

MEMORANDUM

April 26, 2012

To: Senator James M. Inhofe
Attention: Luke Holland

From: Jane A. Leggett (7-9525)
Specialist in Environmental and Energy Policy

Subject: **Funding for Federal Climate Change Activities, FY2008 to FY2012**

In response to your request, this memorandum compiles information on federal funding from FY2008 through FY2012 for climate change activities of various departments and agencies, as presented by the Office of Management and Budget (OMB) and by the individual departments and agencies where noted. CRS deferred to these OMB and department and agency sources, as comparable comprehensive information on funding allocated for climate change activities across departments and agencies is not broken out in all cases for each relevant program or activity in annual appropriations bills and the accompanying committee reports.

Some of the OMB or agency sources are incomplete or may report inconsistent data, as explained below. As such, the amounts in the following tables likely represent an underestimate of federal funding for the period, perhaps on the order of tens of millions of dollars (i.e., not billions). Information is not available for all programs for all years, as explained below.

In sum, OMB and agencies have identified approximately \$70 billion available to federal agencies from FY2008 through FY2012 for climate change activities. The large majority – about 80% -- has funded technology development and deployment, mostly through the Department of Energy (DOE). More than one third of the identified funding was enacted in the American Recovery and Reinvestment Act of 2009 (P.L. 111-5). Tables in the memorandum detail funding by agency in terms of budget authority.¹ Funding information is provided for each of the four major federal initiatives to address climate change:

1. the Global Change Research Program;
2. the Climate Change Technology Program;

¹ According to OMB, in *The Budget System and Concepts* (2008), “budget authority” is “the authority provided by law to incur financial obligations that will result in outlays,” or spending. It should not be confused with actual expenditures of funds. See <http://www.whitehouse.gov/omb/budget/fy2008/pdf/concepts.pdf>. Budget authority identified in this memorandum for a given year is “new budget authority”—which this report uses interchangeably with “funding.” New budget authority differs from total budgetary resources, or the total budget authority available for a specific purpose in a given year. (In some contexts, the term budget authority may be used to include new BA plus residual BA left unobligated, or unspent, from previous years.)

3. the Global Climate Change Initiative; and
4. Adaptation.

A final table provides the sums by agencies across all four initiatives.

CRS has been unable to find complete data on climate change budget authority, particular for FY2012, and also for recent years of the Climate Change Technology Program. Hence, the data compiled in the following tables likely represent the minimum of budget authority for these programs.

Additional caveats regarding the data presented here include:

- Minor inconsistencies sometimes exist in alternative reports on funding, perhaps due to rescissions or reprogramming, or because a program may sometimes be cast as climate change-related and not in other contexts.
- These initiatives are “roll-ups” of programs and funding in each agency, and information on some programs are available only to the degree that the agency has reported funding to OMB or Congress.
- Some activities, particularly to consider or address potential impacts of climate change on federal programs or assets, likely existed prior to their being identified as climate change-related, so that funding may have occurred prior to being listed in these tables or in addition to activities listed in these tables.

Other caveats about comparing or examining possible trends in funding are described in more detail in CRS Report RL33817, *Climate Change: Federal Program Funding and Tax Incentives*. That report contains older information on general objectives and activities of the climate change initiatives.

If I can be of further assistance, please contact me by phone (7-9525) or email (jaleggett@crs.loc.gov).

**Table I. Budget Authority for the “Global Change Research Program”
FY2008 through FY2012**

(in millions of nominal dollars)

	2008 Actual	ARRA Enacted	2009 Enacted	2010 Enacted	2011 Enacted	2012 Enacted	Total FY08-12
Department of Agriculture	63	0	47	121	75	83	389
Department of Commerce	272	218	377	363	338	319	1,887
Department of Defense	0	0	0	0	0	0	0
Department of Energy	128	65	168	171	186	211	929
Department of Health and Human Services	4	0	5	4	4	4	21
Department of the Interior	34	0	45	63	64	59	265
Department of State	0	0	0	0	0	0	0
US Agency for International Development	0	0	0	0	0	0	0
Department of Transportation	1	0	2	3	1	1	8
Department of the Treasury	0	0	0	0	0	0	0
Environmental Protection Agency	17	0	18	21	20	19	95
National Aeronautics and Space Administration	1,084	237	1,086	1,123	1,431	1,390	6,351
National Science Foundation	207	121	269	320	321	333	1,571
Smithsonian Institution	6	0	6	7	7	8	34
Totals	1,815	641	2,023	2,195	2,448	2,427	11,549

Sources: Office of Management and Budget. *Federal Climate Change Expenditures Report to Congress*. Washington DC: Executive Office of the President, June 10, 2010; Office of Management and Budget. *Analytical Perspectives – Budget of the U.S. Government*. Washington DC: Executive Office of the President, 2010, 2011, and 2012.

Note: The normal funding for FY2009 and appropriations in the American Recovery and Reinvestment Act of 2009 (ARRA) (P.L. 111-5) are identified separately in these tables.

Table 2. Budget Authority for the “Climate Change Technology Program”**FY2008 through FY2012**

(in millions of nominal dollars)

	2008 Actual	ARRA Enacted	2009 Enacted	2010 Enacted	2011 Enacted	2012 Enacted	Total FY08-12
Department of Agriculture	205	271	100	453	N.A.	N.A.	1,029
Department of Commerce	8	4	15	18	N.A.	N.A.	45
Department of Defense	150	139	261	226	N.A.	N.A.	776
Department of Energy	5,745	25,223	4,543	4,399	5,503	5,482	50,895
Department of Health and Human Services	0	0	0	0	0	0	0
Department of the Interior	0	0	0	0	0	0	0
Department of State	0	0	0	0	0	0	0
US Agency for International Development	0	0	0	0	0	0	0
Department of Transportation	19	100	43	125	N.A.	N.A.	287
Department of Treasury	0	0	0	0	0	0	0
Environmental Protection Agency	107	0	111	133	113	100	563
National Aeronautics and Space Administration	139	31	119	124	N.A.	N.A.	413
National Science Foundation	21	2	24	26	30	30	133
Smithsonian Institution	0	0	0	0	0	0	0
Totals	6,394	25,499	5,216	5,504	5,646	5,611	54,142

Source: Climate Change Technology Program, workbook of detailed funding data provided to CRS, 2008; Office of Management and Budget. *Federal Climate Change Expenditures Report to Congress*. Washington DC: Executive Office of the President, June 10, 2010; DOE CCTI estimates in FY2010-2012 enacted also from <http://www.cfo.doe.gov/budget/12budget/Content/Volume2.pdf> (p. 200); and (p. 135); NSF enacted for CCTP also from http://nsf.gov/about/budget/fy2012/pdf/fy2012_rollup.pdf, p. 12, and http://www.nsf.gov/about/budget/fy2013/pdf/02-Summary_Tables_fy2013.pdf.

Notes: N.A. means that data were not discovered.

The normal funding for FY2009 and appropriations in the American Recovery and Reinvestment Act of 2009 (ARRA) (P.L. 111-5) are identified separately in these tables.

Table 3. Budget Authority for the “Global Climate Change Initiative” (International)
FY2008 through FY2012
(in millions of nominal dollars)

	2008 Actual	ARRA Enacted	2009 Enacted	2010 Enacted	2011 Enacted	2012 Enacted	Total FY08-12
Department of Agriculture	0	0	0	0	0	0	0
Department of Commerce	0	0	0	0	0	0	0
Department of Defense	0	0	0	0	0	0	0
Department of Energy	0	0	0	0	0	0	0
Department of Health and Human Services	0	0	0	0	0	0	0
Department of the Interior	0	0	0	0	0	0	0
Department of State	41	0	55	202	125	N.A.	422
US Agency for International Development	115	0	222	306	398	N.A.	1,041
Department of Transportation	0	0	0	0	0	0	0
Department of the Treasury	46	0	46	432	296	292	1,112
Environmental Protection Agency	0	0	0	0	0	0	0
National Aeronautics and Space Administration	0	0	0	0	0	0	0
National Science Foundation	0	0	0	0	0	0	0
Smithsonian Institution	0	0	0	0	0	0	0
Totals	202	0	323	939	819	292	2,575

Sources: Office of Management and Budget. *Federal Climate Change Expenditures Report to Congress*. Washington DC: Executive Office of the President, June 10, 2010; CRS Report R41845, *The Global Climate Change Initiative (GCCI): Budget Authority and Request, FY2010-FY2013*, by Richard K. Lattanzio.

Note: N.A. means information was not discovered.

The new budget authority for FY2009 and appropriations in the American Recovery and Reinvestment Act of 2009 (ARRA) (P.L. 111-5) are identified separately in these tables.

Table 4. Budget Authority for “Adaptation”
FY2008 through FY2012
(in millions of nominal dollars)

	2008 Actual	ARRA Enacted	2009 Enacted	2010 Enacted^a	2011 Enacted	2012 Enacted	Total FY08- 12
Department of Agriculture	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Department of Commerce	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Department of Defense	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Department of Energy	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Department of Health and Human Services	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Department of the Interior	N.A.	N.A.	N.A.	136	N.A. ^b	N.A.	136
Department of State	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
US Agency for International Development	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Department of Transportation	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Department of the Treasury	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Environmental Protection Agency	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
National Aeronautics and Space Administration	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
National Science Foundation	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Smithsonian Institution	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Totals	N.A.	N.A.	N.A.	136	N.A.	N.A.	136

Source: Department of the Interior (DOI), *Climate Change Adaptation* (fact sheet). Part of the agency budget justification for FY2011.

Notes: N.A. means information was not discovered.

a. FY2010 was the first year in which funding requested for adaptation was reported.

b. DOI requested \$171 million for Adaptation in FY2011, but the actual budget authority has not been discovered.

**Table 5. Budget Authority for All Reported Climate Change Programs
FY2008 through FY2012**
(in millions of nominal dollars)

	2008 Actual	ARRA Enacted	2009 Enacted	2010 Enacted^a	2011 Enacted	2012 Enacted	Total FY08-12
Department of Agriculture	268	271	147	574	75	83	1,418
Department of Commerce	280	222	392	381	338	319	1,932
Department of Defense	150	139	261	226	0	0	776
Department of Energy	5,873	25,288	4,711	4,570	5,689	5,693	51,824
Department of Health and Human Services	4	0	5	4	4	4	21
Department of the Interior	34	0	45	199	64 ^b	59	572
Department of State	41	0	55	202	125	0	422
US Agency for International Development	115	0	222	306	398	0	1,041
Department of Transportation	20	100	45	128	1	1	295
Department of the Treasury	46	0	46	432	296	292	1,112
Environmental Protection Agency	124	0	129	154	133	119	659
National Aeronautics and Space Administration	1,223	268	1,205	1,247	1,431	1,390	6,764
National Science Foundation	228	123	293	346	351	363	1,704
Smithsonian Institution	6	0	6	7	7	8	34
Totals	8,412	26,411	7,562	8,775	8,913	8,330	68,402

Source: This report, Tables 1 through 4.

Notes: N.A. means information was not discovered.

- a. The normal budget authority for FY2009 and enacted for the American Recovery and Reinvestment Act of 2009 (ARRA) (P.L. 111-5) are identified separately in these tables.
- b. DOI requested \$171 million for Adaptation in FY2011, but the actual budget authority has not been discovered.