

House Boosts DHS R&D 6 Percent

AAAS R&D Funding Update on Dept. of Homeland Security R&D in FY 2009 House Appropriations

Highlights

- The House recently reported an appropriations bill providing \$1.0 billion in fiscal year (FY) 2009 for R&D in the Department of Homeland Security (DHS), a 5.8 percent or \$57 million increase over 2008, but the increase is unlikely to be finalized in time for the October 1 start of FY 2009. The Senate would provide more, for a total of \$1.1 billion.

- R&D on radiological and nuclear countermeasures in the Domestic Nuclear Detection Office (DNDO) would continue to gain slightly with a \$5 million or 1.8 percent boost to \$279 million in both the House and Senate bills, while chemical and biological countermeasures in the Science and Technology Directorate would fall (down 3.7 percent to \$200 million in both bills).

- University Programs funding would fall from \$49 million in both 2007 and 2008 down to \$44 million in the DHS request and the Senate appropriation, but the House would provide \$51 million for a slight \$2 million increase, primarily to shore up DHS funding for university centers.

- In addition, DHS will receive \$2.2 billion in already-appropriated funds for Project Bioshield on October 1, to procure promising biodefense countermeasures from the private sector for the national stockpile.

DHS R&D in FY 2009 House Appropriations

On September 18, the House Appropriations Committee finally reported its version of the FY 2009 Homeland Security appropriations bill (HR 6947) providing funding for the Department of Homeland Security (DHS), nearly three months after the committee originally approved it. In June, its Senate counterpart reported its own version (S 3181). Although the October 1 start of FY 2009 is just days away, a final version of the bill will not be enacted by then, meaning that DHS will begin FY 2009 under a continuing resolution at 2008 funding levels. The CR could extend through March, forcing DHS and other federal agencies to wait months before receiving a final budget. Both the House and Senate bills contain \$42 billion in 2009 discretionary spending, nearly \$5 billion more than the current year and between \$2.3 and \$2.5 billion more than the President's request for these programs.

The House would allocate \$1.0 billion for the DHS R&D portfolio in FY 2009, an increase of \$57 million or 5.8 percent over 2008. The Senate would give even more for a total of \$1.1 billion, a 9.2 percent increase. Both bills are above the DHS request, the House \$16 million more (of which \$15 million comes from earmarked projects added to the request) while the Senate is \$51 million more (of which \$30 million comes from earmarks (see Table)).

Radiological and nuclear countermeasures R&D in the Domestic Nuclear Detection Office (DNDO) continues to be the largest part of the DHS R&D portfolio in 2009 (see Figure 1). DNDO was carved out of the S&T Directorate in 2006 and is now a stand-alone entity devoted to radiological and nuclear countermeasures. Both the House and the Senate would go along with DNDO's plan to increase its basic and applied research portfolio slightly by 1.8 percent or \$5 million to \$279 million in 2009, within a total budget of \$544 million. (The difference between the two totals is procurement of nuclear detection devices for U.S. ports of entry, management costs, and operations support costs.) In 2009, the largest increases for DNDO would go to the procurement side instead of the research side. But within the research portfolio the

Transformational Research and Development program, tending toward the basic research end with a focus on transformative breakthroughs, would receive a large \$17 million increase from both bills, as requested, to \$113 million.

The chemical and biological countermeasures portfolio, which remains in the S&T directorate, would receive \$200 million, down 3.7 percent from the current year to remain the second-largest part of the DHS R&D portfolio (see Figure 1). Although this portfolio has been larger in previous years (see Figure 2), in 2007 DHS spun off non-R&D programs such as the BioWatch surveillance system to other DHS units, leaving behind only purely R&D programs.

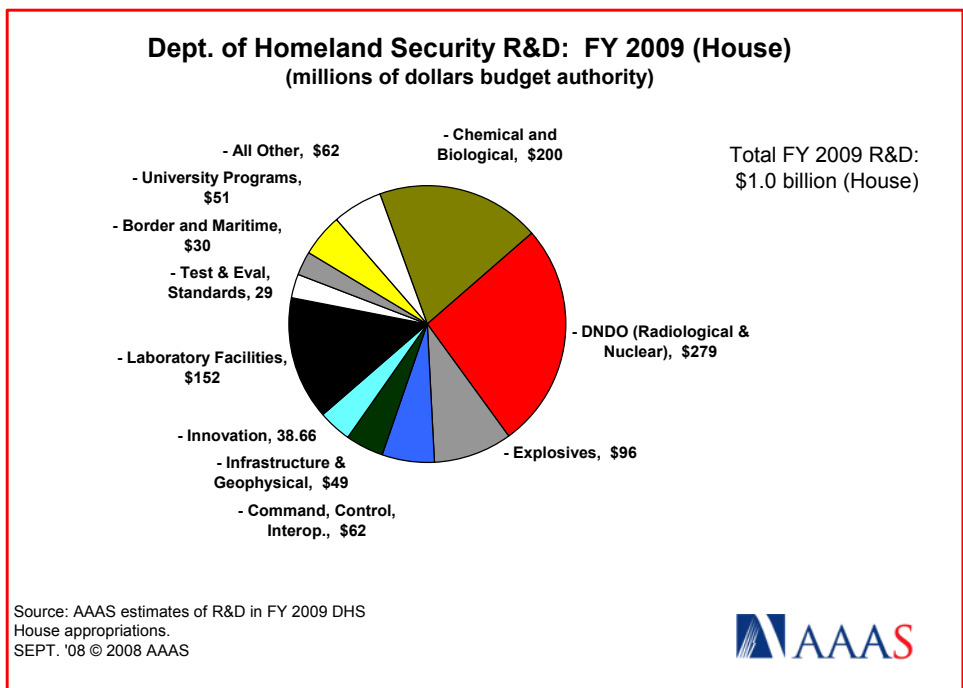


Figure 1. (click on the image for PDF)

In the Laboratory Facilities appropriation (\$152 million, up \$48 million), construction of the National Biodefense Analysis and Countermeasures Center (NBACC) would be finished in 2008 and the FY 2009 request of \$33 million, double this year's funding, would be used to start operations. NBACC will be part of a biodefense complex of DHS, NIH, and DOD facilities at Fort Detrick, Maryland. There would also be \$36 million, more than triple 2008 funding, for detailed design of the National Bio and Agrodefense Facility (NBAF), working toward the beginning of construction in 2010 after a site selection later this year. But the House attaches conditions to the NBAF appropriation: before DHS can spend the money, it must do a risk analysis of doing foot-and-mouth disease research on the U.S. mainland. Currently, DHS performs foot-and-mouth disease research at its lab on Plum Island, off the coast of Long Island in New York, and there are concerns that moving the research to site on the U.S. mainland could make U.S. livestock vulnerable to the disease from accidental release. Both the House and the Senate would add to the request for ongoing construction activities at the Pacific Northwest National Laboratory in Washington, for a total of \$15 million in the House bill. As DHS ramps up the operation and construction of its own laboratories and as DHS moves many of its R&D staff salaries to this account, this portfolio has become the fastest-growing part of DHS R&D (see Figure 2).

Funding for University Programs would increase by \$2 million to \$51 million in the House appropriation, instead of a cut to \$44 million in the request and the Senate. This program funds university-based Centers of Excellence that are multi-year university consortia to perform R&D on homeland security-related topics, and also fellowships to encourage U.S. students to pursue scientific and technical degrees in areas of study related to homeland security. There are now seven DHS Centers of

Excellence, one funded jointly with EPA and another with the Lawrence Livermore National Laboratory, and up to six more could be awarded soon. In order to keep these centers fully funded, the House would add \$4.5 million to the request specifically for the centers.

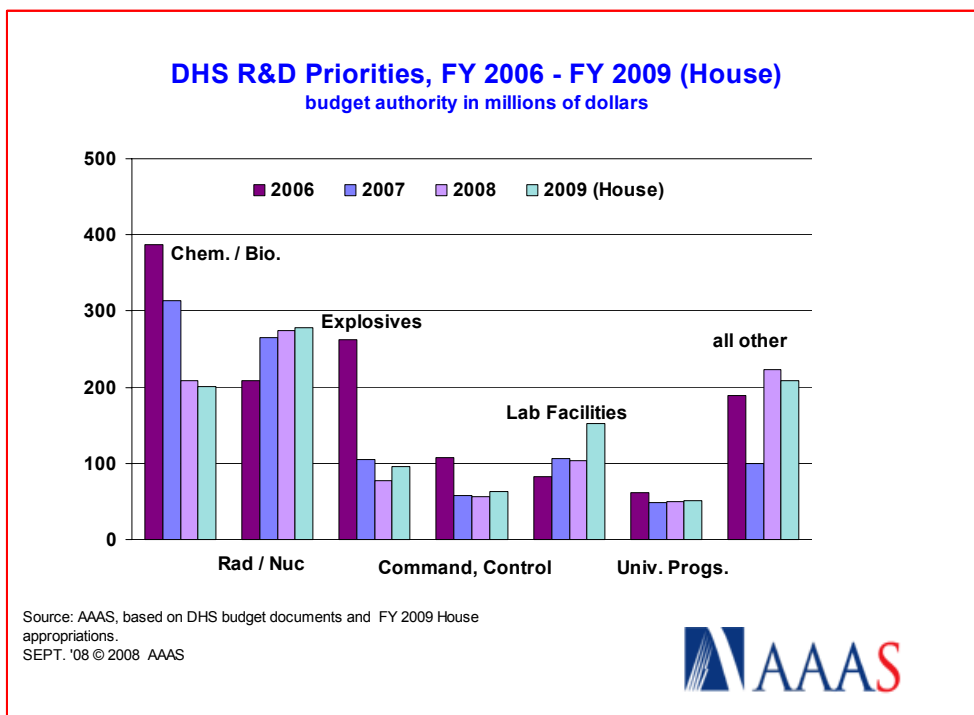


Figure 2. (click on the image for PDF)

The Innovation portfolio, to develop breakthrough technologies and highly innovative approaches to homeland security problems, would increase 17 percent to \$39 million in the 2009 House plan instead of an even larger 36 percent requested increase.

DHS R&D, after a rapid ramp-up phase, grew too rapidly and is now in retrenchment and reorganization. As shown in Figure 3, DHS began life with only a few R&D laboratories and programs that it inherited from USDA, DOE, and DOD, unlike the massive transfer of personnel and capabilities that happened in the rest of the new department. From a transfer of less than \$300 million of programs in 2002, DHS expanded rapidly after its foundation in FY 2003 (see Figure 3), adding portfolios on long-neglected technology areas, establishing relationships with existing national laboratories and federal laboratories, and setting up new structures for funding external R&D.

But the S&T directorate struggled to ramp up its capabilities, staffing, and spending, prompting Congress to slash its funding dramatically in 2007 and impose numerous restrictions and demands. In the 2007 appropriations process, Congress criticized its lack of clear research goals, absence of detailed budget information, mystifying accounting conventions, and even an inability to spend past appropriations it had been given. The final 2007 appropriations bill rescinded \$125 million in these unspent R&D funds and made program cuts in most areas. Although the 2007 and 2008 R&D totals were well below appropriations of previous years, DHS is still working through its backlog of unspent funds. So while DHS' appropriations history in Figure 3 is uneven, the actual outflow of money will be smoother as appropriations get stretched out into outlays over several years.

The new DNDO also appears to have problems in ramping up its operations. In the 2008 omnibus bill, appropriators expressed concern that DNDO has been unable to hire staff quickly enough to keep up with the rapid growth in its budget, and criticized DNDO for providing too little detail on how it plans to spend its appropriations. These programs have not gone away: the report accompanying the House 2009

appropriations bill criticizes DND for not hiring any of the new staff it had planned to hire in 2008 even though FY 2008 is almost over, thereby leaving staffing below 2007 levels.

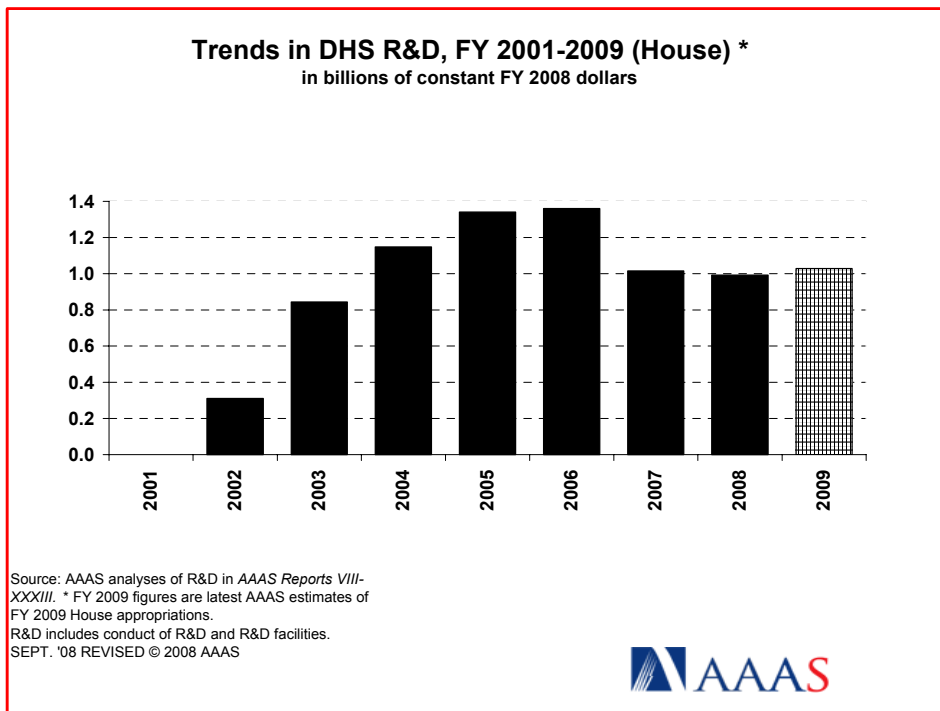


Figure 3. (click on the image for PDF)

Although it is not technically an R&D program, DHS received \$5.6 billion over 10 years in three advance appropriations for Project Bioshield, a program to procure promising biodefense countermeasures from the private sector for the national stockpile. The last installment of \$2.2 billion becomes available at the beginning of FY 2009. Although Bioshield started in DHS and its funding remains there, the operations and management of the program have migrated to the Department of Health and Human Services (HHS), which has set up an office to evaluate and select countermeasures eligible to receive Bioshield funding.

Outlook and Next Steps

Neither chamber is likely to debate its version of the Homeland Security bill in the week remaining before the start of FY 2009. The President has threatened to veto any 2009 appropriations bill that exceeds his request; since both the House and Senate versions of the bill do so and since Congress is not inclined to do the heavy lifting of negotiating a House-Senate compromise bill only to see it vetoed, DHS may have to wait until the next presidential administration before it receives a final 2009 budget.

(This analysis is one of a series of AAAS R&D Funding Updates on FY 2009 congressional appropriations. The complete series of AAAS R&D Funding Updates, including continually updated analyses of R&D in FY 2009 appropriations, is available on the AAAS R&D Web Site (<http://www.aaas.org/spp/rd>) in the “FY 2009 R&D” or the “What’s New” sections.)

- September 22, 2008
AAAS R&D Budget and Policy Program
AAAS R&D Web site: <http://www.aaas.org/spp/rd>



Table. DHS R&D in FY 2009 House Appropriations

**Table. Department of Homeland Security
House Appropriations Committee Action on R&D in the FY 2009 Budget
(budget authority in millions of dollars)**

	FY 2008 Estimate	FY 2009 Request	FY 2009 Senate	Action by House				
				FY 2009 House	Chg. from Request Amount	Chg. from Request Percent	Chg. from FY 2008 Amount	Chg. from FY 2008 Percent
DHS R&D:								
Dom. Nuclear Detection Office 1/	274	279	279	279	0	0.0%	5	1.8%
Science and Technology 1/	692	737	787	755	18	2.5%	63	9.2%
- Chemical and Biological	208	200	200	200	0	0.0%	-8	-3.7%
- Border and Maritime	25	35	35	30	-5	-14.2%	5	18.9%
- Command, Control, Interop.	57	62	87	62	0	0.0%	5	9.5%
- Explosives	78	96	96	96	0	0.0%	18	23.8%
- Human Factors	14	12	8	12	0	0.0%	-2	-12.3%
- Infrastructure & Geophysical	65	38	65	49	11	29.1%	-16	-24.3%
- Innovation	33	45	33	39	-6	-14.1%	6	17.2%
- Laboratory Facilities	104	147	162	152	5	3.4%	48	46.4%
- Test & Eval, Standards	29	25	25	29	4	16.2%	0	0.5%
- Transition	30	32	27	34	2	6.3%	4	11.8%
- University Programs	49	44	44	51	8	17.1%	2	4.0%
- Homeland Security Institute	0	0	5	0	0	--	0	--
Coast Guard	27	18	18	16	-2	-11.1%	-11	-40.7%
Total DHS R&D	992	1,033	1,084	1,049	16	1.6%	57	5.8%
Total Budgets (including non-R&D):								
Sci. & Tech.	830	869	919	887	18	2.1%	57	6.9%
DNDO	484	564	541	544	-19	-3.4%	60	12.4%
Project Bioshield 2/	0	2,175	2,175	2,175	0	0.0%	2,175	--

AAAS estimates based on FY 2009 appropriations bills. Includes conduct of R&D and R&D facilities.

FY 2008 and FY 2009 request figures based on OMB R&D data and supplemental agency budget data.

Figures are rounded to the nearest million. Changes calculated from unrounded figures.

1/ R&D items only. Non-R&D components and line items are excluded.

2/ Advance appropriation available in FY 2009.

September 22, 2008 - AAAS estimates of House Appropriations Committee-approved appropriations.

These figures may be amended or rejected by the full House.