

TABLE 38

Companies with domestic R&D paid for by others and performed by the company in energy and environmental protection application areas, by industry and company size: 2016

(Millions of U.S. dollars)

Industry and company size	NAICS code	Domestic R&D		Energy		Environmental protection	
		Companies ^a (number)	Amount	Companies ^b (number)	Amount	Companies ^b (number)	Amount
All industries	21-23, 31-33, 42-81	4,790	56,954	703	i 2,296	655	i 1,792
Manufacturing industries	31-33	2,545	38,893	307	i 1,252	226	i 784
Food	311	123	217	D	1	27	i 10
Chemicals	325	657	9,410	102	i 146	i 74	i 51
Basic chemicals	3251	101	261	87	i 112	i 61	i 49
Pharmaceuticals and medicines	3254	363	8,644	D	D	0	0
Other chemicals	other 325	193	505	D	D	13	i 1
Plastics and rubber products	326	97	169	23	i 15	i 15	i 12
Nonmetallic mineral products	327	84	14	D	*	D	3
Fabricated metal products	332	269	112	i 4	1	3	1
Machinery	333	239	886	14	70	6	31
Agricultural implements	33311	12	12	0	0	0	0
Semiconductor machinery	333242	10	383	D	3	0	0
Engines, turbines, and power transmission equipment	3336	8	58	i 5	29	i D	20
Other machinery	other 333	209	432	D	38	D	11
Computer and electronic products	334	540	8,869	90	i 282	59	i 509
Semiconductors and other electronic components	3344	185	2,215	40	i 133	4	2
Other electronic products	other 334	355	6,654	50	i 149	55	i 508
Electrical equipment, appliances, and components	335	66	469	i 30	i 89	i 10	i 23
Transportation equipment	336	189	18,371	29	633	i 23	142
Automobiles, bodies, trailers, and parts	3361-63	116	2,749	21	470	i D	134
Other transportation	other 336	73	15,622	8	163	D	8
Miscellaneous manufacturing	339	D	D	5	i 8	i 0	0
Other manufacturing	312-16, 321-24, 331, 337	D	D	D	6	D	2
Nonmanufacturing industries	21-23, 42-81	2,246	18,061	395	i 1,044	429	i 1,008
Mining, extraction, and support activities	21	11	400	6	370	4	6
Utilities	22	6	26	5	23	D	D
Wholesale trade	42	30	10	i 0	0	0	0
Information	51	103	674	D	D	D	3
Publishing	511	61	400	D	D	D	2
Telecommunications	517	D	D	0	0	0	0
Data processing, hosting, and related services	518	32	138	D	D	D	1
Other information	other 51	D	D	0	0	0	0
Professional, scientific, and technical services	54	2,017	16,750	378	i 484	i 417	i 956
Architectural, engineering, and related services	5413	464	1,596	180	i 252	i 163	i 849
Scientific research and development services	5417	982	12,031	170	i 213	i 210	i 87
Biotechnology research and development	541711	205	3,714	D	1	D	1

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		Companies ^a (number)	Amount	Companies ^b (number)	Amount	Companies ^b (number)	Amount
Other scientific research and development	other 5417	777	8,317	D	212	D	85
Other professional, scientific, and technical services	other 54	571	3,124	i	20	i	21
Health care services	621-23	63	66	0	0	0	0
Other nonmanufacturing	23, 44-45, 48-49, 52-53, 55-56, 624, 71-72, 81	15	135	D	D	D	D
All companies (number of domestic employees)	-	4,790	56,954	703	2,296	655	1,792
Micro companies ^c							
5-9	-	964	536	i	23	i	21
Small companies							
10-19	-	1,085	1,071	i	94	i	76
20-49	-	1,239	2,189	i	122	i	120
Medium companies							
50-99	-	439	1,570	i	52	i	22
100-249	-	505	3,153	i	181	i	148
Large companies							
250-499	-	184	1,654	29	72	18	39
500-999	-	100	924	14	33	14	64
1,000-4,999	-	144	10,666	29	354	18	85
5,000-9,999	-	42	4,746	20	141	8	44
10,000-24,999	-	54	12,210	16	551	12	96
25,000 or more	-	34	18,232	14	673	11	1,076

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

NAICS = 2012 North American Industry Classification System.

^a Statistics for the number of companies are based only on companies in the United States that reported to the survey. These statistics do not include an adjustment to the weight to account for unit nonresponse. A company having multiple reporting parts for data collection may contribute to the statistics for multiple industries, so the detail may not add to the total for the number of companies.

^b Statistics for the number of companies are based only on companies in the United States that reported to the survey. These statistics do not include an adjustment to the weight to account for unit nonresponse. These company count estimates reflect a new imputation process implemented for survey year 2014. This change has affected the comparability of these company count estimates with estimates published for years prior to 2014. A company having multiple reporting parts for data collection may contribute to the statistics for multiple industries, so the detail may not add to the total for the number of companies.

^c Business R&D and Innovation Survey does not include companies with fewer than five domestic employees.

Note(s)

Detail may not add to total because of rounding. Industry classification is based on the dominant business code for domestic R&D performance, where available. For companies that did not report business codes, the classification used for sampling was assigned. Statistics are representative of companies located in the United States that performed or funded R&D. Some R&D may be reported in more than one application area. Some R&D is not classified in any application area.

Source(s)

National Science Foundation, National Center for Science and Engineering Statistics, and U.S. Census Bureau, Business R&D and Innovation Survey, 2016.