fiscal year 2015 are summarized below:

SUMMARY OF RESEARCH, DEVELOPMENT, TEST AND EVALUATION APPROPRIATIONS

[In thousands of dollars]

Account	2015 budget estimate	Committee recommendation	Change from budget estimate
Research, Development, Test and Evaluation:			
Research, Development, Test and Evaluation, Army .....	6,593,898	6,544,151	- 49,747
Research, Development, Test and Evaluation, Navy .....	16,266,335	15,920,372	- 345,963
Research, Development, Test and Evaluation, Air Force .....	23,739,892	23,082,702	- 657,190
Research, Development, Test and Evaluation, Defense-Wide .....	16,766,084	16,805,571	+ 39,487
Operational Test and Evaluation, Defense .....	167,738	214,038	+ 46,300
Total .....	63,533,947	62,566,834	- 967,113

REPROGRAMMING GUIDANCE FOR ACQUISITION ACCOUNTS

The Committee directs the Secretary of Defense to continue to follow the reprogramming guidance specified in the report accompanying the House version of the fiscal year 2008 Department of Defense Appropriations bill (House Report 110-279). Specifically, the dollar threshold for reprogramming funds will remain at \$20,000,000 for procurement and \$10,000,000 for research, development, test and evaluation.

In addition, the Under Secretary of Defense (Comptroller) is directed to continue to provide the congressional defense committees quarterly, spreadsheet-based DD Form 1416 reports for service and defense-wide accounts in titles III and IV of this act. Reports for titles III and IV shall comply with guidance specified in the explanatory statement accompanying the Department of Defense Appro-

priations Act, 2006. The Department shall continue to follow the limitation that prior approval reprogrammings are set at either the specified dollar threshold or 20 percent of the procurement or research, development, test and evaluation line, whichever is less. These thresholds are cumulative from the base for reprogramming value as modified by any adjustments. Therefore, if the combined value of transfers into or out of a procurement (P-1) or research, development, test and evaluation (R-1) line exceeds the identified threshold, the Secretary of Defense must submit a prior approval reprogramming to the congressional defense committees. In addition, guidelines on the application of prior approval reprogramming procedures for congressional special interest items are established elsewhere in this statement.

#### RESEARCH, DEVELOPMENT, TEST AND EVALUATION OVERVIEW

*Use of Research, Development, Test and Evaluation Funding for Procurement of End Items.*—The fiscal year 2015 budget request includes \$69,670,000 in two separate programs in the Research, Development, Test and Evaluation, Navy account for the acquisition of weapons that will be used operationally. The Committee strongly believes that these requests violate intent of section 8055 of the Department of Defense Appropriations Act, 2014, which prohibits the use of research and development funding to procure end-items for delivery to military forces for operational use. The Committee further notes that this legislative provision has been carried annually for several years, and has again been requested by the President for inclusion in the Department of Defense Appropriations Act, 2015. The Committee recommendation once again includes this restriction.

In particular, the fiscal year 2015 budget request includes \$25,000,000 in Research, Development, Test and Evaluation, Navy to procure two incrementally funded CH-53K helicopters that will be utilized as operational platforms after completion of the program's test schedule. The Committee is aware of the need to maintain the industrial base following a 1 year schedule delay that shifted the program's production decision into fiscal year 2016. However, this circumstance does not justify the violation of public law and sound acquisition practice. Therefore, the recommendation denies \$25,000,000 requested for these operational aircraft and provides \$15,000,000 in research and development to sustain qualified vendors pending a production decision for the CH-53K program. This recommendation allows the test program to proceed as scheduled and has no negative impact on the program's production schedule.

In addition, the fiscal year 2015 budget request includes \$44,670,000 in Research, Development, Test and Evaluation, Navy to incrementally fund a Ship to Shore Connector ship in addition to the previously funded test asset. All of the program's test and training activities will be conducted with the first Ship to Shore Connector test craft. This second ship will deliver after completion of the program's test activities and be utilized as an operational asset. Further, the Committee notes that the fiscal year 2015 budget request includes \$123,233,000 in Shipbuilding and Conversion, Navy for the procurement of two operational Ship to Shore Connec-

tors. The Committee denies the use of research and development funds for the procurement of an operational craft, and realigns funds from Research, Development, Test and Evaluation, Navy to Shipbuilding and Conversion, Navy for the procurement of a third Ship to Shore Connector in fiscal year 2015. The realignment of funds has no impact on the program's acquisition schedule and allows the test program to proceed as scheduled.

*Navy Justification Material.*—The Committee is concerned with the quality of the material provided by the Navy to justify the fiscal year 2015 President's budget request. The budget justification was incomplete, and lacked several mandatory documents, such as R-4a forms. The deletion of these exhibits is at odds with the Financial Management Regulations and the principles of justifying the Navy's budget to Congress. Additionally, several exhibits contained the words "to be determined" in areas where projections could be made such as contract award date, vendor, and contract type.

The supplemental information that was provided to the Committee offered little further insight. For example, several major acquisition programs requested large amounts of funding for "primary hardware development," without further explanation. These types of summary entries limited Committee insight into the planned work. As a result, the Committee directs the Secretary of the Navy to provide the mandated justification documents and the required level of detail in the fiscal year 2016 budget request.

*Alternative Energy Research.*—The Committee continues to support the fiscal and operational value of investing in alternative energy research. The recommendation includes an additional \$75,000,000 for Army, Navy and Air Force research and development to continue research of promising alternative energy technologies, such as renewable energies, alternative fuels, and energy efficiencies. The Committee encourages the services to focus on the ability of platforms, installations, and personnel to operate with a diverse mix of fuels.

*F135 Engine.*—When the Department of Defense made the decision to terminate the alternate engine for the F-35 Joint Strike Fighter [JSF] in May of 2011, it reassured the Committee that a second engine was no longer necessary as a hedge against the failure of the main JSF engine program. The Department also stated that the financial benefits, such as savings from competition, were small if they existed at all. Since that time, the F135 engine has experienced numerous problems, including the failure of an oil flow management valve and a pre-take-off fire in the past few weeks, both of which grounded the entire fleet of over 100 aircraft. Further, the F135 engine unit cost has not declined as projected. However, the Committee believes that had the alternate engine program continued, competition would have incentivized the F135 engine manufacturer to find creative methods to drive down prices and ensure timely delivery of a high quality product, which is consistent with current Department preference for competition in acquisitions. Therefore, the Committee recommends the Secretary of Defense reassess the value of an alternate engine program creating competition to improve price, quality, and operational availability.

*Solar Research in Dry-Dust Areas.*—The Committee supports efforts by the Department of Defense to become more energy efficient. These efforts have demonstrated cost savings and are an important part of the 2010 and 2014 Quadrennial Defense Reviews and the Department of Defense’s Operational Energy Strategy. Renewable energy, including solar, is an important part of these efforts. Earlier this year, the Army broke ground on its largest solar energy plant at Fort Huachuca in Arizona. Covering 155 acres, the plant is projected to provide not less than 25 percent of the Fort’s electricity. The Committee believes solar initiatives are also important for overseas operations, particularly in the Middle East and Africa, where in country supplies are unreliable and large amounts of energy often need to be transported to theater. However, dry-dust problems can prevent the optimal use of solar energy in some areas. Therefore, the Committee urges the Department of Defense to continue research into the use of solar energy in dry-dust regions.

*Basic Research.*—The fiscal year 2015 budget request includes \$2,017,502,000 for basic research to be performed by all Department of Defense [DOD] services and agencies. This amount is \$149,096,000, or 7 percent below the fiscal year 2014 enacted level. The Committee is discouraged by this sharp decline, because basic research is the foundation upon which other technology is developed. Further, basic research performed by DOD spans across universities and colleges, small businesses and laboratories, growing future scientists and creating new business opportunities. Earlier this year, the Committee held a hearing on Defense Research and Innovation. The testimony provided by the witnesses indicated that a sharp decline in science and technology investment could threaten America’s technological edge. Therefore, the Committee recommends \$2,274,928,000 for basic research, a 5 percent increase for the Department of the Army, Department of the Air Force, Department of the Navy and DOD, above previously enacted levels. The Committee also expects that the Department not make disproportionate or unjustified reductions to science and technology entities as part of the headquarters management reduction initiative.

#### RESEARCH, DEVELOPMENT, TEST AND EVALUATION, ARMY

Appropriations, 2014 .....	\$7,126,318,000
Budget estimate, 2015 .....	6,593,898,000
House allowance .....	6,720,000,000
Committee recommendation .....	6,544,151,000

The Committee recommends an appropriation of \$6,544,151,000. This is \$49,747,000 below the budget estimate.

#### COMMITTEE RECOMMENDED PROGRAM

The following table summarizes the budget estimate for this appropriation, the Committee recommendation, and the Committee recommended adjustments to the budget estimate:

[In thousands of dollars]

	Item	2015 budget estimate	House allowance	Committee recommendation	Change from	
					Budget estimate	House allowance
	RESEARCH, DEVELOPMENT, TEST & EVAL, ARMY					
	BASIC RESEARCH					
1	IN-HOUSE LABORATORY INDEPENDENT RESEARCH .....	13,464	13,464	21,464	+ 8,000	+ 8,000
2	DEFENSE RESEARCH SCIENCES .....	238,167	238,167	238,167		
3	UNIVERSITY RESEARCH INITIATIVES .....	69,808	69,808	89,808	+ 20,000	+ 20,000
4	UNIVERSITY AND INDUSTRY RESEARCH CENTERS .....	102,737	102,737	108,837	+ 6,100	+ 6,100
	TOTAL, BASIC RESEARCH .....	424,176	424,176	458,276	+ 34,100	+ 34,100
	APPLIED RESEARCH					
5	MATERIALS TECHNOLOGY .....	28,006	28,006	48,006	+ 20,000	+ 20,000
6	SENSORS AND ELECTRONIC SURVIVABILITY .....	33,515	33,515	49,115	+ 15,600	+ 15,600
7	TRACTOR HIP .....	16,358	16,358	16,358		
8	AVIATION TECHNOLOGY .....	63,433	63,433	63,433		
9	ELECTRONIC WARFARE TECHNOLOGY .....	18,502	18,502	18,502		
10	MISSILE TECHNOLOGY .....	46,194	56,194	66,194	+ 20,000	+ 10,000
11	ADVANCED WEAPONS TECHNOLOGY .....	28,528	28,528	40,528	+ 12,000	+ 12,000
12	ADVANCED CONCEPTS AND SIMULATION .....	27,435	27,435	27,435		
13	COMBAT VEHICLE AND AUTOMOTIVE TECHNOLOGY .....	72,883	72,883	72,883		
14	BALLISTICS TECHNOLOGY .....	85,597	85,597	85,597		
15	CHEMICAL, SMOKE AND EQUIPMENT DEFEATING TECHNOLOGY .....	3,971	3,971	3,971		
16	JOINT SERVICE SMALL ARMS PROGRAM .....	6,853	6,853	6,853		
17	WEAPONS AND MUNITIONS TECHNOLOGY .....	38,069	63,069	48,069	+ 10,000	- 15,000
18	ELECTRONICS AND ELECTRONIC DEVICES .....	56,435	56,435	77,435	+ 21,000	+ 21,000
19	NIGHT VISION TECHNOLOGY .....	38,445	38,445	46,445	+ 8,000	+ 8,000
20	COUNTERMINE SYSTEMS .....	25,939	25,939	29,939	+ 4,000	+ 4,000
21	HUMAN FACTORS ENGINEERING TECHNOLOGY .....	23,783	23,783	23,783		
22	ENVIRONMENTAL QUALITY TECHNOLOGY .....	15,659	15,659	15,659		
23	COMMAND, CONTROL, COMMUNICATIONS TECHNOLOGY .....	33,817	33,817	33,817		
24	COMPUTER AND SOFTWARE TECHNOLOGY .....	10,764	10,764	10,764		
25	MILITARY ENGINEERING TECHNOLOGY .....	63,311	63,311	68,311	+ 5,000	+ 5,000
26	MANPOWER/PERSONNEL/TRAINING TECHNOLOGY .....	23,295	23,295	23,295		
27	WARFIGHTER TECHNOLOGY .....	25,751	32,051	25,751		- 6,300
28	MEDICAL TECHNOLOGY .....	76,068	76,068	76,068		

29	TOTAL, APPLIED RESEARCH .....	862,611	903,911	978,211	+ 115,600	+ 74,300
	ADVANCED TECHNOLOGY DEVELOPMENT .....					
30	WARFIGHTER ADVANCED TECHNOLOGY .....	65,139	66,139	77,139	+ 12,000	+ 11,000
31	MEDICAL ADVANCED TECHNOLOGY .....	67,291	98,291	75,291	+ 8,000	- 23,000
32	AVIATION ADVANCED TECHNOLOGY .....	88,990	88,990	108,990	+ 20,000	+ 20,000
33	WEAPONS AND MUNITIONS ADVANCED TECHNOLOGY .....	57,931	72,931	57,931		- 15,000
34	COMBAT VEHICLE AND AUTOMOTIVE ADVANCED TECHNOLOGY .....	110,031	110,031	155,031	+ 45,000	+ 45,000
35	COMMAND, CONTROL, COMMUNICATIONS ADVANCED TECHNOLOGY .....	6,883	6,883	6,883		
36	MANPOWER, PERSONNEL AND TRAINING ADVANCED TECHNOLOGY .....	13,580	13,580	13,580		
37	ELECTRONIC WARFARE ADVANCED TECHNOLOGY .....	44,871	44,871	44,871		
38	TRACTOR HIKE .....	7,492	7,492	7,492		
39	NEXT GENERATION TRAINING & SIMULATION SYSTEMS .....	16,749	16,749	16,749		
40	TRACTOR ROSE .....	14,483	14,483	14,483		
41	COMBATING TERRORISM, TECHNOLOGY DEVELOPMENT .....	24,270	24,270	24,270		
42	TRACTOR MAIL .....	3,440	3,440	3,440		
43	TRACTOR EGGS .....	2,406	2,406	2,406		
44	ELECTRONIC WARFARE TECHNOLOGY .....	26,057	26,057	26,057		
45	MISSILE AND ROCKET ADVANCED TECHNOLOGY .....	11,105	11,105	11,105		
46	TRACTOR CAGE .....	181,609	181,609	221,609	+ 40,000	+ 40,000
47	HIGH PERFORMANCE COMPUTING MODERNIZATION PROGRAM .....	13,074	13,074	13,074		
48	LANDMINE WARFARE AND BARRIER ADVANCED TECHNOLOGY .....	7,321	7,321	7,321		
49	JOINT SERVICE SMALL ARMS PROGRAM .....	44,138	44,138	44,138		
50	NIGHT VISION ADVANCED TECHNOLOGY .....	9,197	9,197	11,697	+ 2,500	+ 2,500
51	ENVIRONMENTAL QUALITY TECHNOLOGY DEMONSTRATIONS .....	17,613	17,613	17,613		
52	MILITARY ENGINEERING ADVANCED TECHNOLOGY .....	39,164	39,164	39,164		
53	ADVANCED TACTICAL COMPUTER SCIENCE & SENSOR TECHNOLOGY .....					
	TOTAL, ADVANCED TECHNOLOGY DEVELOPMENT .....	917,791	964,791	1,080,291	+ 162,500	+ 115,500
	DEMONSTRATION & VALIDATION .....					
54	ARMY MISSILE DEFENSE SYSTEMS INTEGRATION .....	12,797	12,797	25,797	+ 13,000	+ 13,000
55	ARMY MISSILE DEFENSE SYSTEMS INTEGRATION (SPACE) .....	13,999	13,999	13,999		
58	TANK AND MEDIUM CALIBER AMMUNITION .....	29,334	29,334	29,334		
60	SOLDIER SUPPORT AND SURVIVABILITY .....	9,602	11,002	3,482	- 6,120	- 7,520
61	TACTICAL ELECTRONIC SURVEILLANCE SYSTEM—AD .....	8,953	8,953	8,953		
62	NIGHT VISION SYSTEMS ADVANCED DEVELOPMENT .....	3,052	3,052	3,052		
63	ENVIRONMENTAL QUALITY TECHNOLOGY .....	7,830	7,830	7,830		
65	NATO RESEARCH AND DEVELOPMENT .....	2,954	2,954	2,954		
67	LOGISTICS AND ENGINEER EQUIPMENT—ADV DEV .....	13,386	13,386	13,386		
69	MEDICAL SYSTEMS—ADV DEV .....	23,659	23,659	23,659		

[In thousands of dollars]

	Item	2015 budget estimate	House allowance	Committee recommendation	Change from	
					Budget estimate	House allowance
70	SOLDIER SYSTEMS—ADVANCED DEVELOPMENT .....	6,830	9,830	6,830		—3,000
72	ANALYSIS OF ALTERNATIVES .....	9,913	9,913	9,913		
73	TECHNOLOGY MATURATION INITIATIVES .....	74,740	74,740	14,740	—60,000	—60,000
74	ASSURED POSITIONING, NAVIGATION AND TIMING (PNT) .....	9,930	9,930	9,930		
76	INDIRECT FIRE PROTECTION CAPABILITY INCREMENT 2—INTERC .....	96,177	71,177	96,177		+25,000
	TOTAL DEMONSTRATION & VALIDATION .....	323,156	302,556	270,036	—53,120	—32,520
	ENGINEERING & MANUFACTURING DEVELOPMENT					
79	AIRCRAFT AVONICS .....	37,246	57,246	34,294	—2,952	—22,952
81	ELECTRONIC WARFARE DEVELOPMENT .....	6,002	6,002	6,002		
82	JOINT TACTICAL RADIO .....	9,832	9,832	9,832		
83	MID-TIER NETWORKING VEHICULAR RADIO .....	9,730	9,730	9,730		
84	ALL SOURCE ANALYSIS SYSTEM .....	5,532	5,532	5,532		
85	TRACTOR CAGE .....	19,929	19,929	19,929		
86	INFANTRY SUPPORT WEAPONS .....	27,884	34,586	27,884		—6,702
87	MEDIUM TACTICAL VEHICLES .....	210	210	210		
88	JAVELIN .....	4,166	4,166	4,166		
89	FAMILY OF HEAVY TACTICAL VEHICLES .....	12,913	12,913	12,913		
90	AIR TRAFFIC CONTROL .....	16,764	16,764	16,764		
91	TACTICAL UNMANNED GROUND VEHICLE .....	6,770	6,770	2,770	—4,000	—4,000
92	NIGHT VISION SYSTEMS—SDD .....	65,333	65,333	65,333		
93	COMBAT FEEDING, CLOTHING, AND EQUIPMENT .....	1,335	3,035	1,335		—1,700
94	NON-SYSTEM TRAINING DEVICES—SDD .....	8,945	8,945	8,945		
96	AIR DEFENSE COMMAND, CONTROL AND INTELLIGENCE -SDD .....	15,906	15,906	15,906		
97	CONSTRUCTIVE SIMULATION SYSTEMS DEVELOPMENT .....	4,394	4,394	4,394		
98	AUTOMATIC TEST EQUIPMENT DEVELOPMENT .....	11,084	11,084	11,084		
99	DISTRIBUTIVE INTERACTIVE SIMULATIONS (DIS)—SDD .....	10,027	10,027	10,027		
100	COMBINED ARMS TACTICAL TRAINER (CATT) CORE .....	42,430	42,430	34,730	—7,700	—7,700
101	BRIGADE ANALYSIS, INTEGRATION AND EVALUATION .....	105,279	105,279	80,279	—25,000	—25,000
102	WEAPONS AND MUNITIONS—SDD .....	15,006	15,006	15,006		
103	LOGISTICS AND ENGINEER EQUIPMENT—SDD .....	24,581	24,581	24,581		
104	COMMAND, CONTROL, COMMUNICATIONS SYSTEMS—SDD .....	4,433	4,433	4,433		
105	MEDICAL MATERIEL/MEDICAL BIOLOGICAL DEFENSE EQUIPMENT .....	30,397	30,397	30,397		
106	LANDMINE WARFARE/BARRIER—SDD .....	57,705	57,705	57,705		
108	ARMY TACTICAL COMMAND & CONTROL HARDWARE & SOFTWARE .....	29,683	29,683	29,683		

109	RADAR DEVELOPMENT .....	5,224	5,224	5,224	5,224	5,224	5,224
111	FIREFINDER .....	37,492	37,492	37,492	37,492	37,492	37,492
112	SOLDIER SYSTEMS—WARRIOR DEMVAL .....	6,157	6,157	6,157	6,157	6,157	6,157
113	ARTILLERY SYSTEMS .....	1,912	1,912	1,912	1,912	1,912	1,912
116	INFORMATION TECHNOLOGY DEVELOPMENT .....	69,761	69,761	69,761	69,761	69,761	69,761
117	ARMY INTEGRATED MILITARY HUMAN RESOURCES SYSTEM (A-IMH) .....	138,465	138,465	138,465	138,465	138,465	138,465
118	ARMORED MULTI-PURPOSE VEHICLE .....	92,353	92,353	92,353	92,353	92,353	92,353
119	JOINT TACTICAL NETWORK CENTER [JTNC] .....	8,440	8,440	8,440	8,440	8,440	8,440
120	JOINT TACTICAL NETWORK [JTN] .....	17,999	17,999	17,999	17,999	17,999	17,999
121	COMMON INFRARED COUNTERMEASURES [CIRCM] .....	145,409	145,409	145,409	145,409	145,409	145,409
122	WIN-T INCREMENT 3—FULL NETWORKING .....	113,210	113,210	113,210	113,210	113,210	113,210
123	AMF JOINT TACTICAL RADIO SYSTEM .....	6,882	6,882	6,882	6,882	6,882	6,882
124	JOINT AIR-TO-GROUND MISSILE [JAGM] .....	83,838	83,838	83,838	83,838	83,838	83,838
125	PAC-2/MISE MISSILE .....	35,009	35,009	35,009	35,009	35,009	35,009
126	ARMY INTEGRATED AIR AND MISSILE DEFENSE [AAMD] .....	142,584	142,584	142,584	142,584	142,584	142,584
127	MANNED GROUND VEHICLE .....	49,160	49,160	49,160	49,160	49,160	49,160
128	AERIAL COMMON SENSOR .....	17,748	17,748	17,748	17,748	17,748	17,748
129	NATIONAL CAPABILITIES INTEGRATION .....	15,212	15,212	15,212	15,212	15,212	15,212
130	JOINT LIGHT TACTICAL VEHICLE ENG AND MANUFACTURING .....	45,718	45,718	45,718	45,718	45,718	45,718
131	AVIATION GROUND SUPPORT EQUIPMENT .....	10,041	10,041	10,041	10,041	10,041	10,041
132	PALADIN INTEGRATED MANAGEMENT [PIM] .....	83,300	83,300	83,300	83,300	83,300	83,300
133	TROJAN—RH12 .....	983	983	983	983	983	983
134	ELECTRONIC WARFARE DEVELOPMENT .....	8,961	8,961	8,961	8,961	8,961	8,961
	TOTAL, ENGINEERING & MANUFACTURING DEVELOPMENT .....	1,719,374	1,757,776	1,585,722	1,333,652	172,054	172,054
135	RDTE MANAGEMENT SUPPORT .....	18,062	18,062	22,962	22,962	22,962	22,962
136	THREAT SIMULATOR DEVELOPMENT .....	10,040	10,040	10,040	10,040	10,040	10,040
137	TARGET SYSTEMS DEVELOPMENT .....	60,317	60,317	56,313	56,313	56,313	56,313
138	MAJOR T&E INVESTMENT .....	20,612	20,612	20,612	20,612	20,612	20,612
139	RAND ARROYO CENTER .....	176,041	176,041	176,041	176,041	176,041	176,041
140	ARMY KWALEIN ATOLL .....	19,439	19,439	19,439	19,439	19,439	19,439
142	CONCEPTS EXPERIMENTATION PROGRAM .....	275,025	275,025	275,025	275,025	275,025	275,025
143	ARMY TEST RANGES AND FACILITIES .....	45,596	45,596	45,596	45,596	45,596	45,596
144	ARMY TECHNICAL TEST INSTRUMENTATION AND TARGETS .....	33,295	33,295	33,295	33,295	33,295	33,295
144	SURVIVABILITY/LETHALITY ANALYSIS .....	4,700	4,700	4,700	4,700	4,700	4,700
145	AIRCRAFT CERTIFICATION .....	6,413	6,413	6,413	6,413	6,413	6,413
146	METEOROLOGICAL SUPPORT TO RDTE ACTIVITIES .....	20,746	20,746	20,746	20,746	20,746	20,746
147	MATERIEL SYSTEMS ANALYSIS .....	7,015	7,015	7,015	7,015	7,015	7,015
148	EXPLOITATION OF FOREIGN ITEMS .....	49,221	49,221	49,221	49,221	49,221	49,221
149	SUPPORT OF OPERATIONAL TESTING .....						

[In thousands of dollars]

	Item	2015 budget estimate	House allowance	Committee recommendation	Change from	
					Budget estimate	House allowance
150	ARMY EVALUATION CENTER .....	55,039	55,039	55,039		
151	SIMULATION & MODELING FOR ACQ, RQTS, & TNG (SMART) .....	1,125	1,125	1,125		
152	PROGRAMWIDE ACTIVITIES .....	64,169	64,169	64,169		
153	TECHNICAL INFORMATION ACTIVITIES .....	32,319	32,319	32,319		
154	MUNITIONS STANDARDIZATION, EFFECTIVENESS AND SAFETY .....	49,052	64,052	49,052		-15,000
155	ENVIRONMENTAL QUALITY TECHNOLOGY MGMT SUPPORT .....	2,612	2,612	2,612		
156	MANAGEMENT HEADQUARTERS (RESEARCH AND DEVELOPMENT) .....	49,592	49,592	49,592		
	TOTAL, RDT&E MANAGEMENT SUPPORT .....	1,000,430	1,015,430	1,001,326	+896	-14,104
	OPERATIONAL SYSTEMS DEVELOPMENT .....					
158	MLRS PRODUCE IMPROVEMENT PROGRAM .....	17,112	17,112	17,112		
159	LOGISTICS AUTOMATION .....	3,654	3,654	3,654		
160	BIOMETRIC ENABLING CAPABILITY (BEC) .....	1,332	1,332	1,332		
161	PATRIOT PRODUCT IMPROVEMENT .....	152,991	152,991	37,991	-115,000	-115,000
162	AEROSTAT JOINT PROJECT OFFICE .....	54,076	29,076	54,076		+25,000
163	ADV FIELD ARTILLERY TACTICAL DATA SYSTEM .....	22,374	22,374	1,274	-21,100	-21,100
164	JOINT AUTOMATED DEEP OPERATION COORDINATION SYSTEM .....	24,371	24,371	36,671	+12,300	+12,300
165	COMBAT VEHICLE IMPROVEMENT PROGRAMS .....	295,177	320,177	305,177	+10,000	-15,000
166	MANEUVER CONTROL SYSTEM .....	45,092	45,092	45,092		
167	AIRCRAFT MODIFICATIONS/PRODUCT IMPROVEMENT PROGRAMS .....	264,887	274,887		-264,887	-274,887
167A	IMPROVED CARGO HELICOPTER .....			35,424	+35,424	+35,424
167B	BLACKHAWK RECAP/MODERNIZATION .....			48,446	+48,446	+48,446
167C	APACHE BLOCK III .....			90,099	+90,099	+90,099
167D	FIXED WING AIRCRAFT .....			819	+819	+819
167E	IMPROVED TURBINE ENGINE PROGRAM .....			39,328	+39,328	+39,328
168	AIRCRAFT ENGINE COMPONENT IMPROVEMENT PROGRAM .....	381	381	381		
169	DIGITIZATION .....	10,912	10,912	5,996	-4,916	-4,916
169A	EMERGING TECHNOLOGIES FROM NIE .....			4,916	+4,916	+4,916
170	MISSILE/AIR DEFENSE PRODUCT IMPROVEMENT PROGRAM .....	5,115	5,115	5,115		
171	OTHER MISSILE PRODUCT IMPROVEMENT PROGRAMS .....	49,848	44,848	38,348		
172	TRACTOR CARD .....	22,691	22,691	22,691		
173	INTEGRATED BASE DEFENSE—OPERATIONAL SYSTEM DEV .....	4,364	4,364	4,364		
174	MATERIALS HANDLING EQUIPMENT .....	834	834	834		
175	ENVIRONMENTAL QUALITY TECHNOLOGY—OPERATIONAL .....	280	280	280		
176	LOWER TIER AIR AND MISSILE DEFENSE (AMD) SYSTEM .....	78,758	78,758	78,758		



## COMMITTEE RECOMMENDED ADJUSTMENTS

The following table details the adjustments recommended by the Committee:

[In thousands of dollars]

Line	Item	2014 budget estimate	Committee recommendation	Change from budget estimate
1	In-House Laboratory Independent Research .....	13,464	21,464	+ 8,000
	Basic research program increase .....			+ 8,000
3	University Research Initiatives .....	69,808	89,808	+ 20,000
	Basic research program increase .....			+ 20,000
4	University and Industry Research Centers .....	102,737	108,837	+ 6,100
	Basic research program increase .....			+ 6,100
5	Materials Technology .....	28,006	48,006	+ 20,000
	Program increase .....			+ 20,000
6	Sensors and Electronic Survivability .....	33,515	49,115	+ 15,600
	Cyberspace security funding .....			+ 9,600
	Force protection radar development .....			+ 6,000
10	Missile Technology .....	46,194	66,194	+ 20,000
	Program increase .....			+ 20,000
11	Advanced Weapons Technology .....	28,528	40,528	+ 12,000
	Directed energy/thermal management program increase .....			+ 12,000
17	Weapons and Munitions Technology .....	38,069	48,069	+ 10,000
	Program increase .....			+ 10,000
18	Electronics and Electronic Devices .....	56,435	77,435	+ 21,000
	Silicon carbide research .....			+ 15,000
	Program increase .....			+ 6,000
19	Night Vision Technology .....	38,445	46,445	+ 8,000
	Program increase .....			+ 8,000
20	Countermeasure Systems .....	25,939	29,939	+ 4,000
	Program increase .....			+ 4,000
25	Military Engineering Technology .....	63,311	68,311	+ 5,000
	Program increase .....			+ 5,000
29	Warfighter Advanced Technology .....	65,139	77,139	+ 12,000
	Environmental control systems .....			+ 12,000
30	Medical Advanced Technology .....	67,291	75,291	+ 8,000
	Program increase: Peer-reviewed military burn research program .....			+ 8,000
31	Aviation Advanced Technology .....	88,990	108,990	+ 20,000
	Future Vertical Lift consortium .....			+ 20,000
33	Combat Vehicle and Automotive Advanced Technology .....	110,031	155,031	+ 45,000
	Program increase .....			+ 20,000
	Alternative energy research .....			+ 25,000
45	Missile and Rocket Advanced Technology .....	44,957	79,957	+ 35,000
	Restore unjustified cut .....			+ 35,000
47	High Performance Computing Modernization Program .....	181,609	221,609	+ 40,000
	Program increase .....			+ 40,000
51	Environmental Quality Technology Demonstrations .....	9,197	11,697	+ 2,500
	Program increase .....			+ 2,500
54	Army Missile Defense Systems Integration .....	12,797	25,797	+ 13,000
	Program increase .....			+ 13,000
60	Soldier Support and Survivability .....	9,602	3,482	- 6,120
	Restoring acquisition accountability: Rapid Equipping Force non-base budget program .....			- 6,120
72	Analysis Of Alternatives .....	9,913	9,913	
	Army Multi-Purpose Vehicle Echelons Above Brigade Analysis of Alternatives acceleration .....			[4,000]
73	Technology Maturation Initiatives .....	74,740	14,740	- 60,000
	Maintaining program affordability: DS3 unjustified request .....			- 60,000
79	Aircraft Avionics .....	37,246	34,294	- 2,952
	Restoring acquisition accountability: VU3 ALE-P delays .....			- 5,752
	Restoring acquisition accountability: C97 JTRS integration delays .....			- 15,000

[In thousands of dollars]

Line	Item	2014 budget estimate	Committee recommendation	Change from budget estimate
	Restoring acquisition accountability: C97 DGNS upgrade forward financing .....			- 2,200
	Degraded Visual Environment .....			+ 20,000
91	Tactical Unmanned Ground Vehicle (TUGV) .....	6,770	2,770	- 4,000
	Restoring acquisition accountability: New start acquisition strategy .....			- 4,000
100	Combined Arms Tactical Trainer (CATT) Core .....	42,430	34,730	- 7,700
	Restoring acquisition accountability: P582 unjustified growth .....			- 7,700
101	Brigade Analysis, Integration and Evaluation .....	105,279	80,279	- 25,000
	Improving funds management: Execution delays .....			- 25,000
111	Firefinder .....	37,492	20,492	- 17,000
	Improving funds management: Unsustained growth .....			- 17,000
117	Integrated Personnel and Pay System—Army (IPPS-A) .....	138,465	68,465	- 70,000
	Restoring acquisition accountability: Concurrency and forward financing .....			- 70,000
126	Army Integrated Air and Missile Defense (AIAMD) .....	142,584	147,584	+ 5,000
	Cyber security and supply chain .....			+ 5,000
132	Paladin Integrated Management (PIM) .....	83,300	71,300	- 12,000
	Improving funds management: Contract savings .....			- 12,000
135	Threat Simulator Development .....	18,062	22,962	+ 4,900
	Program increase .....			+ 4,900
137	Major T&E Investment .....	60,317	56,313	- 4,004
	Restoring acquisition accountability: P984 NETCM lack of acquisition strategy .....			- 4,004
161	Patriot Product Improvement .....	152,991	37,991	- 115,000
	Restoring acquisition accountability: Only for near-term urgent improvements .....			- 115,000
163	Adv Field Artillery Tactical Data System .....	22,374	1,274	- 21,100
	AFATDS Inc II: Army requested transfer to line 164, for AFATDS Inc I only .....			- 12,300
	Restoring acquisition accountability: Inc II program delays .....			- 8,800
164	Joint Automated Deep Operation Coordination System (JADOCs) .....	24,371	36,671	+ 12,300
	AFATDS Inc I only: Army requested transfer from line 163 .....			+ 12,300
165	Combat Vehicle Improvement Programs .....	295,177	305,177	+ 10,000
	Improving funds management: Abrams excess Government costs .....			- 10,000
	Improving funds management: Bradley continued underexecution .....			- 16,200
	Stryker—Engineering Change Proposal acceleration .....			+ 36,200
167	Aircraft Modifications/Product Improvement Programs .....	264,887		- 264,887
	Improving funds management: Transfer to lines 167A–167E for execution .....			- 198,116
	Improving funds management: D17 Apache forward financing .....			- 50,000
	Restoring acquisition accountability: P504 H–60L Digital excess to requirement .....			- 16,771
167A	Improved Cargo Helicopter .....		35,424	+ 35,424
	Improved funds management: P430 transferred from line 167 .....			+ 35,424
167B	Black Hawk Recapitalization/Modernization .....		48,446	+ 48,446
	Improved funds management: P504 transferred from line 167 .....			+ 48,446
167C	Apache Block III .....		90,099	+ 90,099
	Improved funds management: D17 transferred from line 167 .....			+ 74,099
	Ground fire acquisition development .....			+ 16,000
167D	Fixed Wing Aircraft .....		819	+ 819
	Improved funds management: D18 transferred from line 167 .....			+ 819
167E	Improved Turbine Engine Program .....		39,328	+ 39,328

[In thousands of dollars]

Line	Item	2014 budget estimate	Committee recommendation	Change from budget estimate
	Improved funds management: EB1 transferred from line 167 .....			+ 39,328
169	Digitization .....	10,912	5,996	- 4,916
	Transfer EC8: Emerging Technologies from NIEs to line 169A .....			- 4,916
169A	Emerging Technologies from NIEs .....		4,916	+ 4,916
	Transfer EC8: Emerging Technologies from NIEs from line 169 .....			+ 4,916
171	Other Missile Product Improvement Programs .....	49,848	38,348	- 11,500
	Restoring acquisition accountability: DZ9 program delay .....			- 11,500

*Armored Multi-Purpose Vehicle [AMPV].*—The fiscal year 2015 budget request includes \$92,353,000 for the Armored Multi-Purpose Vehicle [AMPV], a Family of Vehicles based on a military vehicle derivative that will replace the M-113 Armored Personnel Carriers to support Armored Brigade Combat Teams across the range of military operations. The Committee notes that the Army Acquisition Objective of 3,007 vehicles for the AMPV program of record does not include vehicles for Echelons Above Brigade [EAB], which could require additional quantities in excess of 1,900 vehicles. The Committee understands that the Army is preparing a report to the congressional defense committees on its plan to eventually replace all M-113 Armored Personnel Carriers within Echelons Above Brigade formations; however, the Committee notes that any potential acquisition program requires an Analysis of Alternatives to support decision milestones.

The Committee notes that the fiscal year 2015 budget request includes \$9,913,000 in a separate program element for several Analyses of Alternatives [AoA], and further notes that while the Army is considering selection of the AMPV EAB as a potential AoA candidate in fiscal year 2015, the Army has not yet decided whether to proceed with that particular AoA. Therefore, the Committee directs the Army to conduct an Analysis of Alternatives for an AMPV EAB requirement in fiscal year 2015, and allocates \$4,000,000 only for that purpose from within available funds. Further, the Army is directed to report to the congressional defense committees within fifteen days of completion of the AoA on its findings and results.

*Patriot Modernization.*—The fiscal year 2015 budget request includes \$152,991,000 in Research, Development, Test and Evaluation, Army for Patriot Modernization, an increase of \$117,957,000 over amounts appropriated in fiscal year 2014. The Committee has previously expressed concerns in Senate Reports 113-85 and 112-196 regarding the lack of clearly defined requirements for this program, the absence of an acquisition strategy that embraces competition, and a lack of full understanding of costs. These concerns are exacerbated by the fiscal year 2015 budget submission, which more than doubles projected funding required for Patriot Modernization through fiscal year 2018, compared to estimates provided for that same time period just 1 year ago. The Committee notes that this comparison does not include funding identified in this year's budget submission for a future radar competition beginning in fiscal year 2017. Further, the Committee notes that exclud-

ing the development and acquisition of a new radar, the Army plans to invest over \$2,200,000,000 for modernization of the Patriot system over the next 5 years in Research, Development, Test and Evaluation, Army and in Missile Procurement, Army, and that the large majority of these funds would not be competitively awarded. The Committee does not believe this to be in the best interest of the Army or the U.S. taxpayer.

Finally, the Committee notes that the Army has delayed submission to the congressional defense committees of reports required in Senate Report 113–85, which direct a plan from the Secretary of the Army that establishes an open system software architecture for future upgrades and technology refresh to the Patriot system in the near-term, and an acquisition strategy from the Secretary of the Army in conjunction with the Under Secretary of Defense for Acquisition, Technology and Logistics that incorporates full and open competition for Patriot Modernization in the near-, mid- and long-term. Therefore, the Committee does not find the requested program increase justified, and recommends \$37,991,000 for Patriot Modernization in fiscal year 2015, consistent with amounts appropriated in fiscal year 2014.

In addition, the Committee directs the Under Secretary of Defense for Acquisition, Technology and Logistics, in conjunction with the Director of the Office of Secretary of Defense Cost Assessment and Program Evaluation, to provide with the fiscal year 2016 budget submission a cost assessment of the acquisition strategy for Patriot Modernization, as well as an estimate of savings that would result from inserting competition in the acquisition strategy in the near-term.

*Network Integration Evaluation [NIE].*—The fiscal year 2015 budget request includes \$105,279,000 to conduct two Network Integration Evaluation [NIE] exercises. The Committee notes that the Army continues to over-estimate costs for the NIE, resulting in repeated significant underexecution, accumulating carry-over funding and annual budget re-estimates. The Committee further notes that the Army intends to apply \$20,000,000 of funds appropriated in fiscal year 2014 to fiscal year 2015 requirements. Accordingly, the Committee recommends a reduction to the fiscal year 2015 request to ensure the Army can execute the funds it is provided.

*Army Aviation Modernization Programs.*—The fiscal year 2015 budget submission includes \$264,887,000 for the modification and product improvement of multiple aircraft. The Committee notes that this includes funds for no less than five major efforts, including two major acquisition programs, the UH–60L Digital Cockpit program and the Improved Turbine Engine Program [ITEP]. The Committee further notes that neither the UH–60L Digital Cockpit program nor the ITEP program has been fully funded for two consecutive budget cycles and that both programs are beset by repeated program delays. The Committee is concerned that the Army is again heading towards failure with two major acquisition programs, and does not believe this matter is alleviated by co-mingling funding for these programs with other aviation modernization efforts. Therefore, the Committee recommends adjusting the budget structure for the modernization of aviation platforms and directs

the Army to maintain the revised budget alignment in the fiscal year 2016 budget submission.

*Precision Weapons Testing.*—The Committee understands that the Army is executing on-going technology and development programs for small, precision weapon munitions that provide low-collateral damage capabilities in urban environments and counter-insurgency operations. The Committee encourages the Army to continue to develop and flight test guidance, navigation, control, and targeting capabilities on small, precise weapons.

*Military Batteries.*—The Committee recognizes the critical nature of high quality batteries to power military wheeled and tracked vehicles in austere, demanding environments. The Committee understands that utilizing batteries based on decades-old design poses potential risks to equipment and personnel, and that the Army has increased use of batteries based on modern designs that deliver improved performance in tactical environments. The Committee directs the Secretary of the Army to provide with the fiscal year 2016 budget submission a report detailing safety incidents by different types of battery models used.

*Materials Technology for Strategic Defense.*—The Committee notes the Army Research Laboratory [ARL] is expanding research, education, and technology development efforts in materials and metals processing science and engineering, aiming to transform the affordability, performance, and environmental sustainability of strategic materials. The Committee further notes that ARL's Open Campus concept benefits the academic community and industry through collaboration with ARL's research staff, leading to continued technological superiority for the U.S. warfighter, and encourages the Army to review whether its strategic materials efforts could benefit from the Open Concept approach.

*Army Inventory Tracking.*—The Committee is concerned about difficulties to effectively and efficiently manage and account for equipment returning from Afghanistan. This challenge also affects cataloguing, inventorying, and tracking of equipment in the continental United States. The Committee understands that the Army is testing automated inventory tracking and management solutions to address capability gaps, and encourages further testing and evaluation to determine if these solutions can be cost-effective, time-saving alternatives to the current means of cataloguing and tracking returning equipment. The Committee directs the Army to report to the congressional defense committees not later than 120 days after the enactment of this act on the result of these evaluations.

*Health Surveillance Technologies.*—The Committee is aware of Department of Defense efforts to use technology to improve surveillance of hospital-based patient safety and quality initiatives as well surveillance of acute and chronic public health disease threats. Deployment of these critical technologies has the ability not only to detect rarely occurring biological threat agents, but the ability to identify the occurrence of naturally occurring infectious illnesses. The technologies can be further modified to detect non-infectious diseases and chronic illness, and to conduct patient safety surveillance in the hospital and outpatient settings. The Committee encourages the Department to work with the medical and academic

community and continue its efforts in reaching the full deployment of these technologies.

RESEARCH, DEVELOPMENT, TEST AND EVALUATION, NAVY

Appropriations, 2014 .....	\$14,949,919,000
Budget estimate, 2015 .....	16,266,335,000
House allowance .....	15,877,770,000
Committee recommendation .....	15,920,372,000

The Committee recommends an appropriation of \$15,920,372,000. This is \$345,963,000 below the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table summarizes the budget estimate for this appropriation, the Committee recommendation, and the Committee recommended adjustments to the budget estimate:

[In thousands of dollars]

	Item	2015 budget estimate	House allowance	Committee recommendation	Change from	
					Budget estimate	House allowance
	RESEARCH, DEVELOPMENT, TEST & EVAL., NAVY					
	BASIC RESEARCH					
1	UNIVERSITY RESEARCH INITIATIVES .....	113,908	113,908	133,908	+20,000	+20,000
2	IN-HOUSE LABORATORY INDEPENDENT RESEARCH .....	18,734	18,734	19,142	+408	+408
3	DEFENSE RESEARCH SCIENCES .....	443,697	443,697	497,145	+53,448	+53,448
	TOTAL, BASIC RESEARCH .....	576,339	576,339	650,195	+73,856	+73,856
	APPLIED RESEARCH					
4	POWER PROJECTION APPLIED RESEARCH .....	95,753	95,753	95,753	.....	.....
5	FORCE PROTECTION APPLIED RESEARCH .....	139,496	139,496	169,496	+30,000	+30,000
6	MARINE CORPS LANDING FORCE TECHNOLOGY .....	45,831	45,831	45,831	.....	.....
7	COMMON PICTURE APPLIED RESEARCH .....	43,541	43,541	43,541	.....	.....
8	WARFIGHTER SUSTAINMENT APPLIED RESEARCH .....	46,923	46,923	46,923	.....	.....
9	ELECTROMAGNETIC SYSTEMS APPLIED RESEARCH .....	107,872	107,872	107,872	.....	.....
10	OCEAN WARFIGHTING ENVIRONMENT APPLIED RESEARCH .....	45,388	65,388	45,388	.....	-20,000
11	JOINT NON-LETHAL WEAPONS APPLIED RESEARCH .....	5,887	5,887	5,887	.....	.....
12	UNDERSEA WARFARE APPLIED RESEARCH .....	86,880	86,880	86,880	.....	.....
13	FUTURE NAVAL CAPABILITIES ADVANCED TECHNOLOGY DEV .....	170,786	176,086	170,786	.....	-5,300
14	MINE AND EXPEDITIONARY WARFARE APPLIED RESEARCH .....	32,526	32,526	32,526	.....	.....
	TOTAL, APPLIED RESEARCH .....	820,883	846,183	850,883	+30,000	+4,700
	ADVANCED TECHNOLOGY DEVELOPMENT					
15	POWER PROJECTION ADVANCED TECHNOLOGY .....	37,734	37,734	37,734	.....	.....
16	FORCE PROTECTION ADVANCED TECHNOLOGY .....	25,831	25,831	25,831	.....	.....
17	ELECTROMAGNETIC SYSTEMS ADVANCED TECHNOLOGY .....	64,623	64,623	64,623	.....	.....
18	MARINE CORPS ADVANCED TECHNOLOGY DEMONSTRATION [ATD] .....	128,397	128,397	128,397	.....	.....
19	JOINT NON-LETHAL WEAPONS TECHNOLOGY DEVELOPMENT .....	11,506	11,506	11,506	.....	.....
20	FUTURE NAVAL CAPABILITIES ADVANCED TECHNOLOGY DEV .....	256,144	261,144	256,144	.....	-5,000
21	WARFIGHTER PROTECTION ADVANCED TECHNOLOGY .....	4,838	40,538	4,838	.....	-35,700
22	UNDERSEA WARFARE ADVANCED TECHNOLOGY .....	9,985	9,985	9,985	.....	.....
23	NAVY WARFIGHTING EXPERIMENTS AND DEMONSTRATIONS .....	53,956	53,956	53,956	.....	.....
24	MINE AND EXPEDITIONARY WARFARE ADVANCED TECHNOLOGY .....	2,000	2,000	2,000	.....	.....
	TOTAL, ADVANCED TECHNOLOGY DEVELOPMENT .....	595,014	635,714	595,014	.....	-40,700

25	DEMONSTRATION & VALIDATION	40,429	40,429	40,429	40,429
26	AIR/OCEAN TACTICAL APPLICATIONS	4,325	4,325	4,325	4,325
27	DEPLOYABLE JOINT COMMAND AND CONTROL	2,991	2,991	2,991	2,991
28	AIRCRAFT SYSTEMS	12,651	12,651	12,651	12,651
29	ASW SYSTEMS DEVELOPMENT	7,782	7,782	7,782	7,782
30	TACTICAL AIRBORNE RECONNAISSANCE	5,275	5,275	5,275	5,275
31	ADVANCED COMBAT SYSTEMS TECHNOLOGY	1,646	1,646	1,646	1,646
32	SURFACE AND SHALLOW WATER MINE COUNTERMEASURES	100,349	83,158	86,734	+ 3,576
33	SURFACE SHIP TORPEDO DEFENSE	52,781	48,481	52,781	+ 4,300
34	CARRIER SYSTEMS DEVELOPMENT	148,865	138,865	148,865	+ 10,000
35	PILOT FISH	25,365	25,365	25,365	+ 8,000
36	RETRACT LARCH	80,477	72,477	80,477	
37	RETRACT JUNIPER	669	669	669	
38	RADIOLOGICAL CONTROL	1,060	1,060	1,060	
39	SURFACE ASW	67,551	70,551	70,551	+ 3,000
40	ADVANCED SUBMARINE SYSTEM DEVELOPMENT	8,044	8,044	8,044	
41	SUBMARINE TACTICAL WARFARE SYSTEMS	17,864	17,864	17,864	
42	SHIP CONCEPT ADVANCED DESIGN	23,716	17,736	2,448	- 5,593
43	SHIP PRELIMINARY DESIGN & FEASIBILITY STUDIES	499,961	499,961	499,961	- 15,288
44	ADVANCED NUCLEAR POWER SYSTEMS	21,026	21,026	21,026	
45	ADVANCED SURFACE MACHINERY SYSTEMS	542,700	542,700	542,700	
46	CHALK EAGLE	88,734	88,734	88,734	+ 2,000
47	LITTORAL COMBAT SHIP (LCS)	20,881	20,881	20,881	
48	COMBAT SYSTEM INTEGRATION	849,277	849,277	849,277	+ 4,000
49	OHIO REPLACEMENT PROGRAM	196,948	168,648	173,348	+ 4,700
50	LITTORAL COMBAT SHIP (LCS) MISSION PACKAGES	8,115	8,115	8,115	
51	AUTOMATIC TEST AND RE-TEST	7,603	7,603	7,603	
52	CONVENTIONAL MUNITIONS	105,749	105,749	105,749	
53	MARINE CORPS ASSAULT VEHICLES	1,342	1,342	1,342	
54	MARINE CORPS GROUND COMBAT/SUPPORT SYSTEM	21,399	21,399	21,399	
55	JOINT SERVICE EXPLOSIVE ORDNANCE DEVELOPMENT	43,578	39,310	37,478	- 6,100
56	COOPERATIVE ENGAGEMENT	7,764	6,264	7,764	
57	OCEAN ENGINEERING TECHNOLOGY DEVELOPMENT	13,200	13,200	13,200	
58	ENVIRONMENTAL PROTECTION	69,415	55,393	69,415	+ 14,022
59	NAVY ENERGY PROGRAM	2,588	2,588	2,588	
60	FACILITIES IMPROVEMENT	176,301	176,301	176,301	
61	CHALK CORAL	3,873	3,873	3,873	
62	NAVY LOGISTIC PRODUCTIVITY	376,028	376,028	376,028	- 400
63	RETRACT MAPLE				

[In thousands of dollars]

	Item	2015 budget estimate	House allowance	Committee recommendation	Change from	
					Budget estimate	House allowance
64	LINK PLUMERIA .....	272,096	252,496	272,096		+ 19,600
65	RETRACT ELM .....	42,233	42,233	42,233		
66	LINK EVERGREEN .....	46,504	46,504	46,504		
67	SPECIAL PROCESSES .....	25,109	25,109	25,109		
68	NATO RESEARCH AND DEVELOPMENT .....	9,659	9,659	9,659		
69	LAND ATTACK TECHNOLOGY .....	318	318	318		
70	NONLETHAL WEAPONS .....	40,912	35,627	40,912		+ 5,285
71	JOINT PRECISION APPROACH AND LANDING SYSTEMS .....	54,896	41,896	23,124	-31,772	- 18,772
73	DIRECTED ENERGY AND ELECTRIC WEAPON SYSTEMS .....	58,696	52,696	58,696		+ 6,000
74	GERALD R. FORD CLASS NUCLEAR AIRCRAFT CARRIER .....	43,613	43,613	43,613		
75	REMOTE MINEHUNTING SYSTEM (RMS) .....	21,110	21,110	21,110		
76	TACTICAL AIR DIRECTIONAL INFRARED COUNTERMEASURES .....	5,657	5,657	5,556	- 101	- 101
77	ASE SELF-PROTECTION OPTIMIZATION .....	8,033	4,033	5,923	- 2,110	+ 1,890
78	LX (R) .....	36,859	30,859	36,859		+ 6,000
79	JOINT COUNTER RADIO CONTROLLED IED ELECTRONIC WARFARE .....	15,227	15,227	15,227		
81	SPACE & ELECTRONIC WARFARE (SEWJ) ARCHITECTURE/ENGINE .....	22,393	22,393	18,798		- 3,595
82	OFFENSIVE ANTI-SURFACE WARFARE WEAPON DEVELOPMENT .....	202,939	161,939	202,939		+ 41,000
83	JOINT LIGHT TACTICAL VEHICLE ENGINEERING/MANUFACTURING .....	11,450	9,450	11,450		+ 2,000
84	ASW SYSTEMS DEVELOPMENT—MIP .....	6,495	6,495	6,495		
85	ELECTRONIC WARFARE DEVELOPMENT—MIP .....	332	332	332		
	TOTAL, DEMONSTRATION & VALIDATION .....	4,591,812	4,396,366	4,487,658	- 104,154	+ 91,292
86	ENGINEERING & MANUFACTURING DEVELOPMENT .....	25,153	25,153	25,153		
87	TRAINING SYSTEM AIRCRAFT .....	46,154	32,035	40,099	- 6,055	+ 8,064
87X	OTHER HELO DEVELOPMENT .....			6,055	+ 6,055	+ 6,055
88	MH-XX .....	25,372	25,372	25,372		
89	AV-88 AIRCRAFT—ENG DEV .....	53,712	53,712	53,712		
90	STANDARDS DEVELOPMENT .....	11,434	11,434	11,434		
91	MULTI-MISSION HELICOPTER UPGRADE DEVELOPMENT .....	2,164	2,164	2,164		
92	AIR/OCEAN EQUIPMENT ENGINEERING .....	1,710	1,710	710	- 1,000	- 1,000
93	P-3 MODERNIZATION PROGRAM .....	9,094	9,094	9,094		
94	WARFARE SUPPORT SYSTEM .....	70,248	62,140	62,748		+ 608
95	TACTICAL COMMAND SYSTEM .....	193,200	146,200	193,200	- 7,500	+ 47,000
96	ADVANCED HAWKEYE .....	44,115	44,115	44,115		
	H-1 UPGRADES .....					



[In thousands of dollars]

	Item	2015 budget estimate	House allowance	Committee recommendation	Change from	
					Budget estimate	House allowance
136X	J5F FOD-N .....	2,887	2,887	10,622	+ 10,622	+ 10,622
137	INFORMATION TECHNOLOGY DEVELOPMENT .....	66,317	66,317	2,887	.....	.....
138	INFORMATION TECHNOLOGY DEVELOPMENT .....	573,187	573,187	61,317	- 5,000	- 5,000
139	CH-53K .....	67,815	55,026	563,187	- 10,000	- 10,000
140	SHIP TO SHORE CONNECTOR (SSC) .....	6,300	6,300	23,145	- 44,670	- 31,881
141	JOINT AIR-TO-GROUND MISSILE (JAGM) .....	308,037	319,037	6,300	.....	.....
142	MULTI-MISSION MARITIME AIRCRAFT (MMA) .....	202,522	202,522	278,037	- 30,000	- 41,000
143	DDG 1000 .....	1,011	1,011	202,522	.....	.....
144	TACTICAL COMMAND SYSTEM—MIP .....	10,357	10,357	1,011	.....	.....
145	TACTICAL CRYPTOLOGIC SYSTEMS .....	23,975	23,975	10,357	.....	.....
146	SPECIAL APPLICATIONS PROGRAM .....	5,419,108	5,298,605	23,975	.....	.....
	TOTAL, ENGINEERING & MANUFACTURING DEVELOPMENT .....	5,419,108	5,298,605	5,190,013	- 229,095	- 108,592
	ROT&E MANAGEMENT SUPPORT .....	45,272	45,272	40,793	- 4,479	- 4,479
147	THREAT SIMULATOR DEVELOPMENT .....	79,718	66,718	69,718	- 10,000	+ 3,000
148	TARGET SYSTEMS DEVELOPMENT .....	123,993	123,993	123,993	.....	.....
149	MAJOR T&E INVESTMENT .....	4,960	4,960	4,960	.....	.....
150	JOINT THEATER AIR AND MISSILE DEFENSE ORGANIZATION .....	8,296	8,296	3,502	- 4,794	- 4,794
151	STUDIES AND ANALYSIS SUPPORT—NAVY .....	.....	.....	4,794	+ 4,794	+ 4,794
151X	FA-XX (NEXT GENERATION FIGHTER) .....	45,752	45,752	45,752	.....	.....
152	CENTER FOR NAVAL ANALYSES .....	876	876	876	.....	.....
154	TECHNICAL INFORMATION SERVICES .....	72,070	72,070	87,070	+ 15,000	+ 15,000
155	MANAGEMENT, TECHNICAL & INTERNATIONAL SUPPORT .....	3,237	3,237	2,590	- 647	- 647
156	STRATEGIC TECHNICAL SUPPORT .....	73,033	73,033	73,033	.....	.....
157	ROT&E SCIENCE AND TECHNOLOGY MANAGEMENT .....	138,304	138,304	138,304	.....	.....
158	ROT&E SHIP AND AIRCRAFT SUPPORT .....	336,286	336,286	336,286	.....	.....
159	TEST AND EVALUATION SUPPORT .....	16,658	16,658	16,658	.....	.....
160	OPERATIONAL TEST AND EVALUATION CAPABILITY .....	2,505	2,505	2,505	.....	.....
161	NAVY SPACE AND ELECTRONIC WARFARE (SEW) SUPPORT .....	8,325	8,325	8,325	.....	.....
162	SEW SURVEILLANCE/RECONNAISSANCE SUPPORT .....	17,866	17,866	17,866	.....	.....
163	MARINE CORPS PROGRAM WIDE SUPPORT .....	977,151	964,151	977,025	- 126	+ 12,874
	TOTAL, ROT&E MANAGEMENT SUPPORT .....	977,151	964,151	977,025	- 126	+ 12,874

	35,949	215	8,873	94,525	30,057	4,509	13,676	9,480	86,216	27,281	2,878	27,685	29,471	4,609	99,106	39,922	1,157	22,067	17,420	133,594	26,366	25,952	75,037	104,023	77,398	32,495	52,419	104,207	20,999	14,179	47,258	10,210	41,829	22,780	23,053	296	359	6,166	8,505
168 OPERATIONAL SYSTEMS DEVELOPMENT	35,949	215	8,873	94,525	30,057	4,509	13,676	9,480	86,216	27,281	2,878	27,685	29,471	4,609	99,106	39,922	1,157	22,067	17,420	133,594	26,366	25,952	75,037	104,023	77,398	32,495	52,419	104,207	20,999	14,179	47,258	10,210	41,829	22,780	23,053	296	359	6,166	8,505
169 UNMANNED COMBAT AIR VEHICLE [UCAV] ADVANCED COMPONENT	115	8,873	94,525	30,057	4,509	13,676	9,480	86,216	27,281	2,878	27,685	29,471	4,609	99,106	39,922	1,157	22,067	17,420	133,594	26,366	25,952	75,037	104,023	77,398	32,495	52,419	104,207	20,999	14,179	47,258	10,210	41,829	22,780	23,053	296	359	6,166	8,505	
170 MARINE CORPS DATA SYSTEMS	— 100	8,873	94,525	30,057	4,509	13,676	9,480	86,216	27,281	2,878	27,685	29,471	4,609	99,106	39,922	1,157	22,067	17,420	133,594	26,366	25,952	75,037	104,023	77,398	32,495	52,419	104,207	20,999	14,179	47,258	10,210	41,829	22,780	23,053	296	359	6,166	8,505	
171 CARRIER ONBOARD DELIVERY FOLLOW ON	— 100	8,873	94,525	30,057	4,509	13,676	9,480	86,216	27,281	2,878	27,685	29,471	4,609	99,106	39,922	1,157	22,067	17,420	133,594	26,366	25,952	75,037	104,023	77,398	32,495	52,419	104,207	20,999	14,179	47,258	10,210	41,829	22,780	23,053	296	359	6,166	8,505	
172 STRATEGIC SUB & WEAPONS SYSTEM SUPPORT	— 7,000	8,873	94,525	30,057	4,509	13,676	9,480	86,216	27,281	2,878	27,685	29,471	4,609	99,106	39,922	1,157	22,067	17,420	133,594	26,366	25,952	75,037	104,023	77,398	32,495	52,419	104,207	20,999	14,179	47,258	10,210	41,829	22,780	23,053	296	359	6,166	8,505	
173 SSBN SECURITY TECHNOLOGY PROGRAM	— 7,000	8,873	94,525	30,057	4,509	13,676	9,480	86,216	27,281	2,878	27,685	29,471	4,609	99,106	39,922	1,157	22,067	17,420	133,594	26,366	25,952	75,037	104,023	77,398	32,495	52,419	104,207	20,999	14,179	47,258	10,210	41,829	22,780	23,053	296	359	6,166	8,505	
174 SUBMARINE ACOUSTIC WARFARE DEVELOPMENT	— 7,000	8,873	94,525	30,057	4,509	13,676	9,480	86,216	27,281	2,878	27,685	29,471	4,609	99,106	39,922	1,157	22,067	17,420	133,594	26,366	25,952	75,037	104,023	77,398	32,495	52,419	104,207	20,999	14,179	47,258	10,210	41,829	22,780	23,053	296	359	6,166	8,505	
175 NAVY STRATEGIC COMMUNICATIONS	— 7,000	8,873	94,525	30,057	4,509	13,676	9,480	86,216	27,281	2,878	27,685	29,471	4,609	99,106	39,922	1,157	22,067	17,420	133,594	26,366	25,952	75,037	104,023	77,398	32,495	52,419	104,207	20,999	14,179	47,258	10,210	41,829	22,780	23,053	296	359	6,166	8,505	
176 RAPID TECHNOLOGY TRANSITION [RTT]	— 7,000	8,873	94,525	30,057	4,509	13,676	9,480	86,216	27,281	2,878	27,685	29,471	4,609	99,106	39,922	1,157	22,067	17,420	133,594	26,366	25,952	75,037	104,023	77,398	32,495	52,419	104,207	20,999	14,179	47,258	10,210	41,829	22,780	23,053	296	359	6,166	8,505	
177 F/A-18 SQUADRONS	— 10,000	8,873	94,525	30,057	4,509	13,676	9,480	86,216	27,281	2,878	27,685	29,471	4,609	99,106	39,922	1,157	22,067	17,420	133,594	26,366	25,952	75,037	104,023	77,398	32,495	52,419	104,207	20,999	14,179	47,258	10,210	41,829	22,780	23,053	296	359	6,166	8,505	
178 FLEET TELECOMMUNICATIONS [TACTICAL]	— 10,000	8,873	94,525	30,057	4,509	13,676	9,480	86,216	27,281	2,878	27,685	29,471	4,609	99,106	39,922	1,157	22,067	17,420	133,594	26,366	25,952	75,037	104,023	77,398	32,495	52,419	104,207	20,999	14,179	47,258	10,210	41,829	22,780	23,053	296	359	6,166	8,505	
179 SURFACE SUPPORT	— 10,000	8,873	94,525	30,057	4,509	13,676	9,480	86,216	27,281	2,878	27,685	29,471	4,609	99,106	39,922	1,157	22,067	17,420	133,594	26,366	25,952	75,037	104,023	77,398	32,495	52,419	104,207	20,999	14,179	47,258	10,210	41,829	22,780	23,053	296	359	6,166	8,505	
180 TOMAHAWK AND TOMAHAWK MISSION PLANNING CENTER [TMPC]	— 1,540	8,873	94,525	30,057	4,509	13,676	9,480	86,216	27,281	2,878	27,685	29,471	4,609	99,106	39,922	1,157	22,067	17,420	133,594	26,366	25,952	75,037	104,023	77,398	32,495	52,419	104,207	20,999	14,179	47,258	10,210	41,829	22,780	23,053	296	359	6,166	8,505	
181 INTEGRATED SURVEILLANCE SYSTEM	— 1,540	8,873	94,525	30,057	4,509	13,676	9,480	86,216	27,281	2,878	27,685	29,471	4,609	99,106	39,922	1,157	22,067	17,420	133,594	26,366	25,952	75,037	104,023	77,398	32,495	52,419	104,207	20,999	14,179	47,258	10,210	41,829	22,780	23,053	296	359	6,166	8,505	
182 AMPHIBIOUS TACTICAL SUPPORT UNITS	— 1,540	8,873	94,525	30,057	4,509	13,676	9,480	86,216	27,281	2,878	27,685	29,471	4,609	99,106	39,922	1,157	22,067	17,420	133,594	26,366	25,952	75,037	104,023	77,398	32,495	52,419	104,207	20,999	14,179	47,258	10,210	41,829	22,780	23,053	296	359	6,166	8,505	
183 AMPHIBIOUS TACTICAL SUPPORT UNITS	— 1,540	8,873	94,525	30,057	4,509	13,676	9,480	86,216	27,281	2,878	27,685	29,471	4,609	99,106	39,922	1,157	22,067	17,420	133,594	26,366	25,952	75,037	104,023	77,398	32,495	52,419	104,207	20,999	14,179	47,258	10,210	41,829	22,780	23,053	296	359	6,166	8,505	
184 GROUND/AIR TASK ORIENTED RADAR	— 1,540	8,873	94,525	30,057	4,509	13,676	9,480	86,216	27,281	2,878	27,685	29,471	4,609	99,106	39,922	1,157	22,067	17,420	133,594	26,366	25,952	75,037	104,023	77,398	32,495	52,419	104,207	20,999	14,179	47,258	10,210	41,829	22,780	23,053	296	359	6,166	8,505	
185 CONSOLIDATED TRAINING SYSTEMS DEVELOPMENT	— 7,000	8,873	94,525	30,057	4,509	13,676	9,480	86,216	27,281	2,878	27,685	29,471	4,609	99,106	39,922	1,157	22,067	17,420	133,594	26,366	25,952	75,037	104,023	77,398	32,495	52,419	104,207	20,999	14,179	47,258	10,210	41,829	22,780	23,053	296	359	6,166	8,505	
186 CRYPTOLOGIC DIRECT SUPPORT	— 7,000	8,873	94,525	30,057	4,509	13,676	9,480	86,216	27,281	2,878	27,685	29,471	4,609	99,106	39,922	1,157	22,067	17,420	133,594	26,366	25,952	75,037	104,023	77,398	32,495	52,419	104,207	20,999	14,179	47,258	10,210	41,829	22,780	23,053	296	359	6,166	8,505	
187 ELECTRONIC WARFARE [EW] READINESS SUPPORT	— 7,000	8,873	94,525	30,057	4,509	13,676	9,480	86,216	27,281	2,878	27,685	29,471	4,609	99,106	39,922	1,157	22,067	17,420	133,594	26,366	25,952	75,037	104,023	77,398	32,495	52,419	104,207	20,999	14,179	47,258	10,210	41,829	22,780	23,053	296	359	6,166	8,505	
188 HARM IMPROVEMENT	— 7,000	8,873	94,525	30,057	4,509	13,676	9,480	86,216	27,281	2,878	27,685	29,471	4,609	99,106	39,922	1,157	22,067	17,420	133,594	26,366	25,952	75,037	104,023	77,398	32,495	52,419	104,207	20,999	14,179	47,258	10,210	41,829	22,780	23,053	296	359	6,166	8,505	
189 TACTICAL DATA LINKS	— 7,000	8,873	94,525	30,057	4,509	13,676	9,480	86,216	27,281	2,878	27,685	29,471	4,609	99,106	39,922	1,157	22,067	17,420	133,594	26,366	25,952	75,037	104,023	77,398	32,495	52,419	104,207	20,999	14,179	47,258	10,210	41,829	22,780	23,053	296	359	6,166	8,505	
190 SURFACE ASW COMBAT SYSTEM INTEGRATION	— 7,000	8,873	94,525	30,057	4,509	13,676	9,480	86,216	27,281	2,878	27,685	29,471	4,609	99,106	39,922	1,157	22,067	17,420	133,594	26,366	25,952	75,037	104,023	77,398	32,495	52,419	104,207	20,999	14,179	47,258	10,210	41,829	22,780	23,053	296	359	6,166	8,505	
191 MIK-48 ADCAP	— 7,000	8,873	94,525	30,057	4,509	13,676	9,480	86,216	27,281	2,878	27,685	29,471	4,609	99,106	39,922	1,157	22,067	17,420	133,594	26,366	25,952	75,037	104,023	77,398	32,495	52,419	104,207	20,999	14,179	47,258	10,210	41,829	22,780	23,053	296	359	6,166	8,505	
192 AVIATION IMPROVEMENTS	— 7,000	8,873	94,525	30,057	4,509	13,676	9,480	86,216	27,281	2,878	27,685	29,471	4,609	99,106	39,922	1,157	22,067	17,420	133,594	26,366	25,952	75,037	104,023	77,398	32,495	52,419	104,207	20,999	14,179	47,258	10,210	41,829	22,780	23,053	296	359	6,166	8,505	
193 OPERATIONAL NUCLEAR POWER SYSTEMS	— 7,000	8,873	94,5																																				

[In thousands of dollars]

	Item	2015 budget estimate	House allowance	Committee recommendation	Change from	
					Budget estimate	House allowance
216	DISTRIBUTED COMMON GROUND SYSTEMS/SURFACE SYSTEMS .....	11,613	11,613	11,613	.....	.....
217	DISTRIBUTED COMMON GROUND SYSTEMS/SURFACE SYSTEMS .....	18,146	18,146	18,146	.....	.....
218	RQ-4 UAV .....	498,003	463,003	426,503	- 71,500	- 36,500
218X	RQ-4 MODERNIZATION .....	.....	.....	5,000	+ 5,000	+ 5,000
219	MQ-8 UAV .....	47,294	43,294	47,294	.....	+ 4,000
220	RQ-11 UAV .....	718	718	718	.....	.....
221	RQ-7 UAV .....	851	851	851	.....	.....
222	SMALL (LEVEL 0) TACTICAL UAS (STUASLO) .....	4,813	4,813	4,813	.....	.....
223	RQ-21A .....	8,192	8,192	8,192	.....	.....
224	MULTI-INTELLIGENCE SENSOR DEVELOPMENT .....	22,559	18,664	17,751	- 4,808	- 913
225	UNMANNED AERIAL SYSTEMS [UAS] PAYLOADS [MIP] .....	2,000	2,000	2,000	.....	.....
226	MODELING AND SIMULATION SUPPORT .....	4,719	4,719	4,719	.....	.....
227	DEPOT MAINTENANCE (NON-IF) .....	21,168	21,168	21,168	.....	.....
228	INDUSTRIAL PREPAREDNESS .....	37,169	37,169	37,169	.....	.....
229	MARITIME TECHNOLOGY (MARTTECH) .....	4,347	4,347	4,347	.....	.....
	TOTAL, OPERATIONAL SYSTEMS DEVELOPMENT .....	2,123,344	1,997,728	2,006,900	- 116,444	+ 9,172
	CLASSIFIED PROGRAMS .....	1,162,684	1,162,684	1,162,684	.....	.....
	TOTAL, RESEARCH, DEVELOPMENT, TEST & EVAL, NAVY .....	16,266,335	15,877,770	15,920,372	- 345,963	+ 42,602

## COMMITTEE RECOMMENDED ADJUSTMENTS

The following table details the adjustments recommended by the Committee:

[In thousands of dollars]

Line	Item	2015 budget estimate	Committee recommendation	Change from budget estimate
1	University Research Initiatives .....	113,908	133,908	+ 20,000
	Program Increase .....			+ 20,000
2	In-House Laboratory Independent Research .....	18,734	19,142	+ 408
	Program Increase .....			+ 408
3	Defense Research Sciences .....	443,697	497,145	+ 53,448
	Program Increase .....			+ 53,448
5	Force Protection Applied Research .....	139,496	169,496	+ 30,000
	Program Increase .....			+ 5,000
	Program Increase: Alternative energy .....			+ 25,000
32	Surface and Shallow Water Mine Countermeasures .....	100,349	86,734	- 13,615
	Budget documentation disparity: USV product development undefined .....			- 13,615
42	Ship Concept Advanced Design .....	17,864	12,271	- 5,593
	Transfer to National Defense Sealift Fund: Strategic Sealift Research and Development .....			- 5,593
43	Ship Preliminary Design & Feasibility Studies .....	23,716	2,448	- 21,268
	Restoring acquisition accountability: CSC contract award delay .....			- 3,305
	Budget documentation disparity: Undefined contract design for Naval Operational Logistics Information .....			- 2,000
	Transfer to National Defense Sealift Fund: Naval Operational Logistics Integration .....			- 15,963
49	Ohio Replacement .....	849,277	853,277	+ 4,000
	Program Increase: Submarine propulsion component development .....			+ 4,000
50	LCS Mission Modules .....	196,948	173,348	- 23,600
	Improving funds management: Prior year unobligated balances and schedule slips .....			- 23,600
56	Cooperative Engagement .....	43,578	37,478	- 6,100
	Restoring acquisition accountability: CAB contract award delay .....			- 3,000
	Restoring acquisition accountability: AMDR delay .....			- 3,100
62	Navy Logistic Productivity .....	3,873	3,473	- 400
	Improving funds management: Unobligated balances .....			- 400
71	Joint Precision Approach and Landing Systems—Dem/Val .....	54,896	23,124	- 31,772
	Restoring acquisition accountability: Removing F-18 and MH-60R integration .....			- 31,772
76	Tactical Air Directional Infrared Countermeasures [TADIRCM] ..	5,657	5,556	- 101
	Program terminations: JATAS .....			- 101
77	ASE Self-Protection Optimization .....	8,033	5,923	- 2,110
	Budget documentation disparity: Unjustified request for test assets .....			- 2,110
81	Space and Electronic Warfare [SEW] Architecture/Engineering Support .....	22,393	18,798	- 3,595
	Budget documentation disparity: Poor justification materials .....			- 3,595
87	Other Helo Development .....	46,154	40,099	- 6,055
	Transfer MH-XX: To program Line #87X .....			- 6,055
87X	MH-XX .....		6,055	+ 6,055
	Transfer MH-XX: From program Line #87 .....			+ 6,055
92	P-3 Modernization Program .....	1,710	710	- 1,000
	Improving funds management: Unobligated balances .....			- 1,000
94	Tactical Command System .....	70,248	62,748	- 7,500
	Budget documentation disparity: Unjustified request for JMPS 64 bit .....			- 7,500
95	Advanced Hawkeye .....	193,200	193,200	
	Restoring acquisition accountability: Cost growth for modernization and poor execution .....			- 10,000
	Program increase: Advanced Hawkeye .....			+ 10,000

[In thousands of dollars]

Line	Item	2015 budget estimate	Committee recommendation	Change from budget estimate
102	Executive Helo Development .....	388,086	348,086	-40,000
	Restoring acquisition accountability: Savings from early down select .....			-40,000
107	Small Diameter Bomb [SDB] .....	71,849	51,286	-20,563
	Restoring acquisition accountability: JSF integration .....			-20,563
108	Standard Missile Improvements .....	53,198	36,698	-16,500
	Improving funds management: Behind in execution .....			-16,500
113	Advanced Above Water Sensors .....	20,409	19,809	-600
	Budget documentation disparity: Unjustified advanced radar technology .....			-600
121	Ship Contract Design/ Live Fire T&E .....	48,470	40,016	-8,454
	Transfer to National Defense Sealift Fund: Maritime Prepositioning Force .....			-8,454
123	Virginia Payload Module [VPM] .....	132,602	112,602	-20,000
	Restoring acquisition accountability: Program execution .....			-20,000
124	Mine Development .....	19,067	14,067	-5,000
	Budget documentation disparity: Unjustified offensive mining .....			-5,000
130	Ship Self Defense (Engage: Hard Kill) .....	96,937	101,937	+5,000
	Program Increase: Systems overhaul .....			+5,000
131	Ship Self Defense (Engage: Soft Kill/EW) .....	134,564	116,904	-17,660
	Budget documentation disparity: Unjustified RCIP .....			-4,435
	Restoring acquisition accountability: SEWIP block 3 PDR delay .....			-13,225
135	Joint Strike Fighter [JSF]—EMD .....	513,021	499,048	-13,973
	Transfer Follow on development to Line #135X .....			-10,399
	Excess FOD .....			-3,574
135X	JSF FOD—MC .....		10,399	+10,399
	Transfer Follow on development from Line #135 .....			+10,399
136	Joint Strike Fighter [JSF]—EMD .....	516,456	502,260	-14,196
	Transfer Follow on development to Line #136X .....			-10,622
	Excess FOD .....			-3,574
136X	JSF FOD—N .....		10,622	+10,622
	Transfer Follow on development from Line #136 .....			+10,622
138	Information Technology Development .....	66,317	61,317	-5,000
	Restoring acquisition accountability: AAUSN IT Contract undefined .....			-5,000
	Enterprise Product Lifecycle Management Integrated Decision Environment program .....			[5,000]
139	CH—53K RDTE .....	573,187	563,187	-10,000
	Restoring acquisition accountability: Reduce SDTA aircraft incremental funding .....			-25,000
	Restoring acquisition accountability: Vendor Production Qualification .....			+15,000
140	Ship to Shore Connector [SSC] .....	67,815	23,145	-44,670
	Transfer Ship to Shore Connector: To SCN Line #19 for operational craft .....			-44,670
142	Multi-mission Maritime Aircraft [MMA] .....	308,037	278,037	-30,000
	Restoring acquisition accountability: Spiral 2 growth .....			-30,000
147	Threat Simulator Development .....	45,272	40,793	-4,479
	Improving funds management: Prior year carryover .....			-4,479
148	Target Systems Development .....	79,718	69,718	-10,000
	Improving funds management: Prior year carryover .....			-10,000
151	Studies and Analysis Support—Navy .....	8,296	3,502	-4,794
	Transfer FA—XX to Line #151X .....			-4,794
151X	FA—XX (Next Generation Fighter) .....		4,794	+4,794
	Transfer from Line #151 for FA—XX .....			+4,794
155	Management, Technical & International Support .....	72,070	87,070	+15,000
	Program Increase: Printed Circuit Board Executive Agent—Funds Previous NDAA mandate .....			+15,000
156	Strategic Technical Support .....	3,237	2,590	-647
	Improving funds management: Prior year carryover .....			-647
169	Marine Corps Data Systems .....	215	115	-100

[In thousands of dollars]

Line	Item	2015 budget estimate	Committee recommendation	Change from budget estimate
	Improving funds management: Prior year carryover .....			- 100
172	Strategic Sub & Weapons System Support .....	96,943	89,943	- 7,000
	Restoring acquisition accountability: Unjustified request for integrated warhead study .....			- 7,000
176	Rapid Technology Transition (RTT) .....	12,480	9,480	- 3,000
	Improving funds management: Prior year carryover .....			- 3,000
181	Tomahawk and Tomahawk Mission Planning Center (TMPC) ....	32,385	26,145	- 6,240
	Budget documentation disparity: Unjustified A2AD improvements .....			- 6,240
184	Ground/Air Task Oriented Radar (G/ATOR) .....	99,106	92,106	- 7,000
	Restoring acquisition accountability: GATOR Block 2 undefined .....			- 7,000
185	Consolidated Training Systems Development .....	39,922	37,922	- 2,000
	Restoring acquisition accountability: Tactical combat training execution .....			- 2,000
189	Tactical Data Links .....	151,208	136,708	- 14,500
	Restoring acquisition accountability: Unjustified requirement for NTCDL .....			- 14,500
192	Aviation Improvements .....	106,936	111,936	+ 5,000
	Expeditionary program Increase .....			+ 5,000
197	Marine Corps Ground Combat/Supporting Arms Systems .....	156,626	52,419	- 104,207
	Transfer Amphibious Assault Vehicle to Line #197X .....			- 104,207
197X	Amphibious Assault Vehicle .....		104,207	+ 104,207
	Transfer Amphibious Assault Vehicle from Line #197 ....			+ 104,207
200	Tactical AIM Missiles .....	47,258	37,258	- 10,000
	Restoring acquisition accountability: AIM-9X Block III development .....			- 10,000
209	WWMCCS/Global Command and Control System .....	296	—	- 296
	Restoring acquisition accountability: Program was terminated last year .....			- 296
218	RQ-4 UAV .....	498,003	426,503	- 71,500
	Budget documentation disparity: Unjustified primary hardware development .....			- 6,500
	Delay start of modernization due to 3 years of slip in Production .....			- 60,000
	Transfer to RQ-4 Modernization Line #218X .....			- 5,000
218X	RQ-4 Modernization .....		5,000	+ 5,000
	Transfer from RQ-4 UAV for modernization Line #218 ....			+ 5,000
224	Multi-Intelligence Sensor Development .....	22,559	17,751	- 4,808
	Improving funds management: Prior year carryover .....			- 4,808

*Ocean Exploration Program.*—As recommended by the President’s Commission on Ocean Policy, the Office of Naval Research [ONR] should support the National Oceanic Atmospheric Administration’s “America’s Ocean Exploration Program” through continued cooperation on advanced technology, such as remotely controlled and autonomously operated vehicles. Where appropriate, the Committee encourages ONR to enable information sharing with other Federal research agencies by integrating and leveraging relevant research and data.

*Commonality for Command and Control Software.*—The Department of the Navy spends a significant portion of its annual budget to procure, develop, and maintain numerous Command and Control [C2] software systems to meet the needs of Navy Flight Test Ranges. These systems contain common software components. Typically, software components are not off-the-shelf systems, leading to complex interoperability challenges which limit data sharing. Therefore, the Committee urges the Navy to identify concepts that enable the decoupling of software components for reuse in future

Government C2 systems at Naval Flight Test Ranges. In addition, the Committee encourages the Navy to evaluate the value of establishing a government owned-government led open source code repository.

*Navy Alternative Energy.*—The Committee provides an additional \$25,000,000 for Navy alternative energy research. The Committee encourages the Navy to expand ocean renewable energy testing, research, develop, and deploy for maritime security systems, support at-sea surveillance and communications systems, and explore opportunities to reduce the cost of energy and increase energy security at coastal Department of Defense [DOD] facilities. The Committee encourages the Navy to continue its investments in developing ocean renewable energy technologies, as defined in the Energy Independence and Security Act of 2007, and to coordinate with the Department of Energy and designated National Marine Renewable Energy Centers for ocean renewable energy demonstration activities at or near DOD facilities.

*Power Generation and Energy Storage.*—The Committee supports the Navy's investments in power generation and energy storage research. The Committee notes that development and deployment of lithium-ion batteries are critical to current and future missions, but safety incidents and concerns have made it challenging for operational utility. Therefore, the Committee encourages the Department of the Navy to continue development and qualification of technologies to reduce the risk of thermal runaway in lithium-ion batteries.

*HAZMAT Elimination.*—Until recently, most on-board ship water purification systems used bromine as an antimicrobial. However, bromine is toxic, and requires special HAZMAT handling which is time-consuming and expensive. While the Navy has placed bromine-free systems on most of the large deck surface ship classes, it has not yet removed bromine systems from the LCS, CG, DDG, and FFG classes. The Committee urges the Navy to explore using systems that eliminate this HAZMAT threat to its personnel.

*Counter Anti-Access/Area Denial Capabilities.*—The Committee remains concerned about the ability of U.S. naval forces to confront anti-access/area-denial environments in maritime domains, particularly in the Asia Pacific region. U.S. Forces face complex and sophisticated emerging ballistic and cruise missile threats that impact operational access and mission effectiveness. The Committee urges the Office of Naval Research to conduct research efforts on technologies that enhance the ability of U.S. naval forces to operate in heavily contested environments.

*Integrated Undersea Surveillance System.*—The Committee understands that the Integrated Undersea Surveillance System provides the Navy with its primary means of submarine detection. The Committee believes that developing technology that is capable of autonomous installation of an undersea passive acoustic array should be a Navy priority. Therefore, the Committee encourages the Navy to continue developing this technology.

*Navy Integrated Capability Concept.*—The Committee notes the Department of the Navy is pursuing a streamlined approach to integrating multiple weapon systems under the Navy Integrated Capability Concept. This concept will greatly enhance interoperability

across weapon systems in the Navy; however, the other military departments are not participating in these integration activities. In addition, this concept is directing the modification of Navy weapons systems, which is expected to cost over \$4,000,000,000. The Committee believes that such a large financial commitment cannot be carried out without proper validation of requirements, which is required of any major defense acquisition program. As a result, the Committee directs the Cost Assessment and Program Evaluation [CAPE] and the Joint Requirements Oversight Council [JROC] to review and validate this cost and requirements of the concept and report to the congressional defense committees within 180 days of enactment of this act.

*Ohio Replacement Program.*—The fiscal year 2015 President’s budget request includes \$853,277,000 to continue development of the *Ohio*-class replacement submarine. The current fleet of 14 ballistic submarines are scheduled to retire in fiscal year 2027, after 42 years of service. The Committee received testimony from the Chief of Naval Operations that replacement of the *Ohio*-class SSBN “is the top priority program for the Navy” and encourages the same priority for the program in future years’ budgets. The Committee strongly urges the Navy to keep this program on schedule and within budget.

*F/A-18 and EA-18G Propulsion Upgrade Study.*—The Committee encourages the Department of the Navy to continue researching potential F414-400 turbofan engine upgrades for the F/A-18 and EA-18G. Therefore, the Committee fully funds the fiscal year 2015 request for the F/A-18 and EA-18G modernization plan.

*Amphibious Combat Vehicle.*—This fiscal year 2015 request includes \$105,749,000 to begin development of the Amphibious Combat Vehicle Increment 1.1. The funding is requested to manufacture 33 prototype vehicles, conduct testing and other associated costs. The Committee is supportive of the Marine Corps’ Amphibious Combat Vehicle [ACV] program but is concerned with aspects of the proposed acceleration of the acquisition strategy, such as inadequate test schedules and excessive numbers of prototypes. Therefore, the Committee fully funds the fiscal year 2015 request, but rescinds \$40,000,000 previously appropriated in the Department of Defense Appropriations Act, 2014. The combined fiscal year 2014 and fiscal year 2015 funds allows ample funding for competitive contract awards in fiscal year 2015.

*Electromagnetic Railgun.*—The Navy has initiated a new effort to transition several breakthrough technologies to the warfighter, including the electromagnetic railgun. The advantages of this capability include increased range over traditional propellant guns, enhanced lethality, increased ammunition storage capacity, and decreased costs when compared to current land attack missiles. The fiscal year 2015 President’s budget request includes, and the Committee fully funds, \$58,696,000 to procure equipment and define ship modifications for a railgun demonstration on a Joint High Speed Vessel.

In an effort to accelerate the railgun’s deployment and reduce the risk of this technology, the Committee encourages the Navy to fund a small railgun demonstration as proposed by the Defense Ordnance Technology Consortium. Demonstration of a smaller weapon

would allow for the rapid production, testing, and early fielding of a tactical railgun system. Once developed, this system may also be used for early fielding of an integrated air and missile defense system to provide testing components for other systems.

By April 1, 2015, the Committee directs the Secretary of Defense to submit a report to the congressional defense committees that outlines the Navy and Strategic Capabilities Office's plan to demonstrate a small (10 mega-joule or less system) electromagnetic railgun system as a step to reduce program risk for follow-on development efforts.

*Unmanned Carrier Launched Airborne Surveillance and Strike [UCLASS] System.*—The Committee supports the request of \$403,017,000 to continue the development of the UCLASS program in three segments: the air segment, the control system and connectivity segment, and the carrier segment. The Committee is concerned that the Navy is proceeding with UCLASS development prior to the formal establishment of stable requirements.

For example, earlier this year, the Navy issued a second draft request for proposals for the air segment, which included changes to the key performance parameters from the original draft. The changes in requirements forced industry to significantly change their air vehicle designs to better meet the amended parameters. This could have been avoided if the UCLASS requirements had been formally established through a Joint Requirements Oversight Council approved capability development document [CDD] prior to issuing a draft request for proposal. The Committee is concerned that the Navy is avoiding basic acquisition practices at the outset of a very large development program. To help ensure key performance parameters are well established and understood in the future, the Committee directs the Secretary of the Navy to obtain Joint Requirements Oversight Council approval of the UCLASS CDD before issuing the final request for proposal.

*MQ-4 Triton Unmanned Aerial Vehicle [UAV].*—The fiscal year 2015 President's budget requests \$498,003,000 to continue system development and begin modernization of the RQ-4 Triton UAV program. Last year, the program experienced a 2 year delay in development and added \$312,000,000 across fiscal years 2014 and 2015. This year, the program has experienced an additional year delay and added \$407,600,000 across fiscal years 2015, 2016 and 2017. The Committee is concerned with the cost and schedule breaches over the past few years. In addition, the Committee is troubled by the software development delays, the reduction of a test article, the development of a unique ground station, and the lack of anti-tamper systems to protect the critical technologies. Therefore, the Committee recommends deferring modernization until a review of the capabilities development document outlining the modernization program is performed by the Joint Review Oversight Council [JROC]. The Committee reduces the fiscal year 2015 research and development request by \$60,000,000, and directs the Navy to use \$5,000,000 to complete the analysis in support of the JROC review. The recommendation includes a separate modernization budget line item for transparency.

*Satellite Communications Interference.*—The Committee is aware that the Department of the Navy is investigating methodologies to

decrease interference in satellite communication between the Mobile User Objective System [MUOS] satellite transmission and the terminals. The Committee is concerned about problems associated with interference in ground terminals for wideband satellite communications systems and encourages further development of technologies that can effectively address this interference. Therefore, the Committee fully funds the budget request for the satellite communication development program and encourages the Navy to work with small businesses to provide an affordable solution.

RESEARCH, DEVELOPMENT, TEST AND EVALUATION, AIR FORCE

Appropriations, 2014 .....	\$23,585,292,000
Budget estimate, 2015 .....	23,739,892,000
House allowance .....	23,438,982,000
Committee recommendation .....	23,082,702,000

The Committee recommends an appropriation of \$23,082,702,000. This is \$657,190,000 below the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table summarizes the budget estimate for this appropriation, the Committee recommendation, and the Committee recommended adjustments to the budget estimate:

[In thousands of dollars]

	Item	2015 budget estimate	House allowance	Committee recommendation	Change from	
					Budget estimate	House allowance
	RESEARCH, DEVELOPMENT, TEST & EVAL, AIR FORCE					
	BASIC RESEARCH					
1	DEFENSE RESEARCH SCIENCES .....	314,482	314,482	389,979	+75,497	+75,497
2	UNIVERSITY RESEARCH INITIATIVES .....	127,079	127,079	147,079	+20,000	+20,000
3	HIGH ENERGY LASER RESEARCH INITIATIVES .....	12,929	12,929	13,950	+1,021	+1,021
	TOTAL, BASIC RESEARCH .....	454,490	454,490	551,008	+96,518	+96,518
	APPLIED RESEARCH					
4	MATERIALS .....	105,680	110,680	105,680	.....	-5,000
5	AEROSPACE VEHICLE TECHNOLOGIES .....	105,747	105,747	105,747	.....	.....
6	HUMAN EFFECTIVENESS APPLIED RESEARCH .....	81,957	96,957	81,957	.....	-15,000
7	AEROSPACE PROPULSION .....	172,550	172,550	197,550	+25,000	+25,000
8	AEROSPACE SENSORS .....	118,343	118,343	118,343	.....	.....
9	SPACE TECHNOLOGY .....	98,229	91,229	98,229	.....	+7,000
10	CONVENTIONAL MUNITIONS .....	87,387	87,387	87,387	.....	.....
11	DIRECTED ENERGY TECHNOLOGY .....	125,955	125,955	125,955	.....	.....
12	DOMINANT INFORMATION SCIENCES AND METHODS .....	147,789	147,789	147,789	.....	.....
13	HIGH ENERGY LASER RESEARCH .....	37,496	37,496	37,496	.....	.....
	TOTAL, APPLIED RESEARCH .....	1,081,133	1,094,133	1,106,133	+25,000	+12,000
	ADVANCED TECHNOLOGY DEVELOPMENT					
14	ADVANCED MATERIALS FOR WEAPON SYSTEMS .....	32,177	39,677	42,177	+10,000	+2,500
15	SUSTAINMENT SCIENCE AND TECHNOLOGY (S&T) .....	15,800	15,800	15,800	.....	.....
16	ADVANCED AEROSPACE SENSORS .....	34,420	34,420	34,420	.....	.....
17	AEROSPACE TECHNOLOGY DEV/DEMO .....	91,062	91,062	91,062	.....	.....
18	AEROSPACE PROPULSION AND POWER TECHNOLOGY .....	124,236	124,236	134,236	+10,000	+10,000
19	ELECTRONIC COMBAT TECHNOLOGY .....	47,602	47,602	47,602	.....	.....
20	ADVANCED SPACECRAFT TECHNOLOGY .....	69,026	63,026	69,026	.....	+6,000
21	MAUI SPACE SURVEILLANCE SYSTEM (MSSS) .....	14,031	14,031	14,031	.....	.....
22	HUMAN EFFECTIVENESS ADVANCED TECHNOLOGY DEVELOPMENT .....	21,788	21,788	21,788	.....	.....
23	CONVENTIONAL WEAPONS TECHNOLOGY .....	42,046	42,046	42,046	.....	.....
24	ADVANCED WEAPONS TECHNOLOGY .....	23,542	23,542	23,542	.....	.....
25	MANUFACTURING TECHNOLOGY PROGRAM .....	42,772	52,772	42,772	.....	-10,000



[In thousands of dollars]

	Item	2015 budget estimate	House allowance	Committee recommendation	Change from	
					Budget estimate	House allowance
74	ROCKET ENGINE DEVELOPMENT (SPACE)	.....	220,000	.....	.....	-220,000
77	EVOLVED EXPENDABLE LAUNCH VEHICLE PROGRAM (SPACE)	.....	.....	7,000	+7,000	+7,000
75	F-35—EMD	563,037	563,037	568,013	+4,976	+4,976
78	LONG RANGE STANDOFF WEAPON	4,938	3,438	1,938	-3,000	-1,500
79	ICBM FUZE MODERNIZATION	59,826	29,826	59,826	.....	+30,000
80	JOINT TACTICAL NETWORK CENTER (JTNC)	78	78	.....	-78	-78
81	F-22 MODERNIZATION INCREMENT 3.2B	173,647	173,647	156,347	-17,300	-17,300
82	GROUND ATTACK WEAPONS FUZE DEVELOPMENT	5,332	5,332	5,332	.....	.....
83	NEXT GENERATION AERIAL REFUELING AIRCRAFT KC-46	776,937	766,937	776,937	.....	+10,000
84	ADVANCED PILOT TRAINING	8,201	8,201	8,201	.....	.....
85	CSAR HH-60 RECAPITALIZATION	.....	100,000	100,000	+100,000	.....
86	HC/MC-130 RECAP RT&E	7,497	7,497	4,497	-3,000	-3,000
87	ADVANCED EHF MILSATCOM (SPACE)	314,378	296,038	308,578	-5,800	+12,540
88	POLAR MILSATCOM (SPACE)	103,552	103,552	103,552	.....	.....
89	WIDEBAND GLOBAL SATCOM (SPACE)	31,425	23,925	31,425	.....	+7,500
90	AIR AND SPACE OPS CENTER 10.2	85,938	85,938	85,938	.....	.....
91	B-2 DEFENSIVE MANAGEMENT SYSTEM	98,768	98,768	98,768	.....	.....
92	NUCLEAR WEAPONS MODERNIZATION	193,357	193,357	148,357	-50,000	-45,000
94	FULL COMBAT MISSION TRAINING	8,831	8,831	8,831	.....	.....
95	NEXTGEN JSTARS	73,088	73,088	10,000	-63,088	-63,088
	TOTAL, ENGINEERING & MANUFACTURING DEVELOPMENT	3,337,419	3,560,809	3,227,729	-109,690	-333,080
97	RT&E MANAGEMENT SUPPORT	.....	.....	24,418	.....	.....
98	THREAT SIMULATOR DEVELOPMENT	24,418	24,418	47,232	.....	.....
99	MAJOR T&E INVESTMENT	47,232	47,232	47,232	.....	.....
101	RAND PROJECT AIR FORCE	30,443	30,443	30,443	.....	.....
100	INITIAL OPERATIONAL TEST & EVALUATION	12,266	12,266	10,266	-2,000	-2,000
102	TEST AND EVALUATION SUPPORT	689,509	689,509	689,509	.....	.....
103	ROCKET SYSTEMS LAUNCH PROGRAM (SPACE)	34,364	34,364	34,364	.....	.....
104	SPACE TEST PROGRAM (STP)	21,161	21,161	21,161	.....	.....
105	FACILITIES RESTORATION & MODERNIZATION—TEST & EVAL	46,955	46,955	46,955	.....	.....
106	FACILITIES SUSTAINMENT—TEST AND EVALUATION SUPPORT	32,965	32,965	32,965	.....	.....
107	REQUIREMENTS ANALYSIS AND MATURATION	13,850	13,850	16,850	+3,000	+3,000
108	SPACE TEST AND TRAINING RANGE DEVELOPMENT	19,512	19,512	19,512	.....	.....
110	SPACE AND MISSILE CENTER [SMC] CIVILIAN WORKFORCE	181,727	177,800	176,727	-5,000	-1,073

111	ENTERPRISE INFORMATION SERVICES (EIS)	4,938	4,938	4,938	4,938	.....	.....	.....
112	ACQUISITION AND MANAGEMENT SUPPORT	18,644	18,644	18,644	18,644	.....	.....	.....
113	ELECTRONIC ACQUISITION SERVICES ENVIRONMENT	1,425	1,425	1,425	1,425	.....	.....	.....
114	GENERAL SKILL TRAINING	3,790	3,790	3,790	3,790	.....	.....	.....
	TOTAL, RDT&E MANAGEMENT SUPPORT	1,183,199	1,179,272	1,179,199	1,179,199	-4,000	-4,000	-73
	OPERATIONAL SYSTEMS DEVELOPMENT							
115	GPS III—OPERATIONAL CONTROL SEGMENT	299,760	299,760	299,760	299,760	.....	.....	.....
117	WIDE AREA SURVEILLANCE	2,000	2,000	2,000	2,000	.....	.....	-2,000
118	JOINT DIRECT ATTACK MUNITION	2,469	2,469	2,469	2,469	.....	.....	.....
119	AIR FORCE INTEGRATED MILITARY HUMAN RESOURCES SYSTEM	90,218	90,218	60,218	60,218	-30,000	-30,000	-30,000
120	ANTI-TAMPER TECHNOLOGY EXECUTIVE AGENCY	34,815	34,815	34,815	34,815	.....	.....	.....
122	B-52 SQUADRONS	55,457	55,457	33,857	33,857	-21,600	-21,600	-21,600
123	AIR-LAUNCHED CRUISE MISSILE (ALCM)	450	450	450	450	.....	.....	.....
124	B-1B SQUADRONS	5,353	4,353	2,353	2,353	-3,000	-3,000	-2,000
125	B-2 SQUADRONS	131,580	105,680	111,580	111,580	-20,000	-20,000	+5,900
126	MINUTEMAN SQUADRONS	139,109	139,109	139,109	139,109	.....	.....	.....
127	STRAT WAR PLANNING SYSTEM—USSTRATCOM	35,603	35,603	28,703	28,703	-6,900	-6,900	-6,900
128	NIGHT FIST—USSTRATCOM	32	32	32	32	-32	-32	-32
130	REGION/SECTOR OPERATION CONTROL CENTER MODERNIZATION	1,522	1,522	1,522	1,522	.....	.....	.....
131	SERVICE SUPPORT TO STRATCOM—SPACE ACTIVITIES	3,134	3,134	3,134	3,134	.....	.....	.....
133	MQ-9 UAV	170,396	170,396	149,096	149,096	-21,300	-21,300	-21,300
136	F-16 SQUADRONS	133,105	133,105	133,105	133,105	.....	.....	.....
137	F-15E SQUADRONS	261,969	251,969	236,969	236,969	-25,000	-25,000	-15,000
138	MANNED DESTRUCTIVE SUPPRESSION	14,831	14,831	14,831	14,831	.....	.....	.....
139	F-22 SQUADRONS	156,962	151,362	151,962	151,962	+5,000	+5,000	+600
140	F-35 SQUADRONS	43,666	43,666	24,477	24,477	-19,189	-19,189	-19,189
141	TACTICAL AIM MISSILES	29,739	29,739	29,739	29,739	.....	.....	.....
142	ADVANCED MEDIUM RANGE AIR-TO-AIR MISSILE (AMRAAM)	82,195	82,195	82,195	82,195	.....	.....	.....
144	F-15 EPWSS	68,944	68,944	38,944	38,944	-30,000	-30,000	-30,000
145	COMBAT RESCUE AND RECOVERY	5,095	5,095	5,095	5,095	.....	.....	.....
146	COMBAT RESCUE—PARARESCUE	883	883	883	883	.....	.....	.....
147	AF TENCAP	5,812	5,812	5,812	5,812	.....	.....	.....
148	PRECISION ATTACK SYSTEMS PROCUREMENT	1,081	1,081	1,081	1,081	.....	.....	.....
149	COMPASS CALL	14,411	14,411	14,411	14,411	.....	.....	.....
150	AIRCRAFT ENGINE COMPONENT IMPROVEMENT PROGRAM	109,664	94,177	109,664	109,664	.....	.....	+15,487
151	JOINT AIR-TO-SURFACE STANDOFF MISSILE (JASSM)	15,897	15,897	12,897	12,897	-3,000	-3,000	-3,000
152	AIR AND SPACE OPERATIONS CENTER (AOC)	41,066	41,066	26,666	26,666	-14,400	-14,400	-14,400
153	CONTROL AND REPORTING CENTER (CRC)	552	552	552	552	-552	-552	-552
154	AIRBORNE WARNING AND CONTROL SYSTEM (AWACS)	180,804	180,804	180,804	180,804	.....	.....	.....

[In thousands of dollars]

	Item	2015 budget estimate	House allowance	Committee recommendation	Change from	
					Budget estimate	House allowance
155	TACTICAL AIRBORNE CONTROL SYSTEMS .....	3,754	3,754	3,754		
157	COMBAT AIR INTELLIGENCE SYSTEM ACTIVITIES .....	7,891	7,891	7,891		
158	TACTICAL AIR CONTROL PARTY—MOD .....	5,891	5,891	5,891		
159	C2ISR TACTICAL DATA LINK .....	1,782	1,782	1,782		
161	DCAPES .....	821	821	821		
163	SEEK EAGLE .....	23,844	23,844	23,844		
164	USAF MODELING AND SIMULATION .....	16,723	16,723	12,123	-4,600	-4,600
165	WARGAMING AND SIMULATION CENTERS .....	5,956	5,956	5,956		
166	DISTRIBUTED TRAINING AND EXERCISES .....	4,457	4,457	3,357	-1,100	-1,100
167	MISSION PLANNING SYSTEMS .....	60,679	60,679	60,679		
169	CYBER COMMAND ACTIVITIES .....	67,057	67,057	67,057		
170	AF OFFENSIVE CYBERSPACE OPERATIONS .....	13,355	13,355	13,355		
171	AF DEFENSIVE CYBERSPACE OPERATIONS .....	5,576	5,576	5,576		
179	SPACE SUPERIORITY INTELLIGENCE .....	12,218	10,697	12,218		+1,521
180	E-4B NATIONAL AIRBORNE OPERATIONS CENTER (NAOC) .....	28,778	1,700	22,978	-5,800	+21,278
181	MINIMUM ESSENTIAL EMERGENCY COMMUNICATIONS NETWORK .....	81,035	81,035	81,035		
182	INFORMATION SYSTEMS SECURITY PROGRAM .....	70,497	70,497	70,497		
183	GLOBAL COMBAT SUPPORT SYSTEM .....	692	692	692		
185	MILSATCOM TERMINALS .....	55,208	49,950	55,208		+5,258
187	AIRBORNE SIGINT ENTERPRISE .....	106,786	106,786	74,496	-32,290	-32,290
190	GLOBAL AIR TRAFFIC MANAGEMENT (GATM) .....	4,157	4,157	4,157		
193	SATELLITE CONTROL NETWORK (SPACE) .....	20,806	20,806	20,806		
194	WEATHER SERVICE .....	25,102	25,102	20,102	-5,000	-5,000
195	AIR TRAFFIC CONTROL, APPROACH, & LANDING SYSTEM (ATC) .....	23,516	23,516	26,516	+3,000	+3,000
196	AERIAL TARGETS .....	8,639	8,639	8,639		
199	SECURITY AND INVESTIGATIVE ACTIVITIES .....	498	498		-498	-498
200	ARMS CONTROL IMPLEMENTATION .....	13,222	13,222	13,222		
201	DEFENSE JOINT COUNTERINTELLIGENCE ACTIVITIES .....	360	360	40	-320	-320
206	SPACE AND MISSILE TEST AND EVALUATION CENTER .....	3,674	3,326	3,674		+348
207	SPACE WARFARE CENTER .....	2,480	2,071	2,480		+409
208	INTEGRATED BROADCAST SERVICE .....	8,592	6,954	8,592		+1,638
209	SPACE/LIFT RANGE SYSTEM (SPACE) .....	13,462	13,462	13,462		
210	DRAGON U-2 .....	5,511	5,511	5,511		
211	ENDURANCE UNMANNED AERIAL VEHICLES .....			20,000	+20,000	+20,000
212	AIRBORNE RECONNAISSANCE SYSTEMS .....	28,113	38,113	28,113		-10,000



[In thousands of dollars]

Item	2015 budget estimate	House allowance	Committee recommendation	Change from	
				Budget estimate	House allowance
TOTAL, RESEARCH, DEVELOPMENT, TEST & EVAL, AIR FORCE .....	23,739,892	23,438,982	23,082,702	- 657,190	- 356,280

## COMMITTEE RECOMMENDED ADJUSTMENTS

The following table details the adjustments recommended by the Committee:

[In thousands of dollars]

Line	Program element title	Fiscal year 2014 base	Committee recommendation	Change from budget estimate
1	Defense Research Sciences .....	314,482	389,979	+ 75,497
	Program increase .....			+ 75,497
2	University Research Initiatives .....	127,079	147,079	+ 20,000
	Program increase .....			+ 20,000
3	High Energy Laser Research Initiatives .....	12,929	13,950	+ 1,021
	Program increase .....			+ 1,021
7	Aerospace Propulsion .....	172,550	197,550	+ 25,000
	Program increase: Liquid rocket engine develop- ment .....			+ 25,000
14	Advanced Materials for Weapon Systems .....	32,177	42,177	+ 10,000
	Program increase: Metals affordability research .....			+ 10,000
18	Aerospace Propulsion and Power Technology .....	124,236	134,236	+ 10,000
	Program increase: Silicon Carbide research .....			+ 10,000
39	Pollution Prevention—Dem/Val .....	1,798	998	– 800
	Improving funds management: Forward financing .....			– 800
42	Technology Transfer .....	2,669	5,169	+ 2,500
	Program increase .....			+ 2,500
49	F–35—EMD .....	4,976		– 4,976
	Transfer F–35 EMD: Air Force requested to line #75 .....			– 4,976
50	Operationally Responsive Space .....		20,000	+ 20,000
	Program increase .....			+ 20,000
51	Tech Transition Program .....	59,004	84,004	+ 25,000
	Program increase: Alternative energy research .....			+ 25,000
54	Next Generation Air Dominance .....	15,722	6,000	– 9,722
	Restoring acquisition accountability: Concept devel- opment studies inherently governmental .....			– 9,722
60	Electronic Warfare Development .....	1,965	10,065	+ 8,100
	Program increase: Digital radar warning receiver for the Air National Guard .....			+ 10,000
	Improving funds management: Forward financing .....			– 1,900
66	Space Fence .....	214,131	154,131	– 60,000
	Restoring acquisition accountability: Program delay .....			– 60,000
67	Airborne Electronic Attack .....	30,687	10,687	– 20,000
	Restoring acquisition accountability: Next Gen Elec- tronic Attack analysis-of-alternatives inherently governmental .....			– 20,000
69	Armament/Ordnance Development .....	31,112	27,112	– 4,000
	Improving funds management: Add lead time for acquisition planning—Improved Lethality .....			– 4,000
71	Agile Combat Support .....	46,340	42,840	– 3,500
	Improving funds management: Forward financing— airfield damage repair .....			– 3,500
75	F–35—EMD .....	563,037	568,013	+ 4,976
	Transfer F–35 EMD: Air Force requested from line #49 .....			+ 4,976
77	Evolved Expendable Launch Vehicle Program (SPACE)— EMD .....		7,000	+ 7,000
	Program increase: Space Launch Range services and capability .....			+ 7,000
78	Long Range Standoff Weapon .....	4,938	1,938	– 3,000
	Restoring acquisition accountability: Program delay .....			– 3,000
80	Joint Tactical Network Center [JTNC] .....	78		– 78
	Improving funds management: Excess to need .....			– 78
81	F–22 Modernization Increment 3.2B .....	173,647	156,347	– 17,300
	Improving funds management: Historic underexecu- tion .....			– 17,300
85	CSAR HH–60 Recapitalization .....		100,000	+ 100,000

[In thousands of dollars]

Line	Program element title	Fiscal year 2014 base	Committee recommendation	Change from budget estimate
	Program increase .....			+ 100,000
86	HC/MC-130 Recap RDT&E .....	7,497	4,497	- 3,000
	Improving funds management: Forward financing ...			- 3,000
87	Advanced EHF MILSATCOM (SPACE) .....	314,378	308,578	- 5,800
	Budget document disparity: Excessive program management services—Evolved AEHF .....			- 5,800
92	Nuclear Weapons Modernization .....	198,357	148,357	- 50,000
	Improving funds management: Forward financing ...			- 50,000
95	NextGen JSTARS .....	73,088	10,000	- 63,088
	Restoring acquisition accountability: Early to need—awaiting Concept Development Document approval .....			- 63,088
101	Initial Operational Test & Evaluation .....	12,266	10,266	- 2,000
	Maintain program affordability: Unjustified increase—Weapons OT&E .....			- 2,000
107	Requirements Analysis and Maturation .....	13,850	16,850	+ 3,000
	Program increase .....			+ 3,000
110	Space and Missile Center [SMC] Civilian Workforce .....	181,727	176,727	- 5,000
	Improving funds management: Optimistic hiring forecast .....			- 5,000
119	AF Integrated Personnel and Pay System [AF-IPPS] .....	90,218	60,218	- 30,000
	Restoring acquisition accountability: Delayed contract award .....			- 30,000
122	B-52 Squadrons .....	55,457	33,857	- 21,600
	Maintain program affordability: 1760 Internal Weapons Bay Upgrade Inc 2 .....			- 10,000
	Improving funds management: Forward financing ...			- 11,600
124	B-1B Squadrons .....	5,353	2,353	- 3,000
	Improving funds management: Forward financing ...			- 3,000
125	B-2 Squadrons .....	131,580	111,580	- 20,000
	Improving funds management: Forward financing ...			- 20,000
127	Strat War Planning System—USSTRATCOM .....	35,603	28,703	- 6,900
	Restoring acquisition accountability: Increment 4 contract award delay .....			- 5,500
	Maintain program affordability: Data integration—unjustified cost increase .....			- 1,400
128	Night Fist—USSTRATCOM .....	32		- 32
	Budget document disparity: Unjustified request .....			- 32
133	MQ-9 UAV .....	170,396	149,096	- 21,300
	Maintain program affordability: System Development and Demonstration .....			- 21,300
137	F-15E Squadrons .....	261,969	236,969	- 25,000
	Improving funds management: Forward financing ...			- 20,000
	Restoring acquisition accountability: Infrared Search and Track .....			- 5,000
139	F-22A Squadrons .....	156,962	151,962	- 5,000
	Maintain program affordability: Unjustified increase—laboratory test and operations .....			- 5,000
140	F-35 Squadrons .....	43,666	24,477	- 19,189
	Restoring acquisition accountability: Delay dual capable aircraft until Capability Development Document approval .....			- 15,615
	Restoring acquisition accountability: Acquisition Decision Memorandum \$40 million limitation .....			- 3,574
144	F-15 EPAWSS .....	68,944	38,944	- 30,000
	Restoring acquisition accountability: Optimistic schedule .....			- 30,000
151	Joint Air-to-Surface Standoff Missile [JASSM] .....	15,897	12,897	- 3,000
	Improving funds management: Forward financing ...			- 3,000
152	Air & Space Operations Center [AOC] .....	41,066	26,666	- 14,400
	Maintain program affordability: Applications development—unjustified increase .....			- 14,400
153	Control and Reporting Center [CRC] .....	552		- 552
	Improving funds management: Forward financing ...			- 552

[In thousands of dollars]

Line	Program element title	Fiscal year 2014 base	Committee recommendation	Change from budget estimate
164	USAF Modeling and Simulation .....	16,723	12,123	-4,600
	Maintain program affordability: Unjustified Increase—Air Constructive Environment .....			-4,600
166	Distributed Training and Exercises .....	4,457	3,357	-1,100
	Maintain program affordability: Unjustified Increase .....			-1,100
180	E-4B National Airborne Operations Center (NAOC) .....	28,778	22,978	-5,800
	Restoring acquisition accountability: Low Frequency Transmit System—delay to contract award .....			-5,800
187	Airborne SIGINT Enterprise .....	106,786	74,496	-32,290
	Improving funds management: Medium Altitude on hold .....			-32,290
194	Weather Service .....	25,102	20,102	-5,000
	Improving funds management: Forward financing .....			-5,000
195	Air Traffic Control, Approach, and Landing System [ATCALs] .....	23,516	26,516	+3,000
	Program increase: Ground Based Sense and Avoid .....			+3,000
199	Security and Investigative Activities .....	498		-498
	Restoring acquisition accountability: Pursue commercial off-the-shelf products .....			-498
201	Defense Joint Counterintelligence Activities .....	360	40	-320
	Improving funds management: Excess to need .....			-320
211	Endurance Unmanned Aerial Vehicles .....		20,000	+20,000
	Long-range, multi-day endurance ISR capability development for AFRICOM Joint Emerging Operational Need Statement (AF-0005) .....			+20,000
215	MQ-1 Predator A UAV .....	1,378		-1,378
	Improving funds management: Air Force divesting MQ-1 fleet .....			-1,378
216	RQ-4 UAV .....	244,514	242,214	-2,300
	Maintain program affordability: Test and Non Prime Support—unjustified increase .....			-2,300
218	Common Data Link (CDL) .....	36,137	27,137	-9,000
	Improving funds management: Forward financing .....			-9,000
220	Support to DCGS Enterprise .....	20,218	17,118	-3,100
	Improving funds management: Forward financing .....			-3,100
232	C-130J Program .....	26,715	22,415	-4,300
	Restoring acquisition accountability: Block 8.1 Software—unjustified increase .....			-4,300
233	Large Aircraft IR Countermeasures (LAIRCM) .....	5,172	4,272	-900
	Maintain program affordability: Studies and analysis—unjustified increase .....			-900
241	Logistics Information Technology (LOGIT) .....	109,685	63,035	-46,650
	Restoring acquisition accountability: Delay transformation projects .....			-46,650
250	Financial Management Information Systems Development .....	107,314	102,685	-4,629
	Restoring acquisition accountability: Defense Enterprise Accounting Management System Increment 2 .....			-4,629
	Classified Programs .....	11,441,120	11,022,938	-418,182
	Classified adjustment .....			-418,182

*Technology Transfer.*—The Committee recognizes the importance of the technology transfer program and recommends an additional \$2,500,000 to complement and leverage current program efforts largely focused on licensing Department of Defense patents across a broad range of industries. The Committee encourages the Department of Defense to apply the additional funds to universities with robust programs in aviation and aerospace research. The funds will allow these universities to lead the transfer of defense technology

to address specific technology shortfalls within the United States aviation and aerospace industry.

*The Competitive Rocket Innovation—Modern Engine Arrangement.*—The Committee is concerned with the Air Force’s reliance on the Russian RD–180 engine to power the first stage of the Atlas V launch vehicle for assured access to space. When the Department originally decided to use the RD–180 engine, the Air Force committed to develop an advanced rocket engine that would eventually replace the RD–180. Unfortunately, the Air Force failed to make rocket engine development a priority, so the program remains a science and technology project with no formal completion schedule that would deliver a new engine in this decade.

The fiscal year 2015 science and technology budget request includes \$43,059,000 for liquid rocket engine technology development. The Committee believes this level of funding falls short of the investment needed to create a viable new engine program and therefore adds \$25,000,000.

The Committee also recognizes that, in addition to assuring access to space for national payloads, civil space programs and the commercial launch industry would benefit from an affordable, domestically manufactured, advanced technology rocket engine that would be available to all launch providers. Therefore, the Committee directs the Secretary of the Air Force to develop an affordable, competitive rocket engine development strategy that delivers a rocket engine by 2019. The strategy should include an assessment of the potential benefits and challenges of using public-private partnerships and innovative teaming arrangements. The Secretary of the Air Force shall submit the development strategy to the congressional defense committees no later than 180 days after the enactment of this act.

*Space Launch Range Services and Capability.*—The Committee notes that a lack of competition for launch services over the past decade has resulted in significant launch costs and disincentives for industry to invest in development to improve launch capabilities. The Committee believes additional competition can be achieved by creating new opportunities within the United States launch infrastructure, including commercial and State-owned launch facilities. Increasing the capability and number of launch facilities helps to ensure our Nation’s ability to launch priority space assets. Therefore, to promote competition at launch facilities, \$7,000,000 is provided to spaceports or launch and range complexes that are commercially licensed by the Federal Aviation Administration and receive funding from the local or State government. These funds shall be used to develop the capacity to provide mid-to-low inclination orbits or polar-to-high inclination orbits in support of the national security space program.

*Combat Rescue Helicopter.*—The Committee fully supports the Air Force’s decision to proceed with an acquisition program to replace the aging HH–60G Pave Hawk combat search and rescue helicopter. Due to the timing of this decision, the President’s budget request for fiscal year 2015 reflects no funding in fiscal year 2015 and a shortfall of \$436,000,000 from fiscal year 2016 through 2018.

Since 2010, the HH–60G Pave Hawk readiness rate has remained around 60 percent. However, the cost to achieve this rate

has grown an average of 7 percent year-by-year. Based on this data, the Committee believes it is unaffordable not to recap the aging Pave Hawk fleet. Therefore, the Committee provides an additional \$100,000,000 in fiscal year 2015 and urges the Secretary of the Air Force to fully fund this program in the out-years consistent with the most recent decision on the program.

The Committee notes that some combat rescue scenarios in the Africa Command and Pacific Command areas of responsibilities could create challenges to a pure rotor wing fleet. Therefore, to ensure the program addresses the full spectrum of combat rescue missions, the Committee encourages the Air Force to review the joint operational needs and requirements to determine if a high-low capability would best meet the combatant commander's needs.

The Committee also directs that should the Secretary of the Air Force consider terminating the combat rescue helicopter program, a 30-day written notification must first be provided to the congressional defense committees. This program is designated as a congressional special interest item.

*Joint Surveillance and Target Attack Radar System [JSTARS] Recapitalization.*—The Committee is encouraged by the Air Force's effort to replace the aging, and increasingly costly, JSTARS E-8C aircraft, and supports the conclusions of Air Force's Analysis of Alternatives [AOA] study. The AOA determined that a business jet aircraft outfitted with existing moving target indicator [MTI] radar and battle management command and control [BMC2] technology would meet the combatant commanders' warfighting requirements at the lowest cost. However, the budget request shows that the Air Force intends to pursue a traditional acquisition program and expend nearly \$2,000,000,000 on a research and development effort despite the fact that existing radars could be integrated onto existing business jet airframes.

The Committee is concerned that the Air Force plans to begin retirement of this high demand/low density asset in 2016 just as it is embarking on an extensive development program with no production planned until 2019. Further, the Air Force plans to launch into competitive prototyping in fiscal year 2015 before a formal capabilities development document is approved that finalizes the system requirements to be prototyped. The Air Force states their plan is to leverage high technology readiness level communication, sensor, and BMC2 system technologies to reduce program cost, schedule, and risk.

However, the program, as laid out, will not enter into the engineering, manufacturing, and development phase until fiscal year 2017, with over \$400,000,000 spent prior to that phase. The current acquisition strategy does not reflect the mature, affordable and existing components that will be utilized.

The Committee believes this is an integration effort rather than a research and development effort, and for that reason, reduces the fiscal year 2015 request by \$63,088,000, and directs the Secretary of the Air Force to reassess the acquisition strategy to shorten the development phase and enter into production earlier.

*B-52 Radar Replacement.*—In March 2013, the Air Force submitted a report to the Committee that stated replacing the B-52 radar will cost less than sustaining its existing radar for the re-

maining service life of the aircraft. The Committee also understands that legacy radar sustainment costs will increase in the coming years, but the Air Force cannot afford the up-front development cost of a replacement radar. The Committee recommends the Secretary of the Air Force reassess the cost of a new radar versus the cost of sustaining the legacy radar, and consider including funds in the fiscal year 2016 budget request to begin replacement of the B-52 legacy radar system.

*Requirements Analysis and Maturation.*—The Committee understands that the Department of Defense [DOD] has spent over \$130,000,000 to develop and deploy multi-physics engineering software applications. These applications have been used in over 70 pilot demonstration programs to improve the outcomes of DOD weapon system acquisitions through rapid virtual prototyping using high performance computing and software tailored for complex DOD weapon system issues. The Committee believes that the Department is on the verge of making a paradigm change in weapons system engineering. Therefore, the Committee encourages the Department to expand and institutionalize virtual prototyping in the weapon system acquisition process. The Committee provides an additional \$3,000,000 to establish a systems engineering capability for DOD weapon system virtual prototyping based on high performance computing.

*Advanced Extremely High Frequency Terminals.*—The Committee is concerned with the change to the Air Force's plan that delays development and acquisition of Advanced Extremely High Frequency [AEHF] terminals for the bomber fleet of aircraft. The Committee believes that any gap in command and control of nuclear forces is unacceptable. Therefore, the Committee directs that the Secretary of the Air Force provide a detailed plan on how it will mitigate any bomber related command and control shortfall resulting from the revised AEHF terminal acquisition strategy. The report shall be submitted to the congressional defense committees not later than 120 days from enactment of this act.

*C-130H Upgrades for the Air National Guard.*—The Committee received a letter from the State Adjutants General of the National Guard outlining their support for continued modernization of the Air National Guard's C-130H fleet. In this letter, the Adjutants General expressed their concern that the C-130H fleet would not be modified with Automatic Dependent Surveillance-Broadcast [ADS-B] Out capability prior to 2020. The letter highlights that the current \$2,300,000,000 C-130 Avionics Modernization Program [AMP] does not include this critical ADS-B Out capability. Because the AMP does not include the ADS-B Out modification, the Committee is encouraged by the State Adjutants General request to pursue an alternative C-130 Communication, Navigation, Surveillance/Air Traffic Management [CNS/ATM] solution for the Air National Guard to meet the 2020 mandate. Therefore, the Committee would be willing to consider a reprogramming request submitted to the congressional defense committees transferring fiscal year 2015 funds to the C-130 Airlift Squadrons budget line item in the Research, Development, Test and Evaluation, Air Force appropriation to begin a program in fiscal year 2015.

*High-Altitude Intelligence, Surveillance, and Reconnaissance [ISR] Programs.*—The RQ-4 Global Hawk provides unique capabilities that are in high demand supporting critical missions in all six geographic combatant command regions across the globe. Likewise, the U-2 aircraft provides unique intelligence, surveillance, and reconnaissance [ISR] capabilities and treaty verification data currently unmet by any other Air Force platform. In the fiscal year 2015 budget request, the Air Force outlines its intent to begin retiring the U-2 fleet in 2016. The Air Force also proposes to begin work that will integrate the U-2 sensor onto the Global Hawk platform at a cost of \$487,000,000, as reported in 2013. The Committee is concerned by the Air Force's decision to retire a critical piece of its high-altitude ISR fleet without a high-altitude ISR transition plan, and the projected cost to upgrade the Global Hawk Block 30. Therefore, of the amounts appropriated in Research, Development, Test and Evaluation, Air Force for Global Hawk RQ-4 UAV, \$77,100,000 intended for payload integration may not be obligated until the Secretary of Defense provides a classified report to the congressional defense committees. The report should identify the different types of high-altitude, combatant commander strategic ISR requirements, which platforms are or can be used to fulfill these requirements, and which requirements will not be met if the U-2 is retired. This report shall also contain an updated high-altitude ISR transition plan and an estimate of the cost to modify the Global Hawk Block 30 or any other platform.

*Arctic Domain Awareness.*—The Committee is concerned with the pace of needed development in the arctic region, particularly with respect to arctic domain awareness. The United States currently has a limited weather satellite presence covering the region that will be further reduced by 2019. Therefore, the Committee directs the Secretary of Defense to provide a report to the congressional defense committees, within 180 days of enactment of this act, outlining a plan to ensure arctic domain awareness coverage for the foreseeable future, including an assessment of the potential to partner with Canada on the Canadian Weather Satellite mission.

*Air Force T-1A Aircraft.*—The T-1A aircraft is used to train all tanker and transport pilots and, due to its age, requires significant upgrades or a service life extension. The Committee supports section 139 of S. 2410, the National Defense Authorization Act for Fiscal Year 2015, as reported, which requires the Air Force to submit to the congressional defense committees a report on the options for replacing or upgrading the T-1A aircraft's capability.

*Minority Leaders Program.*—The Committee encourages the Air Force Research Laboratory to invest in research activities that can be conducted by the Air Force Minority Leaders Program to meet critical defense capabilities, science and technology, future workforce, and technical program objectives for the Air Force. Additionally, the Committee urges the Air Force Research Laboratory to expand the research areas in which the Air Force Minority Leaders Program can participate.

## RESEARCH, DEVELOPMENT, TEST AND EVALUATION, DEFENSE-WIDE

Appropriations, 2014 .....	\$17,086,412,000
Budget estimate, 2015 .....	16,766,084,000
House allowance .....	17,067,900,000
Committee recommendation .....	16,805,571,000

The Committee recommends an appropriation of \$16,805,571,000.  
This is \$39,487,000 above the budget estimate.

## COMMITTEE RECOMMENDED PROGRAM

The following table summarizes the budget estimate for this appropriation, the Committee recommendation, and the Committee recommended adjustments to the budget estimate:

[In thousands of dollars]

	Item	2015 budget estimate	House allowance	Committee recommendation	Change from	
					Budget estimate	House allowance
	<b>RESEARCH, DEVELOPMENT, TEST &amp; EVAL., DEFENSE-WIDE</b>					
	<b>BASIC RESEARCH</b>					
1	DTRA UNIVERSITY STRATEGIC PARTNERSHIP BASIC RESEARCH .....	37,778	37,778	37,778		
2	DEFENSE RESEARCH SCIENCES .....	312,146	312,146	332,146	+20,000	+20,000
3	BASIC RESEARCH INITIATIVES .....	44,564	34,564	44,564		+10,000
4	BASIC OPERATIONAL MEDICAL RESEARCH SCIENCE .....	49,848	49,848	60,757	+10,909	+10,909
5	NATIONAL DEFENSE EDUCATION PROGRAM .....	45,488	55,488	60,488	+15,000	+5,000
6	HISTORICALLY BLACK COLLEGES & UNIV (HBCU) .....	24,412	34,412	31,412	+7,000	-3,000
7	CHEMICAL AND BIOLOGICAL DEFENSE PROGRAM .....	48,261	48,261	48,261		
	<b>TOTAL, BASIC RESEARCH .....</b>	<b>562,497</b>	<b>572,497</b>	<b>615,406</b>	<b>+52,909</b>	<b>+42,909</b>
	<b>APPLIED RESEARCH</b>					
8	JOINT MUNITIONS TECHNOLOGY .....	20,065	20,065	20,065		
9	BIOMEDICAL TECHNOLOGY .....	112,242	114,790	112,242		-2,548
11	LINCOLN LABORATORY RESEARCH PROGRAM .....	51,875	47,875	51,875		+4,000
12	APPLIED RESEARCH FOR ADVANCEMENT S&T PRIORITIES .....	41,965	41,965	41,965		
13	INFORMATION AND COMMUNICATIONS TECHNOLOGY .....	334,407	334,407	324,407	-10,000	-10,000
15	BIOLOGICAL WARFARE DEFENSE .....	44,825	44,825	44,825		
16	CHEMICAL AND BIOLOGICAL DEFENSE PROGRAM .....	226,317	226,317	226,317		
18	CYBER SECURITY RESEARCH .....	15,000	15,000	15,000		
20	TACTICAL TECHNOLOGY .....	305,484	305,484	300,484	-5,000	-5,000
21	MATERIALS AND BIOLOGICAL TECHNOLOGY .....	160,389	160,389	150,389	-10,000	-10,000
22	ELECTRONICS TECHNOLOGY .....	179,203	179,203	169,203	-10,000	-10,000
23	WEAPONS OF MASS DESTRUCTION DEFEAT TECHNOLOGIES .....	151,737	151,737	151,737		
24	SOFTWARE ENGINEERING INSTITUTE .....	9,156	9,156	9,156		
25	SPECIAL OPERATIONS TECHNOLOGY DEVELOPMENT .....	39,750	34,750	39,750		+5,000
	<b>TOTAL, APPLIED RESEARCH .....</b>	<b>1,692,415</b>	<b>1,685,963</b>	<b>1,657,415</b>	<b>-35,000</b>	<b>-28,548</b>
	<b>ADVANCED TECHNOLOGY DEVELOPMENT</b>					
26	JOINT MUNITIONS ADVANCED TECH INSENSITIVE MUNITIONS AD .....	26,688	26,688	26,688		
27	SO/LIC ADVANCED DEVELOPMENT .....	8,682	8,682	8,682		
28	COMBATING TERRORISM TECHNOLOGY SUPPORT .....	69,675	79,675	99,675	+30,000	+20,000
29	FOREIGN COMPARATIVE TESTING .....	30,000	24,000	20,000	-10,000	-4,000
30	COUNTERPROLIFERATION INITIATIVES—PROLIF PREVY & DEFEAT .....	283,694	291,694	283,694		-8,000

[In thousands of dollars]

	Item	2015 budget estimate	House allowance	Committee recommendation	Change from	
					Budget estimate	House allowance
32	ADVANCED CONCEPTS AND PERFORMANCE ASSESSMENT .....	8,470	8,470	8,470	.....	.....
33	DISCRIMINATION SENSOR TECHNOLOGY .....	45,110	43,110	32,110	.....	-11,000
34	WEAPONS TECHNOLOGY .....	14,068	34,068	14,068	.....	-20,000
35	ADVANCED CAISR .....	15,329	13,284	15,329	.....	+2,045
36	ADVANCED RESEARCH .....	16,584	16,584	16,584	.....	.....
37	JOINT DOD—DOE MUNITIONS TECHNOLOGY DEVELOPMENT .....	19,335	19,335	19,335	.....	.....
38	AGILE TRANSPO FOR THE 21ST CENTURY [AT21]—THEATER CA .....	2,544	2,544	2,544	.....	.....
39	SPECIAL PROGRAM—MDA TECHNOLOGY .....	51,033	40,433	51,033	.....	+10,600
40	ADVANCED AEROSPACE SYSTEMS .....	129,723	129,723	129,723	.....	.....
41	SPACE PROGRAMS AND TECHNOLOGY .....	179,883	179,883	179,883	.....	.....
42	ANALYTIC ASSESSMENTS .....	12,000	12,000	12,000	.....	.....
43	ADVANCED INNOVATIVE ANALYSIS AND CONCEPTS .....	60,000	50,000	53,000	.....	+3,000
44	COMMON KILL VEHICLE TECHNOLOGY .....	25,639	22,639	25,639	.....	+3,000
45	CHEMICAL AND BIOLOGICAL DEFENSE PROGRAM—ADVANCED DEV .....	132,674	132,674	132,674	.....	.....
46	JOINT ELECTRONIC ADVANCED TECHNOLOGY .....	10,965	10,965	10,965	.....	.....
47	JOINT CAPABILITY TECHNOLOGY DEMONSTRATIONS .....	131,960	121,960	119,960	.....	-2,000
52	DEFENSE-WIDE MANUFACTURING SCIENCE AND TECHNOLOGY PROG .....	91,095	91,095	91,095	.....	.....
53	EMERGING CAPABILITIES TECHNOLOGY DEVELOPMENT .....	33,706	33,706	33,706	.....	.....
54	GENERIC LOGISTICS R&D TECHNOLOGY DEMONSTRATIONS .....	16,836	16,836	21,836	.....	+5,000
55	DEPLOYMENT AND DISTRIBUTION ENTERPRISE TECHNOLOGY .....	29,683	29,683	29,683	.....	.....
56	STRATEGIC ENVIRONMENTAL RESEARCH PROGRAM .....	57,796	57,796	57,796	.....	.....
57	MICROELECTRONIC TECHNOLOGY DEVELOPMENT AND SUPPORT .....	72,144	82,700	72,144	.....	-10,556
58	JOINT WARFIGHTING PROGRAM .....	7,405	5,405	7,405	.....	+2,000
59	ADVANCED ELECTRONICS TECHNOLOGIES .....	92,246	92,246	92,246	.....	.....
60	COMMAND, CONTROL AND COMMUNICATIONS SYSTEMS .....	243,265	243,265	239,265	.....	-4,000
60XX	DEFENSE RAPID INNOVATION PROGRAM .....	.....	250,000	.....	.....	-250,000
62	NETWORK-CENTRIC WARFARE TECHNOLOGY .....	386,926	386,926	350,426	.....	-36,500
63	SENSOR TECHNOLOGY .....	312,821	312,821	302,821	.....	-10,000
64	DISTRIBUTED LEARNING ADVANCED TECHNOLOGY DEVELOPMENT .....	10,692	10,692	10,692	.....	.....
65	SOFTWARE ENGINEERING INSTITUTE .....	15,776	15,776	15,776	.....	.....
66	QUICK REACTION SPECIAL PROJECTS .....	69,319	64,319	59,319	.....	-5,000
68	MODELING AND SIMULATION MANAGEMENT OFFICE .....	3,000	3,000	3,000	.....	.....
71	TEST & EVALUATION SCIENCE & TECHNOLOGY .....	81,148	81,148	81,148	.....	.....
72	OPERATIONAL ENERGY CAPABILITY IMPROVEMENT .....	31,800	31,800	48,300	.....	+16,500
73	CWMD SYSTEMS .....	46,066	46,066	46,066	.....	.....



[In thousands of dollars]

	Item	2015 budget estimate	House allowance	Committee recommendation	Change from	
					Budget estimate	House allowance
107	JOINT SYSTEMS INTEGRATION .....	7,002	7,002	7,002		
108	JOINT FIRES INTEGRATION & INTEROPERABILITY TEAM .....	7,102	7,102	7,102		
109	LAND-BASED SM-3 (LBSM3) .....	123,444	123,444	123,444		
110	AGIS SM-3 BLOCK IIA CO-DEVELOPMENT .....	263,695	263,695	263,695	+20,000	+20,000
113	SUPPORT TO NETWORKS AND INFORMATION INTEGRATION .....	12,500	12,500	12,500		
114	JOINT ELECTROMAGNETIC TECHNOLOGY (JET) PROGRAM .....	2,656	2,656	2,656		
115	CYBER SECURITY INITIATIVE .....	961	961	961		
116	NUCLEAR AND CONVENTIONAL PHYSICAL SECURITY EQUIPMENT .....	7,936	7,936	7,936		
117	PROMPT GLOBAL STRIKE CAPABILITY DEVELOPMENT .....	70,762	90,762	95,762	+25,000	+5,000
	TOTAL, DEMONSTRATION & VALIDATION .....	6,125,760	6,171,885	6,293,920	+168,160	+122,035
	ENGINEERING & MANUFACTURING DEVELOPMENT .....					
118	CHEMICAL AND BIOLOGICAL DEFENSE PROGRAM .....	345,883	345,883	335,883	-10,000	-10,000
119	ADVANCED IT SERVICES JOINT PROGRAM OFFICE (AITS-JPO) .....	25,459	25,459	25,459		
120	JOINT TACTICAL INFORMATION DISTRIBUTION SYSTEM (JTIDS) .....	17,562	17,562	17,562		
121	WEAPONS OF MASS DESTRUCTION DEFEAT CAPABILITIES .....	6,887	6,887	6,887		
122	INFORMATION TECHNOLOGY DEVELOPMENT .....	12,530	12,530	12,530		
123	HOMELAND PERSONNEL SECURITY INITIATIVE .....	286	286	286		
124	DEFENSE EXPORTABILITY PROGRAM .....	3,244	3,244	3,244		
125	OU5D(C) IT DEVELOPMENT INITIATIVES .....	6,500	6,500	6,500		
126	DOD ENTERPRISE SYSTEMS DEVELOPMENT AND DEMONSTRATION .....	15,326	15,326	15,326		
127	DCMO POLICY AND INTEGRATION .....	19,351	19,351	19,351		
128	DEFENSE AGENCY INITIATIVES FINANCIAL SYSTEM .....	41,465	41,465	41,465		
129	DEFENSE RETIRED AND ANNUITANT PAY SYSTEM (DRAS) .....	10,135	10,135	10,135		
130	DEFENSE-WIDE ELECTRONIC PROCUREMENT CAPABILITY .....	9,546	9,546	9,546		
131	GLOBAL COMBAT SUPPORT SYSTEM .....	14,241	14,241	14,241		
132	DOD ENTERPRISE ENERGY INFORMATION MANAGEMENT [EEM] .....	3,660	3,660	3,660		
	TOTAL, ENGINEERING & MANUFACTURING DEVELOPMENT .....	532,075	532,075	522,075	-10,000	-10,000
	RD&E MANAGEMENT SUPPORT .....					
133	DEFENSE READINESS REPORTING SYSTEM (DRRS) .....	5,616	5,616	5,616		
134	JOINT SYSTEMS ARCHITECTURE DEVELOPMENT .....	3,092	3,092	3,092		
135	CENTRAL TEST AND EVALUATION INVESTMENT DEVELOPMENT .....	254,503	159,003	254,503		+95,500
136	ASSESSMENTS AND EVALUATIONS .....	21,661	21,661	15,661	-6,000	-6,000

138	JOINT MISSION ENVIRONMENT TEST CAPABILITY [JMTC]	27,162	27,162	27,162	27,162	27,162	
139	TECHNICAL STUDIES, SUPPORT AND ANALYSIS	24,501	24,501	24,501	24,501	24,501	
142	JOINT THEATER AIR AND MISSILE DEFENSE ORGANIZATION	43,176	43,176	43,176	43,176	43,176	
	CLASSIFIED PROGRAM USD(P)		100,000				-100,000
145	SYSTEMS ENGINEERING	44,246	44,246	44,246	44,246	44,246	-500
146	STUDIES AND ANALYSIS SUPPORT	2,665	2,665	2,665	2,665	2,665	
147	NUCLEAR MATTERS—PHYSICAL SECURITY	4,366	4,366	4,366	4,366	4,366	
148	SUPPORT TO NETWORKS AND INFORMATION INTEGRATION	27,901	27,901	27,901	27,901	27,901	
149	GENERAL SUPPORT TO USD (INTELLIGENCE)	2,855	2,855	2,855	2,855	2,855	
150	CHEMICAL AND BIOLOGICAL DEFENSE PROGRAM	105,944	105,944	105,944	105,944	105,944	
156	SMALL BUSINESS INNOVATION RESEARCH	400	400	400	400	400	
159	SMALL BUSINESS INNOVATION RESEARCH/TECHNOLOGY TRANSFER	1,634	1,634	1,634	1,634	1,634	
160	DEFENSE TECHNOLOGY ANALYSIS	12,105	12,105	12,105	12,105	12,105	-4,000
161	DEFENSE TECHNICAL INFORMATION CENTER [DTIC]	50,389	50,389	50,389	50,389	50,389	
162	R&D IN SUPPORT OF DOD ENLISTMENT, TESTING & EVALUATION	8,452	8,452	8,452	8,452	8,452	
163	DEVELOPMENT TEST AND EVALUATION	15,187	15,187	15,187	15,187	15,187	-4,000
164	MANAGEMENT HEADQUARTERS (RESEARCH & DEVELOPMENT)	71,362	71,362	71,362	71,362	71,362	
165	BUDGET AND PROGRAM ASSESSMENTS	4,100	4,100	4,100	4,100	4,100	
166	OPERATIONS SECURITY [OPSEC]	1,956	1,956	1,956	1,956	1,956	
167	JOINT STAFF ANALYTICAL SUPPORT	10,321	10,321	10,321	10,321	10,321	
170	SUPPORT TO INFORMATION OPERATIONS [IO] CAPABILITIES	11,552	11,552	11,552	11,552	11,552	
172	CYBER INTELLIGENCE	6,748	6,748	6,748	6,748	6,748	
174	COCOM EXERCISE ENGAGEMENT AND TRAINING TRANSFORMATION	44,005	39,005	44,005	44,005	44,005	+5,000
175	MANAGEMENT HEADQUARTERS—MDA	36,998	36,998	36,998	36,998	36,998	+36,998
176	MANAGEMENT HEADQUARTERS—WHS	612	612	612	612	612	
	CLASSIFIED PROGRAMS		44,367				
	TOTAL, RDT&E MANAGEMENT SUPPORT	887,876	854,878	877,876	854,878	877,876	+22,998
	OPERATIONAL SYSTEMS DEVELOPMENT						
178	ENTERPRISE SECURITY SYSTEM (ESS)	3,988	3,988	3,988	3,988	3,988	
179	REGIONAL INTERNATIONAL OUTREACH & PARTNERSHIP FOR PEAC	1,750	1,750	1,750	1,750	1,750	
180	OVERSEAS HUMANITARIAN ASSISTANCE SHARED INFORMATION SY	286	286	286	286	286	
181	INDUSTRIAL BASE ANALYSIS AND SUSTAINMENT SUPPORT	14,778	14,778	14,778	14,778	14,778	
182	OPERATIONAL SYSTEMS DEVELOPMENT	2,953	2,953	2,953	2,953	2,953	
183	GLOBAL THEATER SECURITY COOPERATION MANAGEMENT	10,350	10,350	10,350	10,350	10,350	
184	CHEMICAL AND BIOLOGICAL DEFENSE (OPERATIONAL SYSTEMS D	28,496	28,496	28,496	28,496	28,496	
185	JOINT INTEGRATION AND INTEROPERABILITY	11,968	11,968	11,968	11,968	11,968	
186	PLANNING AND DECISION AID SYSTEM	1,842	1,842	1,842	1,842	1,842	
187	C4I INTEROPERABILITY	63,558	63,558	63,558	63,558	63,558	

[In thousands of dollars]

	Item	2015 budget estimate	House allowance	Committee recommendation	Change from	
					Budget estimate	House allowance
189	JOINT/ALLIED COALITION INFORMATION SHARING .....	3,931	3,931	3,931	.....	.....
193	NATIONAL MILITARY COMMAND SYSTEM-WIDE SUPPORT .....	924	924	924	.....	.....
194	DEFENSE INFO INFRASTRUCTURE ENGINEERING & INTEGRATION .....	9,657	9,657	9,657	.....	.....
195	LONG HAUL COMMUNICATIONS (DCS) .....	25,355	25,355	25,355	.....	.....
196	MINIMUM ESSENTIAL EMERGENCY COMMUNICATIONS NETWORK .....	12,671	12,671	12,671	.....	.....
197	PUBLIC KEY INFRASTRUCTURE (PKI) .....	222	222	222	.....	.....
198	KEY MANAGEMENT INFRASTRUCTURE (KMI) .....	32,698	32,698	32,698	.....	.....
199	INFORMATION SYSTEMS SECURITY PROGRAM .....	11,304	11,304	11,304	.....	.....
200	INFORMATION SYSTEMS SECURITY PROGRAM .....	125,854	145,854	125,854	.....	.....
202	GLOBAL COMMAND AND CONTROL SYSTEM .....	33,793	33,793	33,793	.....	.....
203	JOINT SPECTRUM CENTER .....	13,423	13,423	13,423	.....	.....
204	NET-CENTRIC ENTERPRISE SERVICES (NCES) .....	3,774	3,774	3,774	.....	.....
205	JOINT MILITARY DECEPTION INITIATIVE .....	951	951	951	.....	.....
206	TELEPORT PROGRAM .....	2,697	2,697	2,697	.....	.....
208	SPECIAL APPLICATIONS FOR CONTINGENCIES .....	19,294	15,794	19,294	.....	+ 3,500
212	CYBER SECURITY INITIATIVE .....	3,234	3,234	3,234	.....	.....
213	CRITICAL INFRASTRUCTURE PROTECTION (CIP) .....	8,846	8,846	8,846	.....	.....
217	POLICY R&D PROGRAMS .....	7,065	7,065	7,065	.....	.....
218	NET CENTRICITY .....	23,984	23,984	23,984	.....	.....
221	DISTRIBUTED COMMON GROUND/SURFACE SYSTEMS .....	5,286	5,286	5,286	.....	.....
224	DISTRIBUTED COMMON GROUND/SURFACE SYSTEMS .....	3,400	3,400	3,400	.....	.....
229	INSIDER THREAT .....	8,670	8,670	8,670	.....	.....
230	HOMELAND DEFENSE TECHNOLOGY TRANSFER PROGRAM .....	2,110	2,110	2,110	.....	.....
239	INDUSTRIAL PREPAREDNESS .....	22,366	22,366	22,366	.....	.....
240	LOGISTICS SUPPORT ACTIVITIES .....	1,574	1,574	1,574	.....	.....
241	MANAGEMENT HEADQUARTERS (JCS) .....	4,409	4,409	4,409	.....	.....
242	MQ-9 UAV .....	9,702	1,314	9,702	.....	+ 8,388
243	RQ-11 UAV .....	259	.....	259	.....	+ 259
245	SPECIAL OPERATIONS AVIATION SYSTEMS ADVANCED DEV .....	164,233	154,821	164,233	.....	+ 9,412
247	SPECIAL OPERATIONS INTELLIGENCE SYSTEMS DEVELOPMENT .....	9,490	9,490	9,490	.....	.....
248	SOF OPERATIONAL ENHANCEMENTS .....	75,253	70,089	75,253	.....	+ 5,164
252	WARRIOR SYSTEMS .....	24,661	20,573	24,661	.....	+ 4,088
253	SPECIAL PROGRAMS .....	20,908	20,908	20,908	.....	.....
259	SOF TACTICAL VEHICLES .....	3,672	3,672	3,672	.....	.....
262	SOF MARITIME SYSTEMS .....	57,905	55,046	57,905	.....	+ 2,859

264	SOF GLOBAL VIDEO SURVEILLANCE ACTIVITIES .....	3,788	3,788	3,788	3,788	.....	.....
265	SOF OPERATIONAL ENHANCEMENTS INTELLIGENCE .....	16,225	15,225	16,225	16,225	.....	+ 1,000
	TOTAL, OPERATIONAL SYSTEMS DEVELOPMENT .....	913,557	898,887	913,557	913,557	.....	+ 14,670
999	CLASSIFIED PROGRAMS .....	3,118,502	3,257,402	3,042,920	3,042,920	.....	- 214,482
	DARPA UNDISTRIBUTED REDUCTION .....	.....	- 69,000	.....	.....	.....	+ 69,000
	ADJUSTMENT HOUSE AMENDMENT (GRAYSON) .....	.....	- 10,000	.....	.....	.....	+ 10,000
	TOTAL, RESEARCH, DEVELOPMENT, TEST & EVAL, DEF-WIDE .....	16,766,084	17,067,900	16,805,571	16,805,571	+ 39,487	- 262,329

## COMMITTEE RECOMMENDED ADJUSTMENTS

The following table details the adjustments recommended by the Committee:

[In thousands of dollars]

Line	Item	2015 budget estimate	Committee recommendation	Change from budget estimate
2	Defense Research Sciences .....	312,146	332,146	+ 20,000
	Basic research program increase .....			+ 20,000
4	Basic Operational Medical Research Science .....	49,848	60,757	+ 10,909
	Basic research program increase .....			+ 10,909
5	National Defense Education Program .....	45,488	60,488	+ 15,000
	Military Child STEM Education programs .....			+ 15,000
6	Historically Black Colleges and Universities/Minority Institutions .....	24,412	31,412	+ 7,000
	Basic research program increase .....			+ 7,000
13	Information & Communications Technology .....	334,407	324,407	- 10,000
	Maintain program affordability: Eliminate program growth in new starts .....			- 10,000
20	Tactical Technology .....	305,484	300,484	- 5,000
	Program increase: Arctic Operations .....			+ 5,000
	Maintain program affordability: Lack of transition plan .....			- 10,000
21	Materials and Biological Technology .....	160,389	150,389	- 10,000
	Improving funds management: Poor execution .....			- 10,000
22	Electronics Technology .....	179,203	169,203	- 10,000
	Improving funds management: Poor execution .....			- 10,000
28	Combating Terrorism Technology Support .....	69,675	99,675	+ 30,000
	Program increase .....			+ 30,000
29	Foreign Comparative Testing .....	30,000	20,000	- 10,000
	Maintain program affordability: Reduce program growth .....			- 10,000
33	Discrimination Sensor Technology .....	45,110	32,110	- 13,000
	Improving funds management: Project MD95 excess growth .....			- 13,000
43	Advanced Innovative Analysis and Concepts .....	60,000	53,000	- 7,000
	Maintain program affordability: Eliminate program growth .....			- 7,000
47	Joint Capability Technology Demonstrations .....	131,960	119,960	- 12,000
	Improving funds management: Unobligated balances .....			- 12,000
54	Generic Logistics R&D Technology Demonstrations .....	16,836	21,836	+ 5,000
	Program increase .....			+ 5,000
60	Command, Control and Communications Systems .....	243,265	239,265	- 4,000
	Maintain program affordability: Excessive growth in new starts .....			- 4,000
62	Network-Centric Warfare Technology .....	386,926	350,426	- 36,500
	Authorization adjustment: Hellads .....			- 20,000
	Restoring acquisition accountability: Classified program adjustment .....			- 16,500
63	Sensor Technology .....	312,821	302,821	- 10,000
	Maintain program affordability: Excessive growth in new starts .....			- 10,000
66	Quick Reaction Special Projects .....	69,319	59,319	- 10,000
	Maintain program affordability: Maintain level of effort .....			- 10,000
72	Operational Energy Capability Improvement .....	31,800	48,300	+ 16,500
	Restore reduced funding level .....			+ 16,500
80	Advanced Sensors Application Program .....	15,518	19,518	+ 4,000
	Program increase .....			+ 4,000
81	Environmental Security Technical Certification Program .....	51,462	66,462	+ 15,000
	Restore funding to the fiscal year 2014 enacted level .....			+ 15,000
82	Ballistic Missile Defense Terminal Defense Segment .....	299,598	170,832	- 128,766
	MT07 Test: Transfer to line 82a .....			- 111,366
	Restoring acquisition accountability: Software build concurrency .....			- 17,400
82a	Ballistic Missile Defense Terminal Defense Segment Test .....		111,366	+ 111,366
	MT07 Test: Transfer from line 82 .....			+ 111,366
83	Ballistic Missile Defense Midcourse Defense Segment .....	1,003,768	854,391	- 149,377
	Authorization adjustment: Ground-Based Midcourse Defense reliability and maintenance .....			+ 30,000

[In thousands of dollars]

Line	Item	2015 budget estimate	Committee recommendation	Change from budget estimate
	MT08 Test: Transfer to line 83a .....			-79,877
	MD97: Transfer to line 83b .....			-99,500
83a	Ballistic Missile Defense Midcourse Defense Segment Test .....		79,877	+79,877
	MT08 Test: Transfer from line 83 .....			+79,877
83b	Improved Homeland Defense Interceptors .....		99,500	+99,500
	MD97: Transfer Improved Homeland Defense Interceptors from line 83 .....			+99,500
84	Chemical and Biological Defense Program—Dem/Val .....	179,236	163,236	-16,000
	Restoring acquisition accountability: INATS Milestone B delay .....			-10,000
	Restoring acquisition accountability: Equine Encephalitis vaccine delay .....			-6,000
85	Ballistic Missile Defense Sensors .....	392,893	271,084	-121,809
	MT11 Test: Transfer to line 85a .....			-71,309
	MD96: Transfer LRDR to line 85b .....			-50,500
85a	Ballistic Missile Defense Sensors Test .....		71,309	+71,309
	MT11 Test: Transfer from line 85 .....			+71,309
85b	Long Range Disc Radar .....		50,500	+50,500
	MD96: Transfer LRDR from line 85 .....			+50,500
88	AEGIS BMD .....	929,208	753,779	-175,429
	MT09 Test: Transfer to line 88a .....			-89,628
	Restoring acquisition accountability: SM-3 BLK IIA Manufacturing quantities excess to test requirements .....			-50,801
	Restoring acquisition accountability: AEGIS BMD 5.1 unjustified budget increase .....			-35,000
88a	AEGIS BMD Test .....		89,628	+89,628
	MT09 Test: Transfer from line 88 .....			+89,628
91	Ballistic Missile Defense Command and Control, Battle Management and Communications .....	443,484	413,484	-30,000
	Restoring acquisition accountability: Excess ramp up prior to completion of program baseline .....			-30,000
96	Israeli Cooperative Programs .....	96,803	270,603	+173,800
	Israeli Upper tier .....			+22,100
	Israeli Arrow program .....			+45,500
	Short range ballistic missile defense .....			+106,200
97	Ballistic Missile Defense Test .....	386,482	366,482	-20,000
	Improving funds management: Test efficiencies .....			-20,000
98	Ballistic Missile Defense Targets .....	485,294	465,294	-20,000
	Improving funds management: Program adjustment .....			-20,000
101	Department of Defense Corrosion Program .....	2,907	12,907	+10,000
	Program increase .....			+10,000
103	Department of Defense [DOD] Unmanned Aircraft System [UAS] Common Development .....	3,702	8,263	+4,561
	Program increase .....			+4,561
106	Defense Rapid Innovation Program .....		75,000	+75,000
	Program increase .....			+75,000
110	AEGIS SM-3 Block IIA Co-Development .....	263,695	283,695	+20,000
	Development risk reduction .....			+20,000
117	Prompt Global Strike Capability Development .....	70,762	95,762	+25,000
	Additional hypersonics funding .....			+25,000
118	Chemical and Biological Defense Program—EMD .....	345,883	335,883	-10,000
	Improving funds management: Unobligated balances .....			-10,000
136	Assessments and Evaluations .....	21,661	15,661	-6,000
	Maintain program affordability: Reduce program growth .....			-6,000
160	Defense Technology Analysis .....	12,105	8,105	-4,000
	Maintain program affordability: Maintain level of effort .....			-4,000
	Classified Programs .....	3,118,502	3,042,920	-75,582
	Classified adjustment .....			-75,582

*Manufacturing and Innovation Centers.*—The Committee notes the budget request supports five manufacturing innovation institutes. The Committee encourages the Department of Defense to use these institutes to provide advanced manufacturing capabilities in

critical technology sectors, strengthen the defense industrial base, and promote the training of a technical manufacturing and engineering workforce. The Committee directs the Department to ensure that the private sector's cost share at least equally matches the funding from Federal sources, and recommends that the Department limit direct core support for these institutes to 5 fiscal years. Prior to establishing a new institute, the Committee directs the Department to submit to the congressional defense committees a business case analysis of costs, requirements, and justifications for the selection of the award and include metrics-based performance measures to monitor performance and success of the institute. The institute performers can compete for other manufacturing technology and research funding available from the Federal Government at all times. Finally, the Department should encourage institutes to work with private sector partners on pre-competitive research activities, common technical standards, and joint technology and manufacturing roadmaps.

*Defense Advanced Research Projects Agency [DARPA] Basic Research.*—The Committee provides an increase in basic research of 5 percent over the fiscal year 2014 enacted levels across the services and the defense wide research and development accounts. Of that increase, the Committee provides an additional \$30,909,000 for DARPA basic research. As the Department's leading research agency, the Committee understands that DARPA is best positioned to identify cutting edge research but believes it must utilize a wider set of colleges and universities, smaller defense contractors, and commercial firms. The Committee directs DARPA to submit a report to the congressional defense committees within 120 days after enactment of this act on its plan to utilize the additional funding.

*Additive Technology.*—The Committee notes that additive manufacturing has revolutionized production in key commercial industries, ranging from automotive and aerospace to medical devices and now cellular phone sectors. Innovations in this field have resulted in unprecedented efficiencies in product design, energy consumption, and supply chain management. However, it can take a decade or more to insert new materials and processes into key defense supply chains. The Committee urges the Department of Defense to focus efforts on breaking down key barriers for wider usage of this groundbreaking technology in the defense industrial base. The Committee directs that the Under Secretary for Acquisition, Technology, and Logistics report on the Department's activities to: accelerate quality control and qualification of additive manufacturing technology in various defense supply chains; increase speed of additive manufacturing production processes to meet both low and high volume needs; and integrate commercial advances in additive manufacturing and 3D scanning into defense supply chains, including investment casting, electronics and communications, medical bracing and devices, and ground and aerospace vehicle production.

*Strategic Capabilities Office [SCO].*—The Committee commends the Department of Defense for standing up the Strategic Capabilities Office to provide lower-cost, strategic alternatives for shaping and countering emerging threats. The Committee believes that

such efforts are a wise use of Government resources that can enhance current capabilities available to the services and combatant commanders. While supportive of these efforts, the Committee is concerned with the coordination of SCO initiatives with other service and Department of Defense research and development priorities. Therefore, the Committee directs the Under Secretary of Defense for Acquisition, Technology, and Logistics [AT&L] to provide a report to the congressional defense committees on SCO's current and long-term mission, a timeline for SCO project development and transition to Department or service activities, and the process by which SCO initiatives are coordinated with other service and Department research priorities. The report should also address how SCO efforts differ from those efforts typically funded through the joint capabilities and technology demonstration [JCTD] and rapid fielding initiatives.

*Technology Transfer Pilot Program.*—The Committee directs the Assistant Secretary of Defense for Research and Engineering to conduct a pilot program on public-private technology transfer ventures between Department of Defense research and development labs and centers and regionally-focused technology commercialization organizations, including accelerators, incubators, and innovation centers. The primary goal of the pilot program should be to increase the commercialization of intellectual property developed in the Department's research and development enterprise in support of critical cross-service technological needs. Areas of focus should include but not be limited to energetics, aviation, unmanned systems, rapid prototyping, corrosion control, and water quality improvement. Technology commercialization partners and initial technology incubator partnerships should be selected through full and open competition emphasizing strong business plans, demonstrated expertise in mentorship and commercialization, and strong regional partnerships. The Secretary of Defense shall report to the Committee on the implementation of the pilot program by April 1, 2015.

*Gas Reactors.*—The Committee is aware of the Department of Defense's interest in developing capabilities that would allow for self-contained power generation for military installations. In 2011, the Center for Naval Analysis released a study outlining new nuclear plant designs which could provide modular power generation, such as smaller scale high temperature gas reactors that use pebble bed technology. The Committee urges the Secretary of Defense to study the feasibility of such technology to include an evaluation of the safety and efficacy of this technology and determine whether a future set of prototype systems should be considered for development. The Committee requests that the Secretary of Defense consider the expedited licensing paths, development strategies, and recommended next steps for maturing this technology as part of the recommended study.

*UAS Common Development Program.*—The Committee notes that the Federal Aviation Administration [FAA] recently designated six unmanned aerial system [UAS] national test sites and plans to announce a UAS Center of Excellence soon that together will develop policies and standards to govern the integration of UAS into the national airspace system [NAS]. The Committee provides an additional \$4,561,000 for the UAS Common Development and encour-

ages the Department of Defense to coordinate with the FAA and National Aeronautics and Space Administration [NASA] in the development and demonstration of common UAS standards, architecture, and technologies. The intent of the effort is to ensure a consistent, nationwide approach to airspace integration across both civil and public sectors and in a way that protects privacy and the safety of other aircraft and people on the ground.

#### MISSILE DEFENSE AGENCY

*Major Acquisition Program New Starts.*—The fiscal year 2015 budget request includes \$99,500,000 to initiate development of improved homeland defense interceptors, and \$50,500,000 to initiate development of a long-range discrimination radar. The Committee notes that these are major defense acquisition programs with acquisition costs expected to exceed \$1,000,000,000. Therefore, the Committee recommends transferring funding for these programs to separate program elements and directs MDA to follow that program element structure in future budget submissions.

Further, the Committee believes that for each program, MDA should follow robust acquisition practices, to include conducting a full Analysis of Alternatives; seeking approval of requirements by the Joint Requirements Oversight Council; developing an acquisition strategy in accordance with DOD 5000.02 regulations; maximizing competition; and providing Office of Secretary of Defense Cost Assessment and Program Evaluation sufficient time to conduct an Independent Cost Estimate prior to reaching the milestone B equivalent of the development effort. The Committee directs the Director, Missile Defense Agency to provide the congressional defense committees an update on MDA's progress implementing these acquisition practices within 60 days of enactment of this act.

*Ground-Based Midcourse Defense [GMD] Reliability and Maintenance Shortfalls.*—The fiscal year 2015 budget request includes \$1,003,768,000 for Ground-Based Midcourse Defense [GMD]. The Committee understands that subsequent to the budget submission, the Director, Missile Defense Agency, completed an assessment of the GMD system, which identified funding shortfalls of certain reliability and maintenance functions. Therefore, the Committee recommends an additional \$30,000,000 only for Ground-Based Midcourse Defense [GMD] reliability and maintenance efforts, as authorized by S. 2410, the National Defense Authorization Act for Fiscal Year 2015, as reported. The Committee understands that the Director, Missile Defense Agency plans to report to the congressional defense committees no later than November 15, 2014, on an implementation plan for executing GMD reliability and maintenance improvement efforts. The Committee directs the Director, Missile Defense Agency, to include in that implementation plan details on MDA's contracting strategy for GMD reliability and maintenance activities that meets program goals within cost and schedule while ensuring Government and industry accountability.

*Acquisition Accountability in MDA Software Development Programs.*—The fiscal year 2015 budget request includes no less than \$510,200,000 for Aegis and \$417,816,000 for Command and Control, Battle Management and Communications [C2BMC] software development efforts. The Committee has previously expressed con-

cerns regarding excess concurrency due to simultaneous development of multiple software spirals; the absence of acquisition program baselines for individual software spirals; the instability of software spiral content; and annual funding adjustments without explanation. The Committee notes that none of these concerns have been addressed with the fiscal year 2015 budget submission. Therefore, the Committee recommends sustaining Aegis and C2BMC software development efforts at prior year levels and adjusts the budget request accordingly.

*Acquisition of Targets.*—The fiscal year 2015 budget request includes \$485,294,000 for the acquisition of targets. The Committee notes significant volatility in MDA’s targets program, to include the adjustment of more than a dozen targets or target modules among multiple target classes between fiscal years. The Committee understands that MDA is working to address these issues, and expects to see improved acquisition performance for all target classes. The Committee further understands that improved acquisition performance will likely yield contracting efficiencies and recommends a reduction of \$20,000,000.

*Standard Missile-3 Block IIA.*—The fiscal year 2015 budget request includes \$263,395,000 to continue co-development of the Standard Missile-3 Block IIA interceptor. This interceptor contributes to the European Phased Adaptive Approach [EPAA], which provides regional ballistic missile defense of deployed U.S. forces and our allies. The Committee is concerned by some of the technical challenges encountered during program development and recommends an additional \$20,000,000 only for risk reduction activities. The Committee is further concerned that the fiscal year 2015 budget request includes initial funding for 17 SM-3 Block IIA rounds—well in excess of test requirements—even though the design has not yet proven mature and appears to be cost-prohibitive at this point. Therefore, the Committee recommends reducing the budget request only for SM-3 Block IIA rounds by \$50,801,000. The Committee notes that this recommendation provides sufficient funds to manufacture rounds in support of the flight test schedule, and does not delay the development or test schedule.

*Sharing of Classified United States Ballistic Missile Defense Information With the Russian Federation.*—The Committee is concerned with the potential security risks associated with sharing sensitive U.S. missile defense data and technology with the Russian Federation. The Committee recognizes existing law restricts the sharing of sensitive and classified ballistic missile defense information with the Russian Federation, as established in Public Law 113–66, the National Defense Authorization Act for Fiscal Year 2014. The Committee expects the administration to continue to adhere to current law until superseded by an act authorizing appropriations for fiscal year 2015.

#### OPERATIONAL TEST AND EVALUATION, DEFENSE

Appropriations, 2014 .....	\$246,800,000
Budget estimate, 2015 .....	167,738,000
House allowance .....	248,238,000
Committee recommendation .....	214,038,000

The Committee recommends an appropriation of \$214,038,000. This is \$46,300,000 above the budget estimate.

COMMITTEE RECOMMENDED PROGRAM

The following table summarizes the budget estimate for this appropriation, the Committee recommendation, and the Committee recommended adjustments to the budget estimate:

(In thousands of dollars)

	Item	2015 budget estimate	Committee recommendation	Change from budget estimate
	RDT&E Management Support			
1	Operational Test and Evaluation .....	74,583	97,883	+ 23,300
	Program increase: Cyber force training and resiliency .....	.....	.....	+ 12,500
	Program increase: PACOM cyber ranging training .....	.....	.....	+ 6,100
	Program increase: Cyber RED team and training .....	.....	.....	+ 4,700
2	Live Fire Test and Evaluation .....	45,142	45,142	.....
3	Operational Test Activities and Analyses .....	48,013	71,013	+ 23,000
	Program increase: Threat Resource Analysis .....	.....	.....	+ 5,000
	Program increase: Joint test and evaluation .....	.....	.....	+ 18,000
	RDT&E Management Support .....	167,738	214,038	+ 46,300
	Total, Operational Test and Evaluation, Defense .....	167,738	214,038	+ 46,300

*Threat Emitters.*—In fiscal year 2014, the Department of Defense initiated an effort to address deficiencies in future weapon system capabilities by developing and funding a plan to acquire advanced electronic warfare threat emitters. In response to the Department's actions, Congress transferred funds from the Test Resources Management Center [TRMC] program element to the Operational Test and Evaluation [OT&E] funding line to accelerate the development and fielding of these emitters. In transferring the funds, it was not the intent of Congress to create two duplicative efforts between the two testing agencies but rather to address a technology shortfall. While the Committee believes that TRMC is the best agency to carry out the overall mission of upgrading range infrastructure to address multi-service systems, there is concern the TRMC approach may not meet a timeline to address inadequacies of systems that are nearing initial operational capability.

In an effort to eliminate duplication and encourage a streamlined approach to addressing the threat, the Committee directs the Under Secretary of Defense for Acquisition, Technology, and Logistics [AT&L] and the Director of Operational Test and Evaluation [DOT&E] to develop a threat emitter execution plan, to be approved by the Deputy Secretary of Defense, that allows for rapid acquisition of both open and closed loop threat emitters that can be used to test future weapons systems. The plan shall emphasize DOT&E and TRMC collaboration and transparency while eliminating mission duplication between the two organizations; and identify a single program executive to execute the open loop and closed loop fielding plan. Furthermore, the Committee directs that any purchases of open loop emitters beyond fiscal year 2015 be conducted under an open and competitive process. The Committee believes that it is in the best interest of national security and to the taxpayer that both testing agencies set aside their competing plans and work together to find common solutions to this threat.