

**Table 10.3 Number of Establishments with Capability to Switch Natural Gas to Alternative Energy Sources, 2010;**

**Level: National Data;**  
**Row: NAICS Codes;**  
**Column: Energy Sources;**  
**Unit: Establishment Counts.**

NAICS Code(a)	Selected Subsectors and Industry	Natural Gas(b)				Alternative Energy Sources(c)				Coal Coke and Breeze	Other(f)
		Total Establishments Consuming Natural Gas(d)	Switchable	Not Switchable	Electricity Receipts(e)	Distillate Fuel Oil	Residual Fuel Oil	Coal	LPG		
<b>Total United States</b>											
311	Food	10,373	1,667	8,630	339	675	166	Q	656	W	107
3112	Grain and Oilseed Milling	489	146	380	5	39	25	10	82	W	Q
311221	Wet Corn Milling	50	16	42	W	W	W	W	7	0	W
31131	Sugar Manufacturing	67	5	64	0	W	W	W	0	0	W
3114	Fruit and Vegetable Preserving and Specialty Foods	839	145	726	8	30	26	0	98	0	0
3115	Dairy Products	908	222	709	44	130	38	W	90	0	11
3116	Animal Slaughtering and Processing	1,262	351	976	99	167	60	W	119	0	75
312	Beverage and Tobacco Products	1,242	301	1,047	124	35	34	12	167	8	13
3121	Beverages	1,193	280	1,012	119	24	30	W	161	8	W
3122	Tobacco	48	21	34	5	11	5	W	6	0	W
313	Textile Mills	1,059	213	855	98	70	57	W	76	0	Q
314	Textile Product Mills	1,969	Q	1,424	Q	W	W	W	W	0	0
315	Apparel	1,979	Q	1,757	W	18	W	0	0	0	0
316	Leather and Allied Products	231	Q	218	0	W	0	0	W	0	0
321	Wood Products	3,146	303	2,716	174	31	23	W	156	0	42
321113	Sawmills	346	56	261	20	16	W	W	22	0	11
3212	Veneer, Plywood, and Engineered Woods	628	66	536	31	8	12	W	32	0	14
321219	Reconstituted Wood Products	137	21	125	W	3	W	0	Q	0	W
3219	Other Wood Products	2,014	170	1,773	W	W	W	0	Q	0	Q
322	Paper	2,984	447	2,550	W	182	132	16	97	4	13
322110	Pulp Mills	32	17	24	W	7	9	0	W	0	W
322121	Paper Mills, except Newsprint	177	59	159	6	18	25	W	7	W	W
322122	Newsprint Mills	15	9	9	0	9	W	W	0	0	0
322130	Paperboard Mills	147	78	111	9	34	43	7	5	W	7
323	Printing and Related Support	10,055	992	7,992	958	45	0	W	Q	0	0
324	Petroleum and Coal Products	1,317	486	963	63	284	176	4	117	W	47
324110	Petroleum Refineries	204	78	186	15	7	12	W	W	0	W
324121	Asphalt Paving Mixture and Block	767	368	453	39	258	159	W	57	W	31
324199	Other Petroleum and Coal Products	44	3	41	W	0	0	W	0	0	0
325	Chemicals	6,339	957	5,473	412	412	198	20	317	4	Q
325110	Petrochemicals	38	10	35	3	3	3	0	W	0	W
325120	Industrial Gases	176	Q	110	Q	0	0	0	0	0	0
325181	Alkalies and Chlorine	27	6	25	W	W	0	0	0	0	W
325182	Carbon Black	29	W	W	0	0	W	0	0	0	0
325188	Other Basic Inorganic Chemicals	399	70	366	W	55	W	W	6	0	5
325192	Cyclic Crudes and Intermediates	23	W	W	0	W	0	0	0	0	0
325193	Ethyl Alcohol	170	24	161	0	10	0	W	10	0	10
325199	Other Basic Organic Chemicals	423	64	395	6	28	Q	W	4	0	W
325211	Plastics Materials and Resins	627	55	581	15	33	7	0	7	0	W
325212	Synthetic Rubber	78	16	62	5	9	W	W	5	0	W
325222	Noncellulosic Organic Fibers	59	27	42	7	19	8	4	4	W	0
325311	Nitrogenous Fertilizers	44	4	39	W	3	0	0	3	0	0
325312	Phosphatic Fertilizers	32	4	31	W	W	W	0	W	0	0
3254	Pharmaceuticals and Medicines	956	143	873	50	102	7	W	14	W	5
325412	Pharmaceutical Preparation	500	85	455	21	64	W	W	9	0	W
325992	Photographic Film, Paper, Plate, and Chemicals	117	37	92	W	12	W	0	24	0	0
326	Plastics and Rubber Products	6,374	873	5,280	578	209	Q	W	334	W	Q
327	Nonmetallic Mineral Products	6,460	1,058	5,366	620	276	25	33	492	W	20
327121	Brick and Structural Clay Tile	146	28	125	0	W	7	12	9	0	7
327211	Flat Glass	47	12	41	0	6	0	0	6	0	W
327212	Other Pressed and Blown Glass and Glassware	140	14	129	0	W	W	0	10	0	W
327213	Glass Containers	63	25	57	7	6	W	0	18	0	W
327215	Glass Products from Purchased Glass	410	32	372	21	W	0	W	12	0	W
327310	Cements	127	56	89	Q	12	9	16	7	W	W
327410	Lime	43	4	40	W	W	0	W	0	0	0
327420	Gypsum	113	14	105	W	12	0	0	5	0	0
327993	Mineral Wool	150	6	148	W	W	0	0	W	0	0
331	Primary Metals	2,699	392	2,410	142	54	32	9	198	W	21
331111	Iron and Steel Mills	345	33	321	12	W	W	W	7	W	5
331112	Electrometallurgical Ferroalloy Products	17	W	W	W	0	0	0	0	0	0
3312	Steel Products from Purchased Steel	319	W	W	W	W	W	0	28	0	0

**Table 10.3 Number of Establishments with Capability to Switch Natural Gas to Alternative Energy Sources, 2010;**

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**Column: Energy Sources;**  
**Unit: Establishment Counts.**

NAICS Code(a)	Selected Subsectors and Industry	Natural Gas(b)				Alternative Energy Sources(c)				Coal Coke and Breeze	Other(f)
		Total Establishments Consuming Natural Gas(d)	Switchable	Not Switchable	Electricity Receipts(e)	Distillate Fuel Oil	Residual Fuel Oil	Coal	LPG		
3313	Alumina and Aluminum	288	45	265	20	12	0	0	22	0	0
331314	Secondary Smelting and Alloying of Aluminum	71	10	70	6	W	0	0	W	0	0
331315	Aluminum Sheet, Plate and Foils	61	7	60	W	W	0	0	W	0	0
331316	Aluminum Extruded Products	128	23	111	9	W	0	0	15	0	0
3314	Nonferrous Metals, except Aluminum	486	93	401	16	13	Q	W	60	W	0
331419	Primary Smelting and Refining of Nonferrous Metals, except Copper and Alu	69	10	64	5	5	0	0	W	0	0
3315	Foundries	1,244	175	1,119	87	13	6	W	81	W	Q
331511	Iron Foundries	313	61	259	18	W	W	W	47	0	0
331521	Aluminum Die-Casting Foundries	135	35	112	21	W	0	0	15	0	W
331524	Aluminum Foundries, except Die-Casting	248	21	235	16	W	0	0	4	0	W
332	Fabricated Metal Products	23,127	1,942	19,562	1,098	Q	W	0	1,280	0	Q
333	Machinery	10,772	920	9,359	720	Q	Q	0	268	0	Q
334	Computer and Electronic Products	4,021	504	3,343	393	86	W	0	65	0	0
334413	Semiconductors and Related Devices	291	14	290	0	13	W	0	0	0	0
335	Electrical Equip., Appliances, and Components	2,786	241	2,617	Q	25	19	0	Q	0	Q
336	Transportation Equipment	4,667	634	4,021	270	Q	16	W	334	0	Q
336111	Automobiles	44	W	W	0	W	0	W	0	0	W
336112	Light Trucks and Utility Vehicles	38	W	W	W	W	0	0	W	0	0
3364	Aerospace Product and Parts	895	161	768	62	52	W	0	73	0	W
336411	Aircraft	255	59	240	W	Q	8	0	Q	0	W
337	Furniture and Related Products	5,022	557	3,875	376	Q	Q	0	Q	0	0
339	Miscellaneous	9,377	1,044	7,673	778	Q	W	W	408	W	Q
	<b>Total</b>	<b>115,999</b>	<b>13,898</b>	<b>97,130</b>	<b>7,714</b>	<b>2,890</b>	<b>1,363</b>	<b>591</b>	<b>5,303</b>	<b>Q</b>	<b>915</b>

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

(b) These counts include only those establishments that reported this activity in 2010.

(c) 'Alternative Energy Sources' consist of those energy sources that could have been substituted for natural gas during 2010. The quantities are expressed in billions of cubic feet, and therefore represent the quantity of natural gas that could have been displaced by the given alternative type of energy.

(d) 'Total Consumed' represents those quantities (Total Inputs) of natural gas that were ascertained switchable or not switchable, plus an additional quantity for which the switching status was not ascertained.

(e) 'Electricity Receipts' represents those quantities of electricity generated off the manufacturing establishment site and available at the site for consumption. It includes those quantities for which payment was made, quantities transferred in, quantities purchased and paid for by a central purchasing entity, and quantities for which payment was made in kind. It does not include electricity generated onsite. 'Electricity Receipts' has not been adjusted to account for any quantities that might have been resold or transferred out. The estimates include those quantities that were ascertained switchable or not switchable, plus an additional quantity for which the switching status was not ascertained.

(f) 'Other' includes all other types of energy not already identified that respondents indicated could have been consumed in place of natural gas.

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: Totals may not equal sum of components because of independent rounding.

Source: U.S. Energy Information Administration, Office of Energy Consumption and Efficiency Statistics, Form EIA-846, '2010 Manufacturing Energy Consumption Survey.'

RSE Table 10.3 Relative Standard Errors for Table 10.3;

Unit: Percents.

NAICS Code(a)	Selected Subsectors and Industry	Natural Gas(b)				Alternative Energy Sources(c)				Coal Coke and Breeze	Other(f)
		Total Establishments Consuming Natural Gas(d)	Switchable	Not Switchable	Electricity Receipts(e)	Distillate Fuel Oil	Residual Fuel Oil	Coal	LPG		
<b>Total United States</b>											
311	Food	3.4	12.4	4.5	34.1	16.0	17.2	69.0	19.2	72.4	24.7
3112	Grain and Oilseed Milling	5.0	19.2	8.6	4.5	19.0	22.1	35.1	33.6	72.4	50.6
311221	Wet Corn Milling	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	X	0.0
31131	Sugar Manufacturing	0.0	0.0	0.0	X	0.0	0.0	0.0	X	X	0.0
3114	Fruit and Vegetable Preserving and Specialty Foods	5.3	24.7	7.1	18.5	13.7	18.8	X	36.4	X	X
3115	Dairy Products	3.8	13.1	5.7	16.3	19.9	28.3	6.7	27.5	X	40.0
3116	Animal Slaughtering and Processing	5.8	16.1	7.6	37.3	20.9	39.3	91.9	37.9	X	31.9
312	Beverage and Tobacco Products	8.0	20.6	9.3	32.4	12.3	25.5	30.0	33.1	43.4	27.3
3121	Beverages	8.3	22.1	9.6	33.7	18.2	29.5	33.3	34.2	43.4	30.0
3122	Tobacco	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	X	0.0
313	Textile Mills	6.2	22.3	8.9	40.1	34.0	37.7	54.1	37.4	X	70.7
314	Textile Product Mills	16.6	60.3	22.2	67.1	12.7	46.5	98.3	50.3	X	X
315	Apparel	23.6	67.6	26.1	98.5	41.1	54.7	X	X	X	X
316	Leather and Allied Products	19.6	50.3	20.4	X	17.6	X	X	50.3	X	X
321	Wood Products	7.5	23.5	8.5	38.2	18.9	28.1	35.7	39.6	X	27.0
321113	Sawmills	12.1	23.0	14.9	32.9	33.2	6.4	6.4	42.4	X	6.4
3212	Veneer, Plywood, and Engineered Woods	10.3	19.3	11.6	29.7	7.6	30.3	58.7	26.6	X	24.5
321219	Reconstituted Wood Products	13.8	39.0	14.8	83.8	13.5	43.9	X	58.5	X	13.5
3219	Other Wood Products	11.0	40.4	12.2	55.5	35.6	67.9	X	66.1	X	63.4
322	Paper	5.8	17.4	7.4	51.5	23.1	20.5	2.9	45.2	0.0	0.0
322110	Pulp Mills	0.0	0.0	0.0	0.0	0.0	0.0	X	0.0	X	0.0
322121	Paper Mills, except Newsprint	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
322122	Newsprint Mills	0.0	0.0	0.0	X	0.0	0.0	0.0	X	X	X
322130	Paperboard Mills	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
323	Printing and Related Support	5.2	26.2	6.8	27.1	47.0	X	98.8	73.4	X	X
324	Petroleum and Coal Products	4.4	7.4	5.3	7.5	9.4	15.1	1.8	6.2	93.9	12.9
324110	Petroleum Refineries	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	X	0.0
324121	Asphalt Paving Mixture and Block	5.8	9.6	7.5	8.3	10.2	16.6	5.3	8.4	93.9	19.6
324199	Other Petroleum and Coal Products	0.0	0.0	0.0	0.0	X	X	0.0	X	X	X
325	Chemicals	3.7	15.3	4.7	31.3	15.6	41.9	41.0	34.5	3.5	55.1
325110	Petrochemicals	0.0	0.0	0.0	0.0	0.0	0.0	X	0.0	X	0.0
325120	Industrial Gases	22.5	73.1	24.7	73.1	X	X	X	X	X	X
325181	Alkalies and Chlorine	0.0	0.0	0.0	0.0	0.0	X	X	X	X	0.0
325182	Carbon Black	0.0	0.0	0.0	X	X	0.0	X	X	X	X
325188	Other Basic Inorganic Chemicals	6.5	34.4	8.5	11.6	43.7	62.9	11.6	26.4	X	30.1
325192	Cyclic Crudes and Intermediates	0.0	0.0	0.0	X	0.0	X	X	X	X	X
325193	Ethyl Alcohol	0.9	16.0	1.4	X	5.4	X	13.5	38.4	X	37.3
325199	Other Basic Organic Chemicals	5.2	32.4	5.9	23.1	20.0	68.3	21.2	12.9	X	43.6
325211	Plastics Materials and Resins	4.9	14.9	5.8	23.7	19.4	19.4	X	23.4	X	7.9
325212	Synthetic Rubber	13.4	20.2	13.6	24.2	24.9	12.3	12.3	23.6	X	47.9
325222	Noncellulosic Organic Fibers	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	X
325311	Nitrogenous Fertilizers	0.0	0.0	0.0	0.0	0.0	X	X	0.0	X	X
325312	Phosphatic Fertilizers	0.0	0.0	0.0	0.0	0.0	0.0	X	0.0	X	X
3254	Pharmaceuticals and Medicines	6.1	12.2	6.7	26.6	12.0	7.8	79.9	7.8	11.6	8.1
325412	Pharmaceutical Preparation	8.3	12.5	8.8	26.3	11.3	10.2	10.2	10.2	X	10.2
325992	Photographic Film, Paper, Plate, and Chemicals	6.6	23.6	12.0	55.4	14.1	14.1	X	36.2	X	X
326	Plastics and Rubber Products	4.6	22.7	6.2	29.8	43.7	74.5	80.5	39.7	98.8	93.3
327	Nonmetallic Mineral Products	6.3	21.8	7.5	30.9	43.3	19.5	8.0	33.9	13.2	9.3
327121	Brick and Structural Clay Tile	2.9	11.5	3.8	X	47.0	30.0	10.0	17.0	X	19.1
327211	Flat Glass	0.0	0.0	0.0	X	0.0	X	X	0.0	X	0.0
327212	Other Pressed and Blown Glass and Glassware	6.5	20.0	7.3	X	13.2	13.2	X	23.9	X	13.2
327213	Glass Containers	0.0	0.0	0.0	0.0	0.0	0.0	X	0.0	X	0.0
327215	Glass Products from Purchased Glass	6.3	11.3	7.3	13.8	8.9	X	8.9	20.4	X	8.9
327310	Cements	11.2	33.0	16.3	73.7	13.2	13.2	13.2	13.2	13.2	13.2
327410	Lime	0.0	0.0	0.0	0.0	0.0	X	0.0	X	X	X
327420	Gypsum	7.6	13.9	8.8	13.9	13.9	X	X	13.9	X	X
327993	Mineral Wool	13.1	14.5	13.2	14.5	14.5	X	X	14.5	X	X
331	Primary Metals	1.8	9.8	2.2	11.5	14.7	45.9	10.2	15.2	6.4	49.5
331111	Iron and Steel Mills	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
331112	Electrometallurgical Ferroalloy Products	0.0	0.0	0.0	0.0	X	X	X	X	X	X
3312	Steel Products from Purchased Steel	10.0	29.2	10.8	12.2	64.5	12.2	X	37.4	X	X
3313	Alumina and Aluminum	3.2	9.2	3.2	20.2	11.3	X	X	7.6	X	X

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**Unit: Percents.**

NAICS Code(a)	Selected Subsectors and Industry	Natural Gas(b)				Alternative Energy Sources(c)				Coal Coke and Breeze	Other(f)
		Total Establishments Consuming Natural Gas(d)	Switchable	Not Switchable	Electricity Receipts(e)	Distillate Fuel Oil	Residual Fuel Oil	Coal	LPG		
331314	Secondary Smelting and Alloying of Aluminum	0.0	0.0	0.0	0.0	0.0	X	X	0.0	X	X
331315	Aluminum Sheet, Plate and Foils	0.0	0.0	0.0	0.0	0.0	X	X	0.0	X	X
331316	Aluminum Extruded Products	1.3	16.5	3.5	41.5	33.1	X	X	6.7	X	X
3314	Nonferrous Metals, except Aluminum	6.3	31.4	8.3	27.1	7.8	80.5	11.1	43.5	11.1	X
331419	Primary Smelting and Refining of Nonferrous Metals, except Copper and Alu	0.0	0.0	0.0	0.0	0.0	X	X	0.0	X	X
3315	Foundries	1.6	11.8	2.1	17.6	31.3	13.3	18.8	12.4	29.6	66.6
331511	Iron Foundries	1.4	16.8	3.7	30.0	50.9	6.5	6.5	20.7	X	X
331521	Aluminum Die-Casting Foundries	11.8	26.2	12.8	43.0	11.7	X	X	12.5	X	48.0
331524	Aluminum Foundries, except Die-Casting	2.7	22.6	3.3	27.5	12.3	X	X	12.3	X	12.3
332	Fabricated Metal Products	4.2	24.8	5.3	33.8	55.5	99.4	X	30.6	X	93.2
333	Machinery	4.1	25.9	5.1	30.0	63.0	69.1	X	47.0	X	56.8
334	Computer and Electronic Products	8.1	31.5	9.8	39.3	44.4	6.4	X	49.9	X	X
334413	Semiconductors and Related Devices	14.0	15.6	14.0	X	15.7	14.9	X	X	X	X
335	Electrical Equip., Appliances, and Components	5.5	37.6	6.4	53.2	45.2	46.5	X	71.8	X	66.1
336	Transportation Equipment	5.8	25.2	7.1	42.2	51.7	12.3	63.4	35.4	X	74.1
336111	Automobiles	0.0	0.0	0.0	X	0.0	X	0.0	X	X	0.0
336112	Light Trucks and Utility Vehicles	0.0	0.0	0.0	0.0	0.0	X	X	0.0	X	X
3364	Aerospace Product and Parts	5.4	23.4	7.2	46.3	44.6	12.4	X	40.0	X	86.3
336411	Aircraft	3.4	37.0	5.6	16.8	67.8	16.8	X	51.5	X	16.8
337	Furniture and Related Products	7.1	29.3	9.3	37.9	74.0	98.7	X	52.5	X	X
339	Miscellaneous	4.9	24.7	6.4	29.1	74.8	59.1	98.8	41.1	98.8	64.2
	Total	1.4	6.1	1.8	9.2	9.0	16.4	33.5	10.5	55.0	23.2

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

(b) These counts include only those establishments that reported this activity in 2010.

(c) 'Alternative Energy Sources' consist of those energy sources that could have been substituted for natural gas during 2010. The quantities are expressed in billions of cubic feet, and therefore represent the quantity of natural gas that could have been displaced by the given alternative type of energy.

(d) 'Total Consumed' represents those quantities (Total Inputs) of natural gas that were ascertained switchable or not switchable, plus an additional quantity for which the switching status was not ascertained.

(e) 'Electricity Receipts' represents those quantities of electricity generated off the manufacturing establishment site and available at the site for consumption. It includes those quantities for which payment was made, quantities transferred in, quantities purchased and paid for by a central purchasing entity, and quantities for which payment was made in kind. It does not include electricity generated onsite. 'Electricity Receipts' has not been adjusted to account for any quantities that might have been resold or transferred out. The estimates include those quantities that were ascertained switchable or not switchable, plus an additional quantity for which the switching status was not ascertained.

(f) 'Other' includes all other types of energy not already identified that respondents indicated could have been consumed in place of natural gas.

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.

X=Not defined because RSE corresponds to a value of zero.

Notes: Totals may not equal sum of components because of independent rounding.

Source: U.S. Energy Information Administration, Office of Energy Consumption and Efficiency Statistics, Form EIA-846, '2010 Manufacturing Energy Consumption Survey.'