

TABLE 31. Domestic R&D paid for by others and performed by the company in energy and environmental protection application areas, by industry and company size: 2012

(Millions of U.S. dollars)

Industry and company size	NAICS code	Total domestic R&D	Application areas	
			Energy	Environmental protection
All industries	21-23, 31-33, 42-81	54,970	3,465	1,483
Manufacturing industries	31-33	38,218	1,990	549 i
Food	311	171	6	17
Chemicals	325	6,359	112 i	47 i
Basic chemicals	3251	380 i	80 i	37 i
Pharmaceuticals and medicines	3254	5,552	6	* i
Other chemicals	other 325	426	26	9 i
Plastics and rubber products	326	338 i	4 i	5 i
Nonmetallic mineral products	327	D	D	D
Fabricated metal products	332	114 i	12 i	* i
Machinery	333	960	165	88
Agricultural implement	33311	43	0	* i
Semiconductor machinery	333295	73	7 i	0
Engine, turbine, and power transmission equipment	3336	579	111	73
Other machinery	other 333	265 i	47 i	15 i
Computer and electronic products	334	8,391	253	72 i
Semiconductor and other electronic components	3344	1,375	91	24 i
Other electronic products	other 334	7,017	162	49
Electrical equipment, appliances, and components	335	187	112	7 i
Transportation equipment	336	20,961 i	1,279 i	293 i
Automobiles, bodies, trailers, and parts	3361-63	D	D	D
Other transportation	other 336	D	D	D
Miscellaneous manufacturing	339	D	D	D
Other manufacturing	312-16, 321-24, 331, 337	D	D	D
Nonmanufacturing industries	21-23, 42-81	16,752	1,475	934
Mining, extraction, and support activities	21	372	360	7
Utilities	22	103	101 i	40
Wholesale trade	42	245 i	0	* i
Information	51	954	12 i	6 i
Publishing	511	734	12 i	6 i
Telecommunications	517	56	* i	0
Data processing, hosting, and related services	518	112	0	0
Other information	other 51	52 i	* i	0
Professional, scientific, and technical services	54	14,143	990 i	345 i
Architectural, engineering, and related services	5413	1,390 i	212 i	23 i
Scientific research and development services	5417	9,756	288	264 i
Biotechnology research and development	541711	3,017	72	52
Other scientific research and development	other 5417	6,738	216 i	212 i
Other professional, scientific, and technical services	other 54	2,997	490 i	59 i
Health care services	621-23	259 i	0	0
Other nonmanufacturing	23, 44-45, 48-49, 52-53, 55-56, 624, 71-72, 81	677	12 i	536
All companies (number of domestic employees)	-	54,970	3,465	1,483
Small companies ^a				
5-499	-	10,573 i	1,193 i	353 i
5-99	-	6,259 i	778 i	223 i
5-49	-	4,365 i	448 i	137 i
5-9	-	959 i	57 i	27 i
10-24	-	1,930 i	192 i	55 i
25-49	-	1,476	199 i	55 i
50-99	-	1,894 i	330	85 i
100-249	-	2,581	260 i	92
250-499	-	1,733	154	38
Medium and large companies				
500-999	-	1,257	59	47 i
1,000-4,999	-	7,666	189	89 i

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5,000–9,999	–	6,662	84	44 i
10,000–24,999	–	6,373	803	143
25,000 or more	–	22,440 i	1,137	806

* = 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 = 2007 North American Industry Classification System.

^a The upper bound is based on the U.S. Small Business Administration's definition of a small business; the Business R&D and Innovation Survey does not include companies with fewer than five domestic employees.

NOTES: Detail may not add to total because of rounding. The 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: National Science Foundation, National Center for Science and Engineering Statistics, and U.S. Census Bureau, Business R&D and Innovation Survey, 2012.