

Released: August 2021
 Next MECS will be fielded in 2023.

Table 10.13 Number of Establishments with Capability to Switch HGL (excluding natural gasoline) to Alternative Energy Sources, 2018;

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

NAICS Code(a)	Subsector and Industry	HGL (excluding natural gasoline)(b)			Alternative Energy Sources(c)						
		Total Consumed(d)	Switchable	Not Switchable	Electricity Receipts(e)	Natural Gas	Distillate Fuel Oil	Residual Fuel Oil	Coal	Coal Coke and Breeze	Other(f)
Total United States											
311	Food	3,166	417	2,859	341	148	92	0	0	0	Q
3112	Grain and Oilseed Milling	146	11	138	8	3	D	0	0	0	0
311221	Wet Corn Milling	28	D	26	D	D	0	0	0	0	0
31131	Sugar Manufacturing	21	D	18	D	0	0	0	0	0	0
3114	Fruit and Vegetable Preserving and Specialty Food	323	15	311	11	Q	D	0	0	0	0
3115	Dairy Product	231	27	204	8	18	6	0	0	0	4
3116	Animal Slaughtering and Processing	353	D	325	D	Q	Q	0	0	0	0
312	Beverage and Tobacco Products	2,106	190	1,982	156	80	Q	0	0	0	0
3121	Beverages	2,079	186	1,958	D	Q	Q	0	0	0	0
3122	Tobacco	27	4	24	D	3	0	0	0	0	0
313	Textile Mills	516	31	486	Q	D	Q	0	0	0	0
314	Textile Product Mills	799	Q	788	0	Q	D	0	0	0	0
315	Apparel	Q	Q	Q	3	0	0	0	Q	0	0
316	Leather and Allied Products	152	Q	144	0	D	D	0	0	0	D
321	Wood Products	4,391	205	4,192	113	70	D	3	Q	0	Q
321113	Sawmills	461	39	427	23	14	9	3	D	0	Q
3212	Veneer, Plywood, and Engineered Woods	470	82	389	Q	Q	Q	0	D	0	Q
321219	Reconstituted Wood Products	79	0	79	0	0	0	0	0	0	0
3219	Other Wood Products	3,366	D	3,284	Q	D	D	0	0	0	Q
322	Paper	1,543	256	1,288	202	116	D	0	0	0	0
322110	Pulp Mills	18	0	18	0	0	0	0	0	0	0
322121	Paper Mills, except Newsprint	91	D	89	D	D	0	0	0	0	0
322122	Newsprint Mills	10	0	10	0	0	0	0	0	0	0
322130	Paperboard Mills	90	D	87	D	D	D	0	0	0	0
323	Printing and Related Support	1,689	Q	1,493	Q	Q	0	0	0	0	Q
324	Petroleum and Coal Products	435	67	394	24	16	24	8	0	0	4
324110	Petroleum Refineries	51	11	39	0	11	0	0	0	0	0
324121	Asphalt Paving Mixture and Block	192	48	167	D	D	D	8	0	0	D
324122	Asphalt Shingle and Coating Materials	98	D	96	3	D	0	0	0	0	D
324191	Petroleum Lubricating Oil and Grease Products	71	0	71	0	0	0	0	0	0	0
324199	Other Petroleum and Coal Products	23	D	21	D	0	D	0	0	0	0
325	Chemicals	3,937	567	3,417	486	67	29	40	0	0	7
325110	Petrochemicals	30	D	29	0	D	0	0	0	0	0
325120	Industrial Gases	111	Q	107	D	Q	0	0	0	0	0
325180	Other Basic Inorganic Chemicals	221	12	213	9	Q	3	0	0	0	0
325193	Ethyl Alcohol	72	6	66	0	Q	0	0	0	0	D
325194	Cyclic Crudes, Intermediate and Gum and Wood Chemicals	20	D	19	D	D	0	0	0	0	0
325199	Other Basic Organic Chemicals	180	Q	145	Q	6	4	0	0	0	D
325211	Plastics Materials and Resins	538	47	492	Q	Q	Q	0	0	0	Q
325212	Synthetic Rubber	37	D	34	3	D	0	0	0	0	0
325220	Artificial and Synthetic Fibers and Filaments	56	4	52	D	4	D	D	0	0	0
325311	Nitrogenous Fertilizers	92	0	92	0	0	0	0	0	0	0
325312	Phosphatic Fertilizers	21	4	17	0	3	0	D	0	0	0
3254	Pharmaceuticals and Medicines	220	11	211	8	3	D	D	0	0	0
325412	Pharmaceutical Preparation	104	5	101	D	3	D	D	0	0	0

325992	Photographic Film, Paper, Plate, and Chemicals	23	0	23	0	0	0	0	0	0	0
326	Plastics and Rubber Products	3,441	370	3,147	302	Q	Q	Q	0	0	0
327	Nonmetallic Mineral Products	3,241	447	2,799	268	254	98	0	0	0	83
327120	Clay Building Material and Refractories	181	24	157	15	D	D	0	0	0	D
327211	Flat Glass	23	3	22	D	D	0	0	0	0	0
327212	Other Pressed and Blown Glass and Glassware	83	D	82	D	0	0	0	0	0	0
327213	Glass Containers	21	D	20	D	0	0	0	0	0	0
327215	Glass Products from Purchased Glass	225	10	219	6	0	4	0	0	0	0
327310	Cements	49	3	46	D	0	D	0	0	0	0
327410	Lime	19	0	19	0	0	0	0	0	0	0
327420	Gypsum	87	0	87	0	0	0	0	0	0	0
327993	Mineral Wool	92	D	90	D	D	0	0	0	0	D
331	Primary Metals	2,086	119	2,003	73	46	27	D	0	0	D
331110	Iron and Steel Mills and Ferroalloys	229	18	216	9	7	6	0	0	0	0
3312	Steel Products from Purchased Steel	354	20	338	12	4	8	0	0	0	0
3313	Alumina and Aluminum	239	9	233	6	3	4	D	0	0	0
331314	Secondary Smelting and Alloying of Aluminum	68	5	63	D	3	D	D	0	0	0
331315	Aluminum Sheet, Plate and Foils	37	0	37	0	0	0	0	0	0	0
331318	Other Aluminum Rolling, Drawing and Extruding	123	3	122	D	0	D	0	0	0	0
3314	Nonferrous Metals, except Aluminum	363	37	333	23	18	5	0	0	0	D
331410	Nonferrous Metal (except Aluminum) Smelting and Refining	75	6	70	3	D	D	0	0	0	D
3315	Foundries	902	35	883	24	13	5	0	0	0	D
331511	Iron Foundries	305	10	301	5	D	0	0	0	0	0
331523	Nonferrous Metal Die-Casting Foundries	192	15	179	D	0	D	0	0	0	0
331524	Aluminum Foundries, except Die-Casting	173	4	173	D	D	D	0	0	0	D
332	Fabricated Metal Products	14,355	1,001	13,502	705	Q	Q	D	0	0	0
333	Machinery	5,318	482	4,978	340	5	0	0	0	0	Q
334	Computer and Electronic Products	804	125	681	Q	3	Q	0	0	0	Q
334413	Semiconductors and Related Devices	25	5	21	D	3	0	0	0	0	0
335	Electrical Equip., Appliances, and Components	902	Q	872	Q	0	Q	0	0	0	Q
336	Transportation Equipment	2,497	136	2,364	55	10	Q	0	0	0	D
336111	Automobiles	26	D	25	D	0	0	0	0	0	0
336112	Light Trucks and Utility Vehicles	33	0	33	0	0	0	0	0	0	0
3364	Aerospace Product and Parts	349	17	334	Q	10	0	0	0	0	D
336411	Aircraft	103	0	103	0	0	0	0	0	0	0
337	Furniture and Related Products	2,642	34	2,613	Q	11	Q	0	0	0	3
339	Miscellaneous	2,591	369	2,312	Q	3	0	Q	Q	0	Q
	Total	56,946	5,283	52,644	3,549	1,323	742	238	Q	0	533

(a) The Bureau of the Census classifies establishments using the 2017 North American Industry Classification System (NAICS).

(b) These counts include only those establishments that reported this activity in 2018. Establishments for which only a portion of the total consumed fuel was reported as switchable contribute to the establishment counts in both the *Switchable* and *Not Switchable* columns. Therefore, the sum of these establishment counts may be greater than the corresponding establishment count of the total number of establishments consuming the fuel.

(c) *Alternative Energy Sources* consist of those energy sources that could have been substituted for HGL (excluding natural gasoline) during 2018. The quantities are expressed in thousands of barrels, and therefore represent the quantity of HGL (excluding natural gasoline) that could have been displaced by the given alternative type of energy.

(d) *Total Consumed* represents those quantities (Total Inputs) of HGL (excluding natural gasoline) 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 HGL (excluding natural gasoline).

* Estimate less than 0.5.

D=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 Demand and Integrated Statistics, Form EIA-846, 2018 Manufacturing Energy Consumption Survey.

The Census Bureau has reviewed this data product for unauthorized disclosure of confidential information and has approved the disclosure avoidance practices applied (Approval ID: CBDRB-FY20-260).

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RSE Table 10.13 Relative Standard Errors for Table 10.13;

Unit: Percents.

NAICS Code(a)	Subsector and Industry	HGL (excluding natural gasoline)(b)			Alternative Energy Sources(c)						
		Total Consumed(d)	Switchable	Not Switchable	Electricity Receipts(e)	Natural Gas	Distillate Fuel Oil	Residual Fuel Oil	Coal	Coal Coke and Breeze	Other(f)
Total United States											
311	Food	4.1	10.1	4.4	10.0	22.1	33.2	X	X	X	58.9
3112	Grain and Oilseed Milling	4.7	1.6	5.0	1.7	1.2	D	X	X	X	X
311221	Wet Corn Milling	0.0	D	0.0	D	D	X	X	X	X	X
31131	Sugar Manufacturing	0.0	D	0.0	D	X	X	X	X	X	X
3114	Fruit and Vegetable Preserving and Specialty Food	14.7	23.3	15.2	23.5	74.0	D	X	X	X	X
3115	Dairy Product	15.4	24.4	17.2	7.6	33.9	7.6	X	X	X	39.0
3116	Animal Slaughtering and Processing	17.3	D	18.5	D	59.6	54.4	X	X	X	X
312	Beverage and Tobacco Products	4.5	18.7	4.8	28.3	23.0	72.9	X	X	X	X
3121	Beverages	7.1	36.5	7.5	D	57.2	72.9	X	X	X	X
3122	Tobacco	0.0	0.0	0.0	D	0.0	X	X	X	X	X
313	Textile Mills	14.3	42.7	15.1	52.9	D	52.2	X	X	X	X
314	Textile Product Mills	38.8	60.2	39.3	X	60.2	D	X	X	X	X
315	Apparel	64.2	95.3	64.9	0.0	X	X	X	96.7	X	X
316	Leather and Allied Products	29.5	69.6	30.8	X	D	D	X	X	X	D
321	Wood Products	7.2	33.0	7.6	47.6	46.6	D	0.0	62.5	X	71.4
321113	Sawmills	9.1	21.7	9.5	27.9	41.1	0.0	0.0	D	X	60.8
3212	Veneer, Plywood, and Engineered Woods	13.2	46.3	14.3	69.6	80.2	71.3	X	D	X	95.9
321219	Reconstituted Wood Products	21.5	X	21.5	X	X	X	X	X	X	X
3219	Other Wood Products	8.6	D	8.8	82.3	D	D	X	X	X	97.6
322	Paper	1.9	31.1	1.9	37.0	46.8	D	X	X	X	X
322110	Pulp Mills	0.0	X	0.0	X	X	X	X	X	X	X
322121	Paper Mills, except Newsprint	0.0	D	0.0	D	D	X	X	X	X	X
322122	Newsprint Mills	0.0	X	0.0	X	X	X	X	X	X	X
322130	Paperboard Mills	0.0	D	0.0	D	D	D	X	X	X	X
323	Printing and Related Support	18.5	58.0	19.8	58.0	91.5	X	X	X	X	91.5
324	Petroleum and Coal Products	5.3	8.2	5.8	29.9	2.2	5.5	37.7	X	X	10.5
324110	Petroleum Refineries	0.0	0.0	0.0	X	0.0	X	X	X	X	X
324121	Asphalt Paving Mixture and Block	16.9	39.4	19.5	D	D	D	37.7	X	X	D
324122	Asphalt Shingle and Coating Materials	9.8	D	10.3	12.3	D	X	X	X	X	D
324191	Petroleum Lubricating Oil and Grease Products	19.7	X	19.7	X	X	X	X	X	X	X
324199	Other Petroleum and Coal Products	0.0	D	0.0	D	X	D	X	X	X	X
325	Chemicals	4.1	12.4	4.4	20.4	8.7	22.1	13.3	X	X	22.1
325110	Petrochemicals	0.0	D	0.0	X	D	X	X	X	X	X
325120	Industrial Gases	40.7	50.8	42.1	D	66.1	X	X	X	X	X
325180	Other Basic Inorganic Chemicals	14.9	37.9	15.6	47.6	61.5	38.5	X	X	X	X
325193	Ethyl Alcohol	7.7	36.2	8.0	X	50.4	X	X	X	X	D
325194	Cyclic Crudes, Intermediate and Gum and Wood Chemicals	0.0	D	0.0	D	D	X	X	X	X	X
325199	Other Basic Organic Chemicals	15.2	65.9	17.1	72.8	36.4	47.4	X	X	X	D
325211	Plastics Materials and Resins	7.3	44.2	8.5	55.3	59.1	57.8	X	X	X	77.8
325212	Synthetic Rubber	0.0	D	0.0	0.0	D	X	X	X	X	X
325220	Artificial and Synthetic Fibers and Filaments	0.0	0.0	0.0	D	0.0	D	D	X	X	X
325311	Nitrogenous Fertilizers	27.4	X	27.4	X	X	X	X	X	X	X
325312	Phosphatic Fertilizers	0.0	0.0	0.0	X	0.0	X	D	X	X	X
3254	Pharmaceuticals and Medicines	21.0	29.6	21.9	37.2	10.8	D	D	X	X	X
325412	Pharmaceutical Preparation	32.8	26.9	33.8	D	10.8	D	D	X	X	X
325992	Photographic Film, Paper, Plate, and Chemicals	27.2	X	27.2	X	X	X	X	X	X	X
326	Plastics and Rubber Products	10.0	35.8	10.7	38.2	89.8	90.4	90.4	X	X	X
327	Nonmetallic Mineral Products	6.0	12.3	6.3	15.0	23.7	34.0	X	X	X	44.7
327120	Clay Building Material and Refractories	12.0	32.8	13.4	39.4	D	D	X	X	X	D

327211	Flat Glass	0.0	0.0	0.0	D	D	X	X	X	X	X
327212	Other Pressed and Blown Glass and Glassware	23.0	D	23.3	D	X	X	X	X	X	X
327213	Glass Containers	0.0	D	0.0	D	X	X	X	X	X	X
327215	Glass Products from Purchased Glass	17.5	22.0	17.9	10.5	X	45.6	X	X	X	X
327310	Cements	38.2	20.6	41.2	D	X	D	X	X	X	X
327410	Lime	0.0	X	0.0	X	X	X	X	X	X	X
327420	Gypsum	16.5	X	16.5	X	X	X	X	X	X	X
327993	Mineral Wool	22.3	D	23.0	D	D	X	X	X	X	D
331	Primary Metals	2.3	9.7	2.5	12.9	12.6	11.0	D	X	X	D
331110	Iron and Steel Mills and Ferroalloys	0.0	0.0	0.0	0.0	0.0	0.0	X	X	X	X
3312	Steel Products from Purchased Steel	8.5	25.4	8.9	31.8	31.6	33.0	X	X	X	X
3313	Alumina and Aluminum	4.0	17.7	4.3	19.0	25.0	22.0	D	X	X	X
331314	Secondary Smelting and Alloying of Aluminum	9.1	17.8	11.0	D	25.0	D	D	X	X	X
331315	Aluminum Sheet, Plate and Foils	0.0	X	0.0	X	X	X	X	X	X	X
331318	Other Aluminum Rolling, Drawing and Extruding	10.1	45.7	10.1	D	X	D	X	X	X	X
3314	Nonferrous Metals, except Aluminum	7.2	14.9	8.2	16.2	22.2	16.6	X	X	X	D
331410	Nonferrous Metal (except Aluminum) Smelting and Refining	8.3	18.0	10.2	18.0	D	D	X	X	X	D
3315	Foundries	3.8	25.5	4.0	33.0	32.1	37.4	X	X	X	D
331511	Iron Foundries	7.1	43.8	7.3	27.4	D	X	X	X	X	X
331523	Nonferrous Metal Die-Casting Foundries	4.1	46.6	5.2	D	X	D	X	X	X	X
331524	Aluminum Foundries, except Die-Casting	11.1	12.2	11.1	D	D	D	X	X	X	D
332	Fabricated Metal Products	7.9	36.7	8.2	43.3	58.6	72.4	D	X	X	X
333	Machinery	8.8	35.4	9.3	42.0	0.0	X	X	X	X	69.8
334	Computer and Electronic Products	17.6	41.1	19.2	54.5	45.4	98.5	X	X	X	98.5
334413	Semiconductors and Related Devices	15.4	30.2	14.7	D	45.4	X	X	X	X	X
335	Electrical Equip., Appliances, and Components	22.6	69.0	23.2	96.3	X	74.8	X	X	X	85.0
336	Transportation Equipment	7.0	20.5	7.1	13.7	43.8	93.4	X	X	X	D
336111	Automobiles	0.0	D	0.0	D	X	X	X	X	X	X
336112	Light Trucks and Utility Vehicles	0.0	X	0.0	X	X	X	X	X	X	X
3364	Aerospace Product and Parts	19.7	36.9	20.2	60.6	43.8	X	X	X	X	D
336411	Aircraft	36.0	X	36.0	X	X	X	X	X	X	X
337	Furniture and Related Products	12.8	48.3	13.0	59.4	47.9	93.9	X	X	X	0.0
339	Miscellaneous	16.1	47.9	17.2	98.8	0.0	X	98.8	98.8	X	94.3
	Total	1.5	5.5	1.6	7.4	6.3	9.6	12.3	80.9	X	22.0

(a) The Bureau of the Census classifies establishments using the 2017 North American Industry Classification System (NAICS).

(b) These counts include only those establishments that reported this activity in 2018. Establishments for which only a portion of the total consumed fuel was reported as switchable contribute to the establishment counts in both the *Switchable* and *Not Switchable* columns. Therefore, the sum of these establishment counts may be greater than the corresponding establishment count of the total number of establishments consuming the fuel.

(c) *Alternative Energy Sources* consist of those energy sources that could have been substituted for HGL (excluding natural gasoline) during 2018. The quantities are expressed in thousands of barrels, and therefore represent the quantity of HGL (excluding natural gasoline) that could have been displaced by the given alternative type of energy.

(d) *Total Consumed* represents those quantities (Total Inputs) of HGL (excluding natural gasoline) 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 HGL (excluding natural gasoline).

* Estimate less than 0.5.

D=Withheld to avoid disclosing data for individual establishments.

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

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

NA=Not available.

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

Source: U.S. Energy Information Administration, Office of Energy Demand and Integrated Statistics, Form EIA-846, 2018 Manufacturing Energy Consumption Survey.

The Census Bureau has reviewed this data product for unauthorized disclosure of confidential information and has approved the disclosure avoidance practices applied (Approval ID: CBDRB-FY20-260).