

Senate Boosts DHS R&D

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

Highlights

- The Senate would add to a requested increase for R&D in the Department of Homeland Security (DHS) for a total R&D portfolio of \$1.1 billion, a \$92 million or 9.2 percent increase over 2008.
- 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, while chemical and biological countermeasures in the Science and Technology Directorate would fall (down 3.7 percent to \$200 million).
- University Programs funding would fall from \$49 million in both 2007 and 2008 down to \$44 million in both the DHS request and now the Senate appropriation for 2009.

DHS R&D in FY 2009 Senate Appropriations

On June 19, the Senate Appropriations Committee approved its version of the FY 2009 Homeland Security appropriations bill (S 3181) providing funding for the Department of Homeland Security (DHS), for consideration by the full Senate in July. The House approved its own version of the bill on June 24; full details of the House version will be available shortly. 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 DHS R&D portfolio for FY 2009 would be \$1.1 billion in the Senate plan, an increase of \$92 million or 9.2 percent over 2008. The Senate total is \$51 million more than the request, of which \$30 million comes from earmarked projects (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. 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 \$541 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 the Senate, 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.

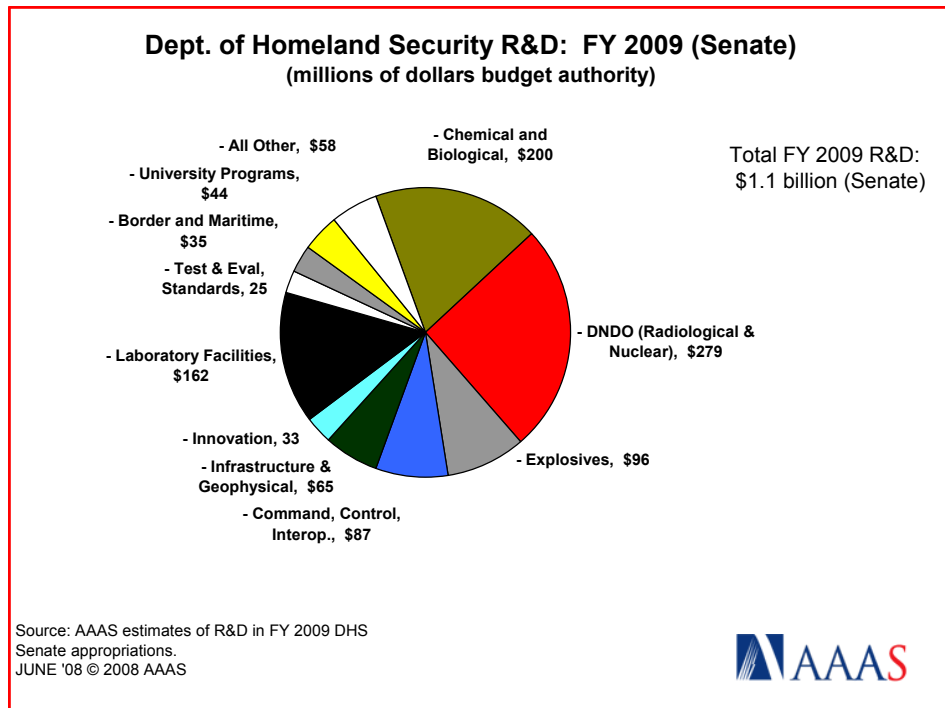


Figure 1. (click on the image for PDF)

Separately, in the Laboratory Facilities appropriation (\$162 million, up \$58 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, working toward the beginning of construction in 2010 after a site selection later this year. The Senate would add \$15 million to the request for ongoing construction activities at the Pacific Northwest National Laboratory in Washington, for a total of \$25 million. As DHS ramps up the operation and construction of its own laboratories, this portfolio has become the fastest-growing part of DHS R&D (see Figure 2).

The Senate would add \$25 million to the Command, Control, and Interoperability portfolio for a total of \$87 million, a 53 percent increase over this year. This program funds most of DHS' cybersecurity research activities. The Senate bill instructs DHS to boost its cybersecurity research spending, with an emphasis on developing tools to enable private firms to protect themselves against cyberattacks, particularly the financial sector.

Funding for University Programs would fall \$6 million down to \$44 million in 2009. 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.

The Innovation portfolio, to develop breakthrough technologies and highly innovative approaches to homeland security problems, would remain at \$33 million in the 2009 Senate plan instead of a requested 36 percent increase. Among the technologies this program will tackle are liquid explosives detection, container security, mobile screening technologies, tunnel detection devices, improvised explosive devices, and critical infrastructure resiliency.

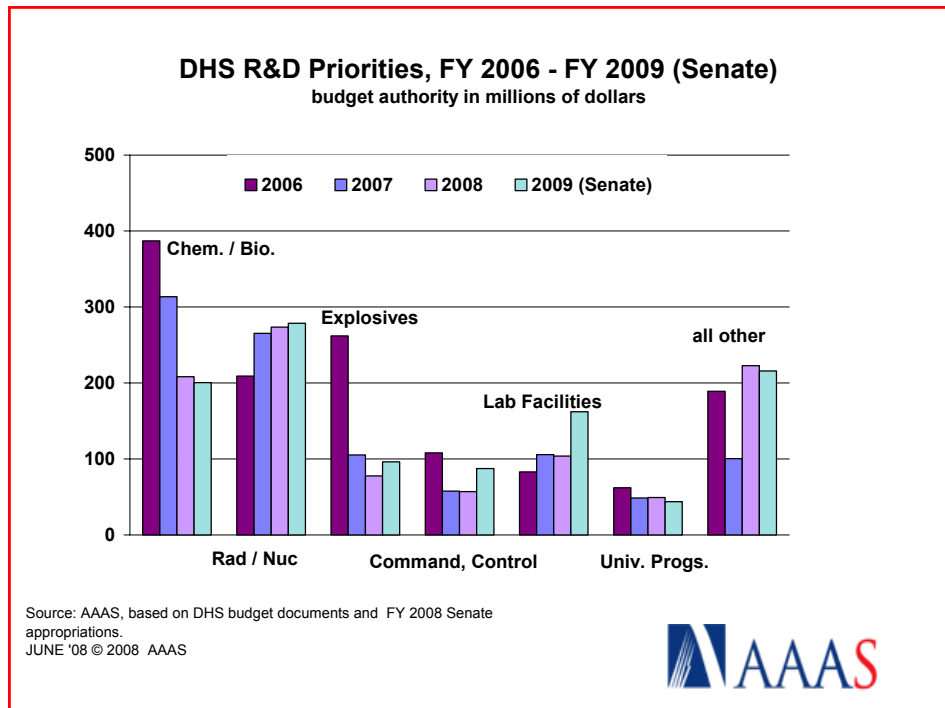


Figure 2. (click on the image for PDF)

Outlook and Next Steps

The full Senate is expected to debate and approve the Homeland Security bill in July, while the House is also expected to consider its version in July. But there is increasing doubt as to whether Congress will try to send a final version of the bill to President Bush before the October 1 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, the bill may have a long way to go before its funding levels become final.

(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.)

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AAAS R&D Budget and Policy Program
1200 New York Avenue, NW
Washington, DC 20005
(202) 326-6607
AAAS R&D Web site: <http://www.aaas.org/spp/rd>



Table. DHS R&D in FY 2009 Senate Appropriations

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

	FY 2008 Estimate	FY 2009 Request	Action by Senate				
			FY 2009 Senate	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	0	0.0%	5	1.8%
Science and Technology 1/	692	737	787	51	6.9%	96	13.8%
- <i>Chemical and Biological</i>	208	200	200	0	0.0%	-8	-3.7%
- <i>Border and Maritime</i>	25	35	35	0	0.0%	10	38.5%
- <i>Command, Control, Interop.</i>	57	62	87	25	40.1%	30	53.4%
- <i>Explosives</i>	78	96	96	0	0.0%	18	23.8%
- <i>Human Factors</i>	14	12	8	-4	-35.8%	-6	-43.7%
- <i>Infrastructure & Geophysical</i>	65	38	65	27	71.4%	0	0.5%
- <i>Innovation</i>	33	45	33	-12	-26.7%	0	0.0%
- <i>Laboratory Facilities</i>	104	147	162	15	10.2%	58	56.0%
- <i>Test & Eval, Standards</i>	29	25	25	0	0.0%	-4	-13.5%
- <i>Transition</i>	25	32	27	-5	-15.7%	2	6.2%
- <i>University Programs</i>	49	44	44	0	0.0%	-6	-11.2%
- <i>Homeland Secu. Institute</i>	5	0	5	5	--	0	0.0%
Coast Guard	27	18	18	0	0.0%	-9	-33.3%
Total DHS R&D	992	1,033	1,084	51	4.9%	92	9.2%
Total Budgets (including non-R&D):							
<i>Sci. & Tech.</i>	830	869	919	51	5.8%	89	10.8%
<i>DNDO</i>	484	564	541	-23	-4.0%	57	11.7%
<i>Project Bioshield 2/</i>	0	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.

June 30, 2008 - AAAS estimates of Senate Appropriations Committee-approved appropriations.

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