

AAAS R&D Funding Update August 11, 2006 -
R&D Earmarks in FY 2007 Senate Appropriations

R&D Earmarks Headed Toward Records in 2007

(This analysis is part of a AAAS effort to enumerate congressionally designated, performer-specific R&D projects not appearing in agency budget requests (earmarks) in FY 2007 appropriations bills. The data in this analysis highlight AAAS interpretations of R&D earmarks in Senate-approved appropriations. The complete series of AAAS R&D Funding Updates, including continually updated analyses of R&D in FY 2007 appropriations, is available on the AAAS R&D Web Site (<http://www.aaas.org/spp/rd>) in the “FY 2007 R&D” or the “What’s New” sections.)

- **Congress appears to be well on its way to matching last year’s record-breaking total of R&D earmarks in the FY 2007 budget now under consideration.** Before a month-long August recess, Senate appropriators designated \$1.3 billion for congressionally designated, performer-specific R&D projects in FY 2007 appropriations (see Table A and Figure 1), while the House would earmark \$1.1 billion in R&D funds.

- If past patterns hold, the final earmark total could be the House and Senate totals combined rather than the average of the two. Last year, the House had \$1.2 billion and the Senate \$1.5 billion in R&D earmarks which combined for a total of \$2.4 billion in final FY 2006 appropriations.

- Although earmarking in Senate appropriations would continue unabated in agencies such as the Department of Energy (DOE; \$240 million), the U.S. Department of Agriculture (USDA; \$352 million), the Department of Defense (DOD; \$448 million) and the National Oceanic and Atmospheric Administration (NOAA; \$184 million), both the House and the Senate have so far refrained from earmarking the National Aeronautics and Space Administration (NASA) budget in 2007, and in DOE both chambers have chosen to add earmarks on top of the budget request rather than cutting the request to make room for earmarks.

- These earmarked projects amount to just 1.0 percent of the Senate’s total \$138.3 billion appropriation for federal R&D, but because they are heavily concentrated they can have big impacts on key programs. Earmarks make up 1 out of every 5 R&D dollars for USDA’s extramural research programs and nearly 1 out of 4 R&D dollars in NOAA.

FY 2007 R&D Earmarks in Senate Appropriations

Before departing Washington for a month-long August recess, the Senate Appropriations Committee finished drafting Senate versions of all 11 FY 2007 appropriations bills. In June, its House counterpart drafted the House versions of these bills. (For full details of federal R&D so far in 2007 appropriations, please see the August Summary Report on R&D in FY 2007 Appropriations, available on the AAAS R&D Web site). The Senate versions of the FY 2007 bills contain \$1.3 billion in R&D earmarks, down nearly half from the \$2.4 billion total for R&D earmarks in FY 2006. The House would earmark \$1.1 billion for mostly different projects. But based on past patterns, the final FY 2007 total could equal or exceed FY 2006 when 2007 appropriations are finalized this fall. Last year, for example, the 2006 House bills contained \$1.2 billion in earmarks while the Senate bills contained \$1.5 billion, but the final total was \$2.4 billion, almost as much as the two chambers’ totals combined (see Table A).

Within federal appropriations for R&D are R&D earmarks of unrequested, congressionally designated performer-specific R&D projects contained in legislative language or committee report language attached to appropriations bills. These projects have been added to agencies’ requested budgets as part of the annual give-and-take between Congress and the Executive Branch over the size and shape of agencies’ budgets.

- **R&D earmarks total \$1.3 billion in Senate FY 2007 appropriations bills, and \$1.1 billion in the House versions of these bills.** Although these projects amount to only 1.0 percent of total R&D in the Senate, they are concentrated in a few key agencies and programs (see Table A). Four agencies (the U.S. Department of Agriculture (USDA; \$352 million), the Department of Energy (DOE; \$240 million); the Department of Defense (DOD; \$448 million), and the Department of Commerce's National Oceanic and Atmospheric Administration (NOAA; \$184 million)) receive 91 percent of the total R&D earmarks in the Senate bills. The House bills do not earmark the NOAA R&D portfolio, so just three agencies account for 90 percent of the House's earmarks.

- **The Senate's 2007 earmarks and the House's 2007 earmarks are down from the combined total for 2006, but only slightly down from the Senate's \$1.5 billion and the House \$1.2 billion in earmarks in last year's appropriations bills (see Figure 1).**

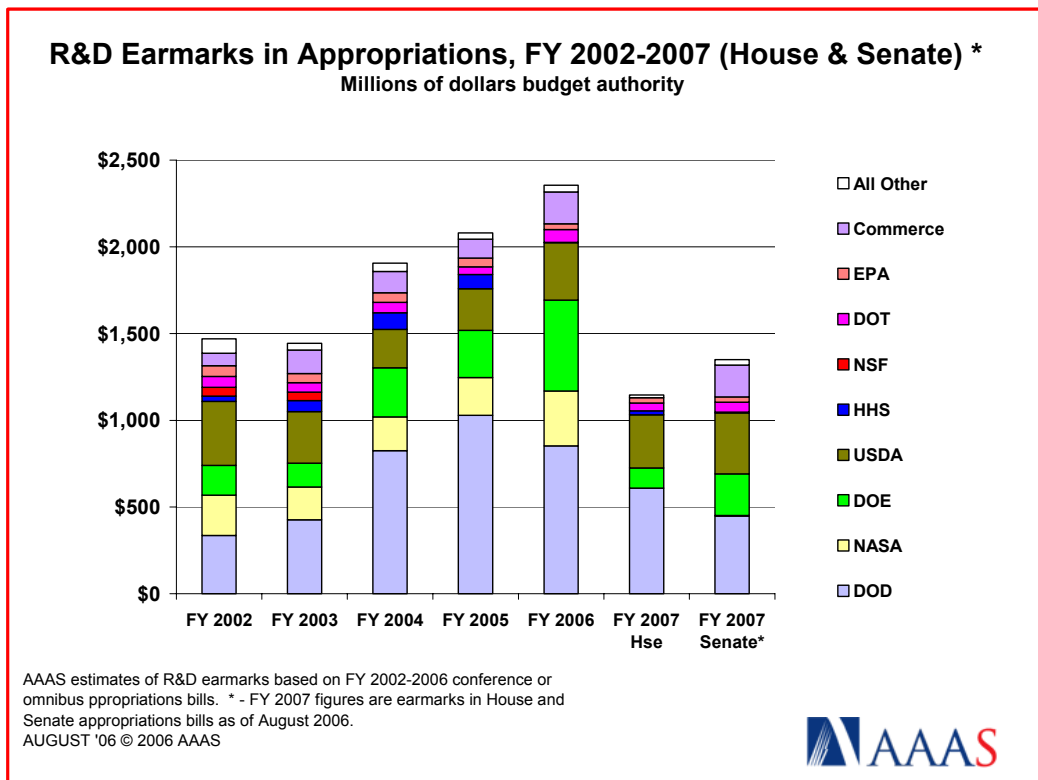


Figure 1. (click on image for PDF)

- The **USDA** earmarks total \$352 million in the Senate, approaching the record total of four years ago. These include \$113 million for 179 itemized extramural research projects in the Special Research Grants program, with another \$33 million for 37 other projects in USDA's extramural research accounts. The Senate would allocate \$110 million for intramural research projects at USDA laboratories around the nation, and would earmark the entire \$83 million appropriation for Agricultural Research Service (ARS) Buildings and Facilities for congressionally designated construction projects. In addition to making up 100 percent of facilities funding, R&D earmarks total 22 percent of all extramural research in the Cooperative State Research, Education, and Extension Service (CSREES), making these a significant drain on resources that might have gone to competitively awarded research grants or formula-based research funding. The House would have similar totals for partially overlapping lists of projects, totaling \$306 million.

- The **DOD** budget contains \$609 million in House R&D earmarks, while the Senate would earmark \$448 million for an almost entirely different set of projects, suggesting that the final 2007 list of earmarks could exceed \$1 billion. The earmarks are mostly small (\$10 million or less) projects, but significantly most are for research rather than development or R&D facilities construction, squeezing basic research and applied research budgets. Earmarks for "6.2" (applied research) earmarks are \$134 million, or almost 3 percent of a

sharply declining total. Earmarks in the “6.4” or higher categories of DOD development are \$157 million in the Senate, only 0.3 percent of a dramatically expanding portfolio.

- **DOE R&D earmarks** decline in House appropriations to \$116 million, the lowest level this decade, but total \$240 million in Senate appropriations for 2007. The Office of Science (OS) budget contains \$63 million in Senate earmarks and \$30 million in House earmarks, compared to a \$130 million total in 2006. But both the House and the Senate would add these earmarks on top of the already-substantial 14 percent requested increase for DOE Science, allowing for a 21 percent increase in core (non-earmarked) Science R&D funding between 2006 and 2007 in the Senate plan. Although DOE energy R&D earmarks hit a new high of \$266 million in 2006, the House would earmark only \$61 million for energy R&D in 2007 and would keep the earmarks in a separate account from core funding. The Senate would follow suit by earmarking \$132 million in energy R&D, mostly in separate accounts. The new policy would have big impacts on key programs such as biomass R&D where earmarks make up 50 percent of total program funds in 2006. The biomass program not only more than doubles in the Senate appropriation, but because most 2007 earmarks would be in a separate account core biomass funding would nearly quadruple. Solar, hydrogen, and other renewable energy programs also benefit from these House and Senate actions of substantial increases in non-earmarked 2007 funding compared to a heavily earmarked 2006 base.

- **Some agencies remain earmark-free.** The **National Science Foundation (NSF)**, the **National Institutes of Health (NIH)**, and the **Department of Homeland Security (DHS)** all remain earmark-free in FY 2007 appropriations so far. Traditionally, NIH and NSF’s research accounts have been free of earmarks, although in some years NSF construction projects are earmarked. FY 2007 is the fourth year of appropriations for DHS; so far, Congress has not earmarked R&D projects in DHS. And the House and the Senate have so far refrained from inserting earmarks in NASA appropriations, although there are strong indications that they will appear in the final 2007 NASA budget.

Definitions: What is an R&D Earmark?

For the purposes of this analysis, R&D earmarks are defined as “congressionally designated performer-specific R&D projects not included in agency budget requests.” The earmarks appear in either legislative language contained in appropriations bills, in which case they have the force of law, or appear in committee report language accompanying appropriations bills, in which case they are technically advisory. For all practical purposes, however, agencies usually follow the instructions from Congress contained in committee report language, including earmarks. When Congress designates a specific performer or performers for a particular R&D project, these are counted as earmarks; because AAAS definitions of R&D include investments in R&D facilities construction, the earmarks in this analysis also include funds provided to specific institutions for investments in R&D major capital equipment, and also construction funds for specific R&D facilities.

AAAS definitions of R&D earmarks tend to undercount earmarks, because they include explicitly performer-specific projects only. Congress often designates funding for specific projects or research topics; in some cases such as in DOD’s peer-reviewed medical research programs the topics may be congressionally designated but the performers are selected competitively so they are not counted as earmarks. In many other cases, however, Congress will designate funding for a specific research project without identifying a location explicitly, but on the implicit understanding that only one organization is capable of performing it or has already been selected to do earlier work in that area. Such topical earmarks are common in DOD’s R&D portfolio, where earmarks for weapons projects or technology areas are understood to steer the funds to a specific performer with demonstrated expertise or past experience. This analysis does not count such projects in which competitive awards are theoretically possible albeit unlikely.

R&D earmarks do not appear in federal agencies’ budget requests, which are released at the beginning of the budget process in February and reflect agency priorities. These budget requests contain detailed proposed distributions of agency funds by mission, allocation mechanism, and often by performer. Earmarks do not appear in agencies’ own budget requests but are added to agencies’ budgets by Congress during the appropriations process. Some projects not originally included in agency requests may be initiated by congressional action in earlier appropriations cycles and may be renewed at reduced funding

levels in agencies' requests; funds added to specific performers by Congress above the amounts requested by the agency are counted as earmarks.

These figures include earmarks to all categories of R&D performers. While discussion of the earmarks issue tends to center on earmarks to academic institutions, this analysis also includes R&D earmarks to other categories of performers, most prominently federal laboratories. While academic institutions receive the bulk of the earmarks in Table A, federal laboratories, sometimes located on university campuses, also receive earmarks as well as some nonprofits and industrial firms.

The earmarks counted in this analysis are a subset of R&D in the federal budget as tracked by AAAS. Thus, the earmarks in this analysis do not include non-R&D projects that may go to R&D performers, for example educational or extension projects awarded to universities and colleges. Some of these earmarks may come from the same budget accounts that fund R&D earmarks. They also do not include construction funds for non-R&D facilities, except when they are provided in R&D accounts.

Purpose of the AAAS Analysis

The analysis is intended to provide timely and unbiased information for further analysis and debate on the allocation of R&D resources in the federal budget process, and the R&D Budget and Policy Program undertakes this analysis to provide timely and relevant information for policymakers and members of the science and engineering community who are concerned about methods of allocating R&D resources. It attempts to provide additional information to supplement existing AAAS coverage of R&D in the appropriations process. The analysis is not a comprehensive inventory of earmarks; nor can the analysis break out earmarks by recipient or by state because of the difficulty in identifying and assigning locations to multi-performer research consortia or earmarks in which the actual performer is left intentionally vague. Also, because earmarks are in the eye of the beholder and are ill-defined (unlike the standardized, longstanding definitions for R&D used by AAAS and federal agencies) this analysis relies on AAAS interpretations and judgment calls on a project-by-project basis of what is or is not an R&D earmark. In doing this analysis, AAAS does not take a position on the relative merits of agency requests vs. congressional earmarks, or of competitively awarded funds vs. earmarked funds.

Conclusions

When Congress returns to session in September, the October 1 start of FY 2007 will be less than four weeks away. Appropriators have already given up hope of completing FY 2007 appropriations on time, so most federal R&D funding agencies will have to wait until after the November elections to receive their final budgets. Although there has been much debate and attention on the practice of congressional earmarking this year as a result of scandals that have derailed the careers of several members of Congress who were caught taking bribes in exchange for doling out earmarks, the practice continues unabated. Reform proposals have so far focused on bringing greater transparency to the process, which seem unlikely to curb earmarking in an environment when members of Congress are mostly eager to take credit for earmarks they have steered to their districts or states. For R&D performers, flat or declining R&D budgets for many R&D funding agencies as well as the example of peer institutions hiring lobbyists to secure earmarks has set off a scramble among universities, localities, and research institutions to step up lobbying for earmarks for fear of missing out on increasingly scarce funds. In such a Washington environment, the recent trend of ever-increasing R&D earmarks within flat total R&D budgets is likely to continue.

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Table A. Earmarks for FY 2007 R&D by Agency (Senate as of 8/06)

Table A. Congressional Earmarks for R&D by Agency and Program
Senate Action on R&D in the FY 2007 Budget (as of August 7, 2006)
(budget authority in millions of dollars)

	FY 2002 Earmarks	FY 2003 Earmarks	FY 2004 Earmarks	FY 2005 Earmarks	FY 2006 Earmarks	FY 2007 House	FY 2007 Senate		Earmarks % of R&D
							FY 2007 Earmarks	FY 2007 R&D	
Defense (military)	336	426	825	1,029	852	609	448	74,182	0.6%
(Army)	120	152	318	322	309	245	113	11,188	1.0%
(Navy)	68	111	178	247	225	132	152	17,071	0.9%
(Air Force)	43	41	134	142	125	104	74	23,885	0.3%
(Defense Agencies)	90	71	127	246	160	108	66	20,594	0.3%
(Other)	13	52	69	72	34	20	42	1,443	2.9%
National Aeron. & Space Admin.	233	190	194	217	317	0	3	12,166	0.0%
Energy	171	138	284	274	524	116	240	9,597	2.5%
(Science programs)	72	50	95	78	129	30	63	3,912	1.6%
(Energy programs)	65	36	114	122	266	61	132	1,621	8.1%
(Defense programs)	35	52	74	73	129	25	45	4,064	1.1%
Health and Human Services	31	62	97	82	1	24	5	29,292	0.0%
(National Institutes of Health)	0	0	0	0	0	0	0	28,005	0.0%
National Science Foundation	50	50	0	0	0	0	0	4,505	0.0%
(Major Research Equipment)	50	50	0	0	0	0	0	237	0.0%
Agriculture	369	297	220	239	331	306	352	2,349	15.0%
(Agricultural Res. Service)	257	166	86	76	158	177	194	1,229	15.8%
(CSREES)	107	129	125	148	165	128	146	662	22.1%
(Forest Service)	5	3	8	12	7	0	12	319	3.6%
Interior	14	18	23	12	18	5	16	642	2.5%
(U.S. Geological Survey)	14	11	20	10	10	3	6	569	1.1%
Transportation	63	54	59	45	75	45	57	793	7.2%
Environ. Protection Agency	62	53	56	51	33	30	30	596	5.0%
Commerce	72	136	122	109	184	0	184	1,265	14.5%
(NOAA)	31	107	97	109	184	0	184	779	23.6%
(NIST)	42	29	26	0	0	0	0	450	0.0%
Homeland Security	0	0	0	0	0	0	0	1,045	0.0%
Education	0	1	0	3	0	0	0	301	0.0%
Agency for Int'l Development	4	4	4	4	5	0	2	228	0.7%
Department of Veterans Affairs	0	0	0	0	0	0	0	778	0.0%
Housing and Urban Developmen	30	11	15	5	1	5	5	59	8.5%
Department of Justice	29	3	0	0	6	6	0	90	0.0%
All Other	5	2	5	11	9	0	9	398	2.2%
Total	1,470	1,444	1,906	2,080	2,355	1,146	1,349	138,286	1.0%

AAAS estimates of R&D in FY 2007 Senate appropriations bills. Includes conduct of R&D and R&D facilities.

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

"Earmarks" are AAAS interpretations of unrequested, congressionally designated, performer-specific R&D projects contained in legislative language or committee report language in appropriations bills.

Earmarks do not include non-R&D congressionally designated projects.

FY 2007 columns represent earmarks in Senate and House versions of appropriations bills. All other years are earmarks in final appropriation

August 7, 2006 - AAAS estimates of Senate and House FY 2007 appropriations bills.