

**Table 1.4 Number of Establishments by First Use of Energy for All Purposes (Fuel and Nonfuel), 2002**  
**Level: National Data;**  
**Row: NAICS Codes; Column: Energy Sources and Shipments;**  
**Unit: Establishment Counts.**

NAICS Code(a)	Subsector and Industry	Any Energy Source(b)	Net Electricity(c)	Residual Fuel Oil	Distillate Fuel Oil(d)	Natural Gas(e)	LPG and NGL(f)	Coal	Coke and Breeze	Other(g)	Shipments of Energy Sources Produced Onsite(h)
<b>Total United States</b>											
<b>RSE Column Factors:</b>		0.7	0.7	1.4	1.2	0.9	1.3	1.1	1.2	1.3	0.5
311	Food	15,089	15,045	275	2,536	12,106	3,159	91	23	1,911	0
311221	Wet Corn Milling	49	49	3	20	47	14	19	0	15	0
31131	Sugar	77	77	18	41	63	31	24	23	45	0
311421	Fruit and Vegetable Canning	468	468	40	128	416	229	0	0	153	0
312	Beverage and Tobacco Products	1,595	1,595	49	254	1,132	630	17	0	188	0
3121	Beverages	1,517	1,517	38	224	1,075	586	9	0	166	0
3122	Tobacco	78	78	11	30	57	44	8	0	22	0
313	Textile Mills	2,247	2,247	145	365	1,388	865	48	0	209	0
314	Textile Product Mills	3,457	3,456	16	82	2,245	592	27	0	162	0
315	Apparel	5,500	5,500	26	311	3,014	608	0	0	182	0
316	Leather and Allied Products	685	699	W	31	568	71	0	0	Q	0
321	Wood Products	10,486	10,460	73	2,959	4,600	4,273	W	0	2,826	0
321113	Sawmills	2,235	2,209	4	1,151	476	581	0	0	930	0
3212	Veneer, Plywood, and Engineered Woods	1,478	1,478	8	476	774	771	W	0	511	0
3219	Other Wood Products	6,461	6,461	55	1,148	3,153	2,794	0	0	1,303	0
322	Paper	4,257	4,257	242	556	3,481	2,197	103	W	503	0
322110	Pulp Mills	34	34	15	25	26	18	W	0	24	0
322121	Paper Mills, except Newsprint	323	323	111	158	267	215	55	W	172	0
322122	Newsprint Mills	21	21	4	15	16	12	4	0	16	0
322130	Paperboard Mills	210	210	57	96	185	148	39	0	103	0
323	Printing and Related Support	20,220	20,220	136	195	13,304	1,879	0	0	605	0
324	Petroleum and Coal Products	1,916	1,916	121	915	1,409	526	44	W	429	15
324110	Petroleum Refineries	215	215	40	91	198	94	9	0	173	0
324199	Other Petroleum and Coal Products	47	47	W	26	30	10	14	W	32	14
325	Chemicals	8,909	8,909	277	1,789	6,767	3,372	163	17	2,055	47
325110	Petrochemicals	37	37	W	11	33	26	W	0	21	16
325120	Industrial Gases	527	527	0	5	179	9	0	0	103	0
325181	Alkalies and Chlorine	33	33	W	13	29	7	7	0	17	W
325182	Carbon Black	22	22	11	11	22	4	0	0	14	0
325188	Other Basic Inorganic Chemicals	515	515	16	106	317	222	5	3	136	W
325192	Cyclic Crudes and Intermediates	37	37	4	17	36	16	W	0	21	0
325193	Ethyl Alcohol	48	48	0	11	46	12	18	0	29	W
325199	Other Basic Organic Chemicals	578	578	30	267	483	365	47	0	359	13
325211	Plastics Materials and Resins	709	709	62	169	588	415	16	W	255	13
325212	Synthetic Rubber	125	125	24	32	103	60	W	0	46	W
325222	Noncellulosic Organic Fibers	64	64	19	24	50	31	W	0	27	0
325311	Nitrogenous Fertilizers	56	56	0	23	44	11	W	0	23	0
325312	Phosphatic Fertilizers	27	27	5	19	21	10	W	W	12	0
3254	Pharmaceuticals and Medicines	1,143	1,143	56	328	917	308	6	0	169	0
325412	Pharmaceutical Preparation	606	606	11	131	507	126	6	0	77	0
325992	Photographic Film, Paper, Plate, and Chemicals	171	171	4	51	162	69	W	0	48	0
326	Plastics and Rubber Products	10,538	10,538	81	728	8,022	3,991	7	0	1,383	0
327	Nonmetallic Mineral Products	11,593	11,516	27	4,209	7,328	3,127	195	22	2,206	0
3272	Glass and Glass Products	1,047	1,047	3	161	979	329	W	0	215	0
327211	Flat Glass	38	38	W	22	38	28	W	0	23	0
327213	Glass Containers	61	61	0	44	61	51	0	0	46	0
327310	Cements	195	195	3	129	136	64	109	W	119	0
327410	Lime	65	65	7	51	44	29	45	W	54	0
327993	Mineral Wool	207	207	0	39	183	68	0	14	39	0
331	Primary Metals	4,166	4,166	44	1,059	3,600	1,885	75	165	1,466	9
331111	Iron and Steel Mills	771	771	5	279	448	168	37	28	180	9
331112	Electrometallurgical Ferroalloy Products	15	15	0	10	15	6	4	W	8	0

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3312	Steel Products from Purchased Steel	548	548	13	167	504	303	8	W	223	0
3313	Alumina and Aluminum	446	446	W	119	423	194	W	W	168	0
331312	Primary Aluminum	41	41	W	26	41	22	W	0	27	0
3314	Nonferrous Metals, except Aluminum	671	671	W	111	629	317	W	21	250	0
3315	Foundries	1,715	1,715	13	374	1,582	897	18	111	639	0
331511	Iron Foundries	453	453	0	223	396	253	16	111	198	0
331521	Aluminum Die-Casting Foundries	227	227	W	12	215	126	0	0	84	0
331524	Aluminum Foundries, except Die-Casting	341	341	W	38	304	152	0	0	118	0
332	Fabricated Metal Products	35,349	35,349	201	3,016	26,976	13,621	73	66	8,461	0
333	Machinery	17,381	17,381	14	1,158	14,123	5,965	W	0	3,358	0
334	Computer and Electronic Products	9,238	9,292	23	661	6,629	987	W	0	750	0
334413	Semiconductors and Related Devices	578	632	W	93	434	63	0	0	86	0
335	Electrical Equip., Appliances, and Components	3,886	3,886	18	339	3,349	1,451	W	W	765	0
336	Transportation Equipment	7,653	7,653	33	1,185	5,994	3,253	20	W	2,059	0
336112	Light Trucks and Utility Vehicles	42	42	3	25	41	19	W	0	32	0
337	Furniture and Related Products	10,941	10,941	62	658	6,144	2,833	99	0	940	0
339	Miscellaneous	15,605	15,605	W	346	11,171	3,715	0	0	1,741	0
	Total	200,710	200,630	1,877	23,352	143,350	59,000	971	304	32,238	72

(a) The Bureau of the Census classifies establishments using the North American Industry Classification System (NAICS).

(b) 'Any Energy Source' represents the non-duplicative total of establishments identified with any of the listed energy sources. This count includes only those establishments that reported this activity in 2002.

(c) 'Net Electricity' is obtained by summing purchases, transfers in, and generation from noncombustible renewable resources, minus quantities sold and transferred out. It does not include electricity inputs from onsite cogeneration or generation from combustible fuels because that energy has already been included as generating fuel (for example, coal).

(d) 'Distillate Fuel Oil' includes Nos. 1, 2, and 4 fuel oils and Nos. 1, 2, and 4 diesel fuels.

(e) 'Natural Gas' includes natural gas obtained from utilities, local distribution companies, and any other supplier(s), such as independent gas producers, gas brokers, marketers, and any marketing subsidiaries of utilities.

(f) Examples of Liquefied Petroleum Gases (LPG) are ethane, ethylene, propane, propylene, normal butane, butylene, ethane-propane mixtures, propane-butane mixtures, and isobutane produced at refineries or natural gas processing plants, including plants that fractionate raw Natural Gas Liquids (NGL).

(g) 'Other' includes net steam (the sum of purchases, generation from renewables, and net transfers), and other energy that respondents indicated was used to produce heat and power or as feedstock/raw material inputs. See also Footnote 'i'.

(h) 'Shipments of Energy Sources Produced Onsite' are those shipments produced or transformed onsite from the nonfuel use of other energy sources. For example, at an establishment that processes coal to make coke for later use, the entire quantity of coal is counted as first use. Any onsite consumption of coke is not counted as first use because it would duplicate the coal use. If some of the coke is then sold to another establishment, then that second establishment will consider this coke to be a shipment of an offsite-produced energy source. Hence, the second establishment will count this coke as its first use, thereby resulting in double counting. In order to eliminate the double counting, the energy equivalent of the coke shipment must be subtracted from first use.

(i) For the petroleum refining industry only, the feedstocks and raw material inputs for the production of nonenergy products (i.e., asphalt, waxes, lubricants, and solvents) and feedstock consumption at adjoining petrochemical plants are included in the 'Other' column, regardless of type of energy. The

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remaining columns for the petroleum refining industry include only energy that was consumed for the production of heat and power. The 'Other' column also includes net steam and other energy that respondents indicated was used in the production of heat and power. Those inputs and feedstocks that were converted to other energy products (e.g., crude oil converted to residual and distillate fuel oils) are excluded.

NF=No applicable RSE row/column factor.

\* Estimate less than 0.5.

W=Withheld to avoid disclosing data for individual establishments.

Q=Withheld because Relative Standard Error is greater than 50 percent.

NA=Not available.

Notes: To obtain the RSE percentage for any table cell, multiply the cell's corresponding RSE column and RSE row factors. Totals may not equal sum of components because of independent rounding. The derived estimates presented in this table are for the first use (formerly primary consumption) of energy for heat and power and as feedstocks or raw material inputs. First use is defined as the consumption of the energy that was originally produced offsite or was produced onsite from input materials not classified as energy. Examples of the latter are hydrogen produced from the electrolysis of brine; the output of captive (onsite) mines or wells; woodchips, bark, and woodwaste from wood purchased as a raw material input; and waste materials, such as wastepaper and packing materials. First use excludes quantities of energy that are produced from other energy inputs and, therefore, avoids double counting.

Source: Energy Information Administration, Office of Energy Markets and End Use, Energy Consumption Division, Form EIA-846, '2002 Manufacturing Energy Consumption Survey,' and Office of Oil and Gas, Petroleum Supply Division, Form EIA-810, 'Monthly Refinery Report' for 2002.

**RSE  
Row  
Factors**



4.7  
0.9  
0.9  
7  
10.3  
12  
0.9  
4.9  
9.8  
9.3  
5.8  
1.6  
2.5  
3  
1.9  
1.7  
0.9  
3.4  
0.9  
1.6  
4.7  
5.6  
1.3  
1  
2  
1  
7.4  
1.1  
0.9  
4.6  
0.9  
1.1  
1.9  
2  
2.9  
0.9  
1  
0.9  
3.1  
5.8  
4  
1.7  
5.4  
4.3  
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2.8  
0.9  
12.6  
2.9  
3.6  
1

**RSE  
Row  
Factors**

3.6  
2.5  
1.6  
2.4  
4.6  
5.2  
1.2  
4.3  
4.6  
2.1  
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3.4  
4.7  
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6.2  
1.9  
1.9

RSE  
Row  
Factors