

TABLE 46. Domestic R&D paid for by the company and others and performed by the company with energy applications, by industry and company size: 2008
(Millions of U.S. dollars)

Industry and company size	NAICS code	Total	Funded by company	Funded by others
All industries	21-23, 31-33, 42-81	18,188	16,107	2,081
Manufacturing industries	31-33	14,065	12,539	1,527
Food	311	37	30	6
Beverage and tobacco products	312	3	3	0
Textiles, apparel, and leather products	313-316	19	19	*
Wood products	321	15	12	3
Paper	322	44	41	3
Printing and related support activities	323	4	4	0
Petroleum and coal products	324	D	762	D
Chemicals	325	657	595	62
Basic chemicals	3251	413	390	23
Resin, synthetic rubber, fibers, and filaments	3252	73	58	15
Pesticide, fertilizer, and other agricultural chemical	3253	D	12	D
Pharmaceuticals and medicines	3254	D	18	D
Soap, cleaning compound, and toilet preparation	3256	26	26	0
Paint, coating, adhesive, and other chemical	3255, 3259	D	91	D
Plastics and rubber products	326	91	90	1
Nonmetallic mineral products	327	112	106	6
Primary metals	331	83	77	6
Fabricated metal products	332	274	264	11
Machinery	333	1,196	1,121	75
Agricultural implements	33311	D	D	*
Semiconductor machinery	333295	112	87	24
Engine, turbine, and power transmission equipment	3336	188	164	23
Other machinery	other 333	D	D	28
Computer and electronic products	334	5,002	4,337	665
Communications equipment	3342	153	152	1
Semiconductor and other electronic components	3344	3,108	2,996	111
Navigational, measuring, electromedical, and control instruments	3345	1,409	872	538
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	278	210	67
Search, detection, navigation, guidance, aeronautical, and nautical system and instruments	334511	659	247	411
Other measuring and controlling instruments	other 3345	473	414	59
Computer and peripheral equipment and other computer and electronic products	3341, 3343, 3346	332	317	15
Electrical equipment, appliances, and components	335	1,026	963	63
Transportation equipment	336	4,574	3,979	595
Automobiles, bodies, trailers, and parts	3361-3363	3,085	3,024	61
Aerospace products and parts	3364	1,464	931	533
Aircraft, aircraft engine, and aircraft parts	336411-336413	1,343	916	427
Guided missile, space vehicle, and related parts	336414, 336415, 336419	121	15	106
Military armored vehicle, tank, and tank components	336992	*	*	*
Other transportation equipment	other 336	24	24	*
Furniture and related products	337	7	7	0
Miscellaneous manufacturing	339	D	129	D
Medical equipment and supplies	3391	12	12	0
Other miscellaneous manufacturing	3399	D	118	D
Nonmanufacturing industries	21-23, 42-81	4,123	3,568	554
Mining, extraction, and support activities	21	1,201	1,187	13
Utilities	22	173	157	16
Construction	23	25	25	0
Wholesale trade	42	32	22	10
Retail trade	44, 45	1	1	1
Electronic shopping and mail-order houses	4541	0	0	0
Other retail trade	other 44, 45	1	1	1
Transportation and warehousing	48, 49	9	8	*
Information	51	833	824	9
Publishing	511	575	567	8
Newspaper, periodical, book, and directory publishers	5111	1	1	0

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Software publishers	5112	574	566	8
Telecommunications	517	2	2	*
Internet service providers, Web search portals, and data processing services	518	235	235	*
Other information	other 51	21	21	0
Finance and insurance	52	* i	* i	0
Real estate and rental and leasing	53	2	2	0
Professional, scientific, and technical services	54	1,811	1,334	476
Architectural, engineering, and related services	5413	491	401	89
Computer systems design and related services	5415	702	456	246
Scientific R&D services	5417	515	399	116
Other professional, scientific, and technical services	other 54	103	78	25
Health care services	621-623	0	0	0
Other nonmanufacturing	55, 56, 61, 624, 71, 72, 81	37	7	30
All companies	21-23, 31-33, 42-81	18,188	16,107	2,081
Small companies (number of domestic employees) ^a				
5-499	-	4,073	3,469	604
5-99	-	2,323	1,883	439
5-49	-	1,659	1,371	288
5-24	-	918	706	212
25-49	-	741	665	76
50-99	-	663	513	150
100-249	-	976	894	82
250-499	-	774	691	83
Medium and large companies (number of domestic employees)				
500-999	-	810	755	55
1,000-4,999	-	2,994	2,703	291
5,000-9,999	-	1,117	1,057	60
10,000-24,999	-	2,704	2,601	103
25,000 or more	-	6,490	5,521	969

* = amount < \$500,000; D = data withheld to avoid disclosing operations of individual companies; i = value > 50% of estimate is a combination of imputation and reweighting to account for nonresponse.

NAICS = 2002 North American Industry Classification System.

^a Upper bound based on U.S. Small Business Administration's definition of small business; Business R&D and Innovation Survey (BRDIS) does not include companies with fewer than five domestic employees. After 2008 BRDIS sample was selected and surveyed, an error was identified that resulted in excluding 226,884 single-establishment companies with five paid employees from sample frame. Most excluded establishments were classified in industries with low R&D intensities, such as construction, retail trade, and service sectors. Based on available information for these small single-establishment companies, their contribution to 2008 R&D estimates is estimated to be negligible.

NOTES: Detail may not add to total because of rounding. Industry classification based on dominant business code for domestic R&D performance where available. For companies that did not report business codes, classification used for sampling was assigned. Statistics are representative of companies located in United States that performed or funded R&D.

SOURCE: National Science Foundation/National Center for Science and Engineering Statistics and U.S. Census Bureau, Business R&D and Innovation Survey, 2008.