

Released: May 2021

Next MECS will be fielded in 2023.

Table 2.3 Nonfuel (Feedstock) Use of Combustible Energy, 2018;

Level: National and Regional Data;

Row: Values of Shipments and Employment Sizes;

Column: Energy Sources;

Unit: Trillion Btu.

Economic Characteristic(a)	Total	Residual Fuel Oil	Distillate Fuel Oil(b)	Natural Gas(c)	HGL (excluding natural gasoline)(d)	Coal	Coke and Breeze	Other(e)
Total United States								
Value of Shipments and Receipts								
(million dollars)								
Under 20	453	*	1	116	1	0	0	335
20-49	246	*	*	118	Q	Q	*	125
50-99	359	34	D	D	83	17	0	120
100-249	532	10	Q	D	Q	D	0	208
250-499	385	0	D	D	70	D	0	98
500 and Over	3,634	0	1	319	2,642	216	0	455
Subtotal	5,609	44	6	958	2,834	425	*	1,341
Not Ascertained(f)	529	0	0	0	0	0	0	529
Total	6,138	44	6	958	2,834	425	*	1,870
Employment Size								
Under 50	837	*	1	173	140	31	*	492
50-99	500	27	*	129	133	38	0	173
100-249	1,014	17	Q	239	397	139	0	217
250-499	887	0	1	134	D	3	0	D
500-999	1,284	0	*	171	754	4	0	354
1000 and Over	1,089	0	*	112	D	210	0	D
Subtotal	5,609	44	6	958	2,834	425	*	1,341
Not Ascertained(f)	529	0	0	0	0	0	0	529
Total	6,138	44	6	958	2,834	425	*	1,870
Northeast Census Region								
Value of Shipments and Receipts								
(million dollars)								
Under 20	68	0	*	Q	*	0	0	67
20-49	20	0	*	*	*	0	0	20
50-99	3	*	*	*	*	1	0	1
100-249	7	0	*	*	*	*	0	7
250-499	25	0	*	2	*	*	0	22
500 and Over	150	0	0	21	0	128	0	*
Total	273	*	*	25	1	129	0	118
Employment Size								
Under 50	82	0	*	Q	*	0	0	81
50-99	7	*	*	*	*	1	0	6
100-249	31	0	*	*	*	*	0	30
250-499	1	0	*	*	*	*	0	*
500-999	2	0	*	2	*	*	0	*
1000 and Over	149	0	0	21	0	128	0	*
Total	273	*	*	25	1	129	0	118
Midwest Census Region								
Value of Shipments and Receipts								
(million dollars)								
Under 20	84	D	D	D	D	0	0	79
20-49	21	0	D	3	D	0	0	18
50-99	44	5	D	D	D	1	0	27
100-249	171	0	*	D	D	D	0	75
250-499	136	0	D	D	D	D	0	23
500 and Over	184	0	D	18	D	D	0	1
Total	641	D	1	108	D	206	0	223

Employment Size									
Under 50	139	*	*	9	D	D	0	D	D
50-99	80	D	*	23	D	D	0	50	
100-249	222	0	*	58	*	104	0	61	
250-499	104	0	D	2	D	D	0	D	
500-999	9	0	*	1	D	1	0	D	
1000 and Over	87	0	D	16	D	70	0	D	
Total	641	D	1	108	D	206	0	223	

South Census Region

Value of Shipments and Receipts (million dollars)									
Under 20	198	D	D	D	D	0	0	105	
20-49	173	*	D	112	D	Q	*	59	
50-99	295	29	D	92	D	15	0	76	
100-249	330	10	Q	113	D	D	0	113	
250-499	219	0	D	D	D	0	0	50	
500 and Over	3,298	0	D	279	D	D	0	454	
Total	4,513	D	Q	789	D	89	*	856	

Employment Size									
Under 50	480	0	Q	142	D	D	*	D	
50-99	398	D	*	105	D	D	0	104	
100-249	739	17	Q	174	397	35	0	113	
250-499	775	0	D	126	D	D	0	D	
500-999	1,269	0	*	168	D	3	0	D	
1000 and Over	852	0	D	74	D	12	0	D	
Total	4,513	D	Q	789	D	89	*	856	

West Census Region

Value of Shipments and Receipts (million dollars)									
Under 20	103	*	*	18	*	0	0	85	
20-49	32	0	*	3	*	*	0	28	
50-99	17	0	*	2	*	0	0	15	
100-249	25	0	*	11	*	0	0	14	
250-499	4	0	0	1	0	0	0	3	
500 and Over	2	0	*	1	0	1	0	*	
Total	182	*	*	36	*	1	0	144	

Employment Size									
Under 50	136	0	*	20	*	0	0	115	
50-99	14	*	*	1	*	*	0	12	
100-249	21	0	*	8	*	0	0	13	
250-499	7	0	*	7	*	1	0	*	
500-999	4	0	*	*	0	0	0	3	
1000 and Over	*	0	*	0	0	*	0	*	
Total	182	*	*	36	*	1	0	144	

- (a) *Value of Shipments and Receipts* and *Employment Size* categories were supplied by the Bureau of the Census.
- (b) *Distillate Fuel Oil* includes Nos. 1, 2, and 4 fuel oils and Nos. 1, 2, and 4 diesel fuels.
- (c) *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.
- (d) *Hydrocarbon Gas Liquids (HGL)* include 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).
- (e) *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 f.
- (f) Previously, the Manufacturing Energy Consumption Survey (MECS) had accounted for energy consumed in petroleum refineries by measuring their own fuel use, assuming shipments of fuel products would later be counted in the industries that use them, and assigning the heat equivalent of the nonfuel products to the petroleum refinery (for a more detailed explanation see, *Feedstock and Offsite-Produced Fuel at Petroleum Refineries*). Starting with the 2014 MECS, however, EIA began collecting asphalt and petrochemical feedstock data from establishments that use those nonfuel products. These data are included in the *Other* column. However, other *Miscellaneous Nonfuel Products* (i.e. lubricants, solvents, waxes, and special naphthas) from refineries, and used elsewhere throughout the manufacturing sector as energy are not collected on the MECS. An estimate of the *Miscellaneous Nonfuel Products* used in manufacturing was derived using EIA's [U.S. Product Supplied for Crude Oil and Petroleum Products](#) data.

* Estimate less than 0.5.

D=Withheld to avoid disclosing data for individual establishments.

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

NA=Not available.

Notes: 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; wood chips, bark, and wood waste 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.

Sources: U.S. Energy Information Administration, Office of Energy Consumption and Efficiency Statistics, Form EIA-846, *2018 Manufacturing Energy Consumption Survey*, and the Bureau of the Census, data files for the *2018 Annual Survey of Manufactures*.

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 2.3 Relative Standard Errors for Table 2.3;

Unit: Percents.

Economic Characteristic(a)	Total	Residual Fuel Oil	Distillate Fuel Oil(b)	Natural Gas(c)	HGL (excluding natural gasoline)(d)	Coal	Coke and Breeze	Other(e)
Total United States								
Value of Shipments and Receipts								
(million dollars)								
Under 20	6.9	0.6	44.7	12.1	48.7	X	X	8.3
20-49	13.9	16.2	13.4	27.3	52.6	71.6	57.4	8.3
50-99	4.8	0.0	D	D	4.2	0.0	X	4.5
100-249	6.3	0.0	78.6	D	55.8	D	X	2.6
250-499	0.6	X	D	D	1.8	D	X	0.2
500 and Over	1.1	X	0.2	0.2	1.4	0.0	X	1.9
Subtotal	1.3	0.1	40.8	4.1	1.5	0.4	57.4	2.4
Not Ascertained(f)	0.0	X	X	X	X	X	X	0.0
Total	1.3	0.1	40.8	4.1	1.5	0.4	57.4	2.4
Employment Size								
Under 50	5.5	0.0	45.0	19.0	2.4	5.7	57.4	6.4
50-99	7.9	0.1	4.1	15.4	25.5	0.0	X	0.5
100-249	3.7	0.1	66.8	3.8	6.9	0.0	X	2.4
250-499	0.1	X	6.1	0.3	D	0.1	X	D
500-999	0.2	X	0.8	1.6	0.1	0.0	X	0.1
1000 and Over	0.1	X	0.1	0.4	D	0.0	X	D
Subtotal	1.3	0.1	40.8	4.1	1.5	0.4	57.4	2.4
Not Ascertained(f)	0.0	X	X	X	X	X	X	0.0
Total	1.3	0.1	40.8	4.1	1.5	0.4	57.4	2.4
Northeast Census Region								
Value of Shipments and Receipts								
(million dollars)								
Under 20	8.7	X	0.2	53.3	57.6	X	X	8.9
20-49	4.6	X	0.0	56.8	0.0	X	X	4.6
50-99	19.6	0.0	92.1	88.6	99.5	0.0	X	24.0
100-249	0.2	X	0.0	0.0	22.9	0.0	X	0.1
250-499	0.1	X	0.0	0.0	65.2	0.0	X	0.0
500 and Over	0.3	X	X	2.0	X	0.0	X	0.0
Total	2.2	0.0	64.0	3.2	46.4	0.0	X	5.1
Employment Size								
Under 50	7.3	X	0.2	61.2	73.4	X	X	7.4
50-99	4.7	0.0	0.0	0.8	18.9	0.0	X	5.5
100-249	1.6	X	91.9	32.0	90.4	0.0	X	0.7
250-499	36.6	X	0.0	30.4	52.2	0.0	X	90.6
500-999	0.0	X	0.0	0.0	0.0	0.0	X	0.0
1000 and Over	0.3	X	X	2.0	X	0.0	X	0.0
Total	2.2	0.0	64.0	3.2	46.4	0.0	X	5.1
Midwest Census Region								
Value of Shipments and Receipts								
(million dollars)								
Under 20	14.2	D	D	D	D	X	X	15.0
20-49	9.7	X	D	21.4	D	X	X	10.7
50-99	1.4	0.0	D	D	D	0.0	X	0.7
100-249	1.0	X	0.0	D	D	D	X	2.0

250-499	0.1	X	D	D	D	D	X	0.1
500 and Over	0.2	X	D	2.0	D	D	X	0.1
Total	1.9	D	2.3	1.3	D	0.0	X	5.4

Employment Size

Under 50	8.7	0.0	38.5	9.5	D	D	X	D
50-99	0.9	D	4.5	3.0	D	D	X	0.1
100-249	0.5	X	0.1	1.3	63.2	0.0	X	0.7
250-499	0.4	X	D	20.4	D	D	X	D
500-999	0.1	X	40.6	0.0	D	0.0	X	D
1000 and Over	0.1	X	D	0.0	D	0.0	X	D
Total	1.9	D	2.3	1.3	D	0.0	X	5.4

South Census Region

Value of Shipments and Receipts

(million dollars)

Under 20	9.0	D	D	D	D	X	X	10.6
20-49	19.8	16.2	D	28.7	D	88.2	57.4	17.2
50-99	5.8	0.0	D	17.0	D	0.0	X	7.0
100-249	10.2	0.0	79.7	8.1	D	D	X	4.5
250-499	1.0	X	D	D	D	X	X	0.4
500 and Over	1.2	X	D	0.0	D	D	X	1.9
Total	1.5	D	57.4	5.0	D	2.0	57.4	2.2

Employment Size

Under 50	7.9	X	63.6	23.0	D	D	57.4	D
50-99	9.9	D	3.2	18.9	D	D	X	0.7
100-249	5.1	0.1	79.6	5.2	6.9	0.0	X	4.7
250-499	0.1	X	D	0.1	D	D	X	D
500-999	0.2	X	0.0	1.6	D	0.0	X	D
1000 and Over	0.1	X	D	0.2	D	0.0	X	D
Total	1.5	D	57.4	5.0	D	2.0	57.4	2.2

West Census Region

Value of Shipments and Receipts

(million dollars)

Under 20	21.1	0.0	48.8	0.6	84.8	X	X	25.7
20-49	4.3	X	9.8	20.5	50.8	0.0	X	4.0
50-99	1.8	X	0.0	13.2	7.3	X	X	0.1
100-249	0.3	X	76.7	0.1	0.0	X	X	0.4
250-499	2.4	X	X	7.8	X	X	X	0.6
500 and Over	2.4	X	0.0	4.1	X	0.0	X	0.0
Total	11.9	0.0	37.5	2.0	36.6	0.0	X	15.1

Employment Size

Under 50	16.0	X	50.8	1.9	40.2	X	X	18.9
50-99	2.6	0.0	0.1	6.3	12.4	0.0	X	2.9
100-249	3.5	X	76.6	7.8	63.1	X	X	0.3
250-499	1.4	X	0.0	1.6	99.2	0.0	X	0.1
500-999	1.1	X	0.0	18.8	X	X	X	0.1
1000 and Over	25.3	X	0.0	X	X	0.0	X	61.1
Total	11.9	0.0	37.5	2.0	36.6	0.0	X	15.1

(a) Value of Shipments and Receipts and Employment Size categories were supplied by the Bureau of the Census.

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

(c) 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.

(d) Hydrocarbon Gas Liquids (HGL) include 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).

(e) 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 f.

(f) Previously, the Manufacturing Energy Consumption Survey (MECS) had accounted for energy consumed in petroleum refineries by measuring their

own fuel use, assuming shipments of fuel products would later be counted in the industries that use them, and assigning the heat equivalent of the nonfuel products to the petroleum refinery (for a more detailed explanation see, *Feedstock and Offsite-Produced Fuel at Petroleum Refineries*). Starting with the 2014 MECS, however, EIA began collecting asphalt and petrochemical feedstock data from establishments that use those nonfuel products. These data are included in the *Other* column. However, other *Miscellaneous Nonfuel Products* (i.e. lubricants, solvents, waxes, and special naphthas) from refineries, and used elsewhere throughout the manufacturing sector as energy are not collected on the MECS. An estimate of the *Miscellaneous Nonfuel Products* used in manufacturing was derived using EIA's [U.S. Product Supplied for Crude Oil and Petroleum Products](#) data.

* Estimate less than 0.5.

D=Withheld to avoid disclosing data for individual establishments.

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

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

NA=Not available.

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