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Next MECS will be fielded in 2027

Table 5.8 End uses of fuel consumption, 2022

Level: National and regional data
Row: End uses
Column: Energy sources, including net demand for electricity
Unit: Trillion British thermal units

End use	Net demand for electricity ^a	Residual fuel oil	Distillate fuel oil and diesel fuel ^b	Natural gas ^c	HGL (excluding natural gasoline) ^d	Coal (excluding coal coke and breeze)
Total United States						
Total fuel consumption	3,182	13	79	7,087	85	398
Indirect Uses—Boiler Fuel	59	8	12	2,993	14	97
Conventional Boiler Use	59	2	2	869	7	14
CHP and/or Cogeneration Process	--	5	9	2,124	7	83
Direct Uses—Total Process	2,472	2	25	3,512	44	224
Process Heating	265	2	4	2,946	37	205
Process Cooling and Refrigeration	250	*	Q	44	*	*
Machine Drive	1,652	*	10	250	3	3
Electro-Chemical Processes	212	--	--	--	--	--
Other Process Use	93	*	9	273	4	16
Direct Uses—Total Nonprocess	584	3	39	544	25	*
Facility HVAC ^e	298	*	1	412	6	*
Facility Lighting	184	--	--	--	--	--
Other Facility Support	59	*	*	56	1	*
Onsite Transportation	23	--	31	8	18	--
Conventional Electricity Generation	--	*	2	43	*	*
Other Nonprocess Use	20	2	5	26	1	*
End use not reported	67	*	4	38	1	77
Northeast Census Region						
Total fuel consumption	339	4	10	531	12	16
Indirect Uses—Boiler Fuel	6	3	2	202	1	5
Conventional Boiler Use	6	1	*	82	*	0
CHP and/or Cogeneration Process	--	1	2	121	1	5
Direct Uses—Total Process	248	1	4	253	7	11
Process Heating	29	1	1	223	7	11
Process Cooling and Refrigeration	24	*	*	4	*	0
Machine Drive	171	*	3	20	*	0
Electro-Chemical Processes	15	--	--	--	--	--
Other Process Use	9	*	*	7	*	*
Direct Uses—Total Nonprocess	66	*	3	67	4	*
Facility HVAC ^e	34	*	1	52	2	*
Facility Lighting	20	--	--	--	--	--
Other Facility Support	8	*	*	6	*	0
Onsite Transportation	2	--	2	1	2	--
Conventional Electricity Generation	--	*	*	5	*	0
Other Nonprocess Use	2	0	*	2	*	0
End use not reported	Q	*	Q	8	*	0
Midwest Census Region						
Total fuel consumption	930	1	17	2,027	20	172
Indirect Uses—Boiler Fuel	20	1	1	739	3	49
Conventional Boiler Use	20	*	*	312	Q	6

CHP and/or Cogeneration Process	--	*	1	427	1	43
Direct Uses—Total Process	700	*	5	1,003	6	63
Process Heating	81	0	1	858	5	62
Process Cooling and Refrigeration	75	*	*	18	*	0
Machine Drive	492	*	2	58	1	1
Electro-Chemical Processes	18	--	--	--	--	--
Other Process Use	35	0	3	69	*	*
Direct Uses—Total Nonprocess	191	*	10	267	10	*
Facility HVAC ^e	93	0	*	221	3	0
Facility Lighting	62	--	--	--	--	--
Other Facility Support	18	0	*	26	*	0
Onsite Transportation	9	--	7	3	7	--
Conventional Electricity Generation	--	0	*	2	*	0
Other Nonprocess Use	10	*	Q	14	*	*
End use not reported	18	0	*	17	*	59

South Census Region

Total fuel consumption	1,544	7	39	3,784	37	108
Indirect Uses—Boiler Fuel	28	3	7	1,772	7	34
Conventional Boiler Use	28	*	2	384	3	1
CHP and/or Cogeneration Process	--	3	5	1,388	4	32
Direct Uses—Total Process	1,238	1	12	1,851	21	73
Process Heating	123	1	2	1,528	16	63
Process Cooling and Refrigeration	114	0	*	18	*	*
Machine Drive	800	0	4	159	1	*
Electro-Chemical Processes	169	--	--	--	--	--
Other Process Use	32	0	Q	145	4	9
Direct Uses—Total Nonprocess	254	2	18	156	8	*
Facility HVAC ^e	134	*	*	104	1	*
Facility Lighting	79	--	--	--	--	--
Other Facility Support	26	0	*	16	*	*
Onsite Transportation	11	--	16	3	7	--
Conventional Electricity Generation	--	0	*	30	*	*
Other Nonprocess Use	5	2	2	4	*	0
End use not reported	24	*	2	5	Q	1

West Census Region

Total fuel consumption	369	2	14	745	16	103
Indirect Uses—Boiler Fuel	5	2	Q	280	2	9
Conventional Boiler Use	5	1	*	92	2	6
CHP and/or Cogeneration Process	--	1	Q	188	1	3
Direct Uses—Total Process	286	*	Q	405	10	77
Process Heating	32	*	*	337	9	68
Process Cooling and Refrigeration	37	0	Q	3	*	0
Machine Drive	190	0	Q	13	1	2
Electro-Chemical Processes	10	--	--	--	--	--
Other Process Use	17	0	*	52	*	7
Direct Uses—Total Nonprocess	73	*	8	54	4	*
Facility HVAC ^e	37	*	*	35	*	*
Facility Lighting	22	--	--	--	--	--
Other Facility Support	7	0	*	7	*	0
Onsite Transportation	2	--	6	1	3	--
Conventional Electricity Generation	--	0	1	6	*	0
Other Nonprocess Use	3	0	Q	5	*	*
End use not reported	5	0	Q	7	*	17

Data source: U.S. Energy Information Administration, Office of Energy Demand and Integrated Statistics, Form EIA-846, 2022 *Manufacturing Energy*

Consumption Survey

Notes: Totals may not equal sum of components because of independent rounding. The estimates presented in this table are for the total consumption of energy (formerly total inputs of energy) for the production of heat, power, and electricity generation, regardless of where the energy was produced. Specifically, the estimates include the quantities of energy that were originally produced offsite and purchased by or transferred to the establishment, plus those that were produced onsite from other energy or input materials not classified as energy or were extracted from captive (onsite) mines or wells. CHP is defined as combined heat and power. Allocations to specific end uses are made based on reasonable approximations by respondents.

^a *Net demand for electricity* is the sum of purchases, transfers in, and total onsite electricity generation, minus sales and transfers offsite. It is the total amount of electricity used by establishments. *Net demand for electricity* is not directly comparable with *net electricity*, which specifically excludes electricity generated onsite by combustible energy sources.

^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 Facility heating, ventilation, and air conditioning (*facility HVAC*) excludes steam and hot water.

* 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%.

NA=Not available.

-- Estimation is not applicable.

S=Negative value.

The Census Bureau has reviewed this data product to ensure appropriate access, use, and disclosure protection of the confidential source data (Project No. 7504703, Disclosure Review Board (DRB) approval number: CBDRB-FY25-0054).

RSE Table 5.8 Relative standard errors for table 5.8
Unit: Percentage

End use	Net demand for electricity ^a	Residual fuel oil	Distillate fuel oil and diesel fuel ^b	Natural gas ^c	HGL (excluding natural gasoline) ^d	Coal (excluding coal coke and breeze)
Total United States						
Total fuel consumption	2.6	3.5	7.0	2.2	4.5	5.1
Indirect Uses—Boiler Fuel	7.3	3.5	11.2	3.3	10.4	0.3
Conventional Boiler Use	7.3	10.6	6.2	1.8	18.7	0.0
CHP and/or Cogeneration Process	--	1.8	13.9	4.6	7.3	0.3
Direct Uses—Total Process	2.5	13.0	17.7	2.1	4.2	9.0
Process Heating	4.1	13.1	6.1	2.5	4.5	9.9
Process Cooling and Refrigeration	2.9	69.0	75.5	12.2	41.3	1.7
Machine Drive	3.2	44.8	17.8	3.7	19.9	0.3
Electro-Chemical Processes	1.1	--	--	--	--	--
Other Process Use	11.7	0.0	39.4	1.8	6.2	0.0
Direct Uses—Total Nonprocess	3.9	6.7	6.2	3.8	7.3	0.6
Facility HVAC ^e	3.8	71.5	23.3	4.8	19.9	2.3
Facility Lighting	5.2	--	--	--	--	--
Other Facility Support	3.3	0.0	22.2	5.7	40.4	0.0
Onsite Transportation	14.3	--	5.9	6.0	7.1	--
Conventional Electricity Generation	--	0.0	31.2	1.2	52.7	0.0
Other Nonprocess Use	6.3	0.0	27.4	8.1	29.9	0.0
End use not reported	22.1	0.0	28.2	10.8	36.8	0.1
Northeast Census Region						
Total fuel consumption	5.6	8.5	16.0	4.5	11.8	0.1
Indirect Uses—Boiler Fuel	15.1	10.3	35.7	5.5	7.1	0.0
Conventional Boiler Use	15.1	20.5	0.4	9.0	9.0	X
CHP and/or Cogeneration Process	--	4.9	38.0	6.9	8.0	0.0
Direct Uses—Total Process	5.6	23.2	29.5	7.2	11.2	0.1
Process Heating	10.4	24.0	4.4	8.0	11.7	0.1
Process Cooling and Refrigeration	7.2	19.6	1.9	11.9	50.7	X
Machine Drive	7.3	49.9	42.5	8.6	51.5	X
Electro-Chemical Processes	2.2	--	--	--	--	--
Other Process Use	23.5	0.0	3.8	26.2	42.3	0.0
Direct Uses—Total Nonprocess	5.2	9.0	10.5	6.0	20.7	66.3
Facility HVAC ^e	5.3	47.6	32.2	6.7	32.2	66.3
Facility Lighting	5.4	--	--	--	--	--
Other Facility Support	9.5	0.0	23.1	12.8	39.2	X
Onsite Transportation	10.6	--	7.0	22.4	15.8	--
Conventional Electricity Generation	--	0.0	13.4	2.3	31.8	X
Other Nonprocess Use	38.2	X	10.6	42.9	73.8	X
End use not reported	69.2	0.0	93.0	9.3	71.2	X
Midwest Census Region						
Total fuel consumption	5.0	9.7	11.5	3.3	15.4	0.2
Indirect Uses—Boiler Fuel	20.5	9.8	3.0	7.1	43.0	0.6
Conventional Boiler Use	20.5	0.2	35.3	3.0	60.8	0.0
CHP and/or Cogeneration Process	--	26.2	0.2	12.2	21.8	0.7
Direct Uses—Total Process	5.0	99.0	28.6	2.3	21.5	0.0
Process Heating	5.5	X	6.3	2.4	25.5	0.0
Process Cooling and Refrigeration	6.9	99.0	62.1	24.6	8.0	X
Machine Drive	5.3	99.0	11.2	9.9	26.2	0.0
Electro-Chemical Processes	8.1	--	--	--	--	--
Other Process Use	29.4	X	47.8	3.6	50.5	0.0
Direct Uses—Total Nonprocess	5.6	0.0	12.3	5.9	13.8	X
Facility HVAC ^e	5.1	X	0.4	6.6	34.4	X

Facility Lighting	9.3	--	--	--	--	--
Other Facility Support	7.0	X	9.5	10.7	67.4	X
Onsite Transportation	19.7	--	6.9	7.4	14.6	--
Conventional Electricity Generation	--	X	31.4	11.0	0.8	X
Other Nonprocess Use	5.9	0.0	53.1	3.7	44.3	X
End use not reported	17.3	X	14.4	19.4	26.2	0.0

South Census Region

Total fuel consumption	4.2	4.8	10.5	3.7	4.2	2.1
Indirect Uses—Boiler Fuel	3.7	0.0	4.4	4.7	7.0	0.1
Conventional Boiler Use	3.7	0.0	6.6	2.8	11.0	0.0
CHP and/or Cogeneration Process	--	0.0	5.5	5.9	9.0	0.1
Direct Uses—Total Process	3.8	19.2	28.9	3.6	3.7	3.1
Process Heating	7.5	19.2	10.8	4.4	1.3	3.6
Process Cooling and Refrigeration	3.0	X	24.6	15.6	73.5	1.7
Machine Drive	5.5	X	23.1	4.2	43.5	2.1
Electro-Chemical Processes	0.6	--	--	--	--	--
Other Process Use	9.2	X	59.3	2.1	4.0	0.0
Direct Uses—Total Nonprocess	7.8	7.6	9.5	8.4	10.0	0.1
Facility HVAC ^e	7.4	96.5	59.0	12.5	33.4	0.4
Facility Lighting	9.4	--	--	--	--	--
Other Facility Support	5.0	X	12.6	6.5	83.6	0.0
Onsite Transportation	27.4	--	10.1	7.7	9.4	--
Conventional Electricity Generation	--	X	15.5	0.2	65.2	0.0
Other Nonprocess Use	12.3	0.0	36.2	27.5	28.2	X
End use not reported	19.0	0.0	38.8	18.7	65.6	0.1

West Census Region

Total fuel consumption	4.6	4.4	21.1	2.8	5.1	19.6
Indirect Uses—Boiler Fuel	7.9	0.0	64.7	2.1	10.0	0.0
Conventional Boiler Use	7.9	0.0	24.2	3.0	0.1	0.0
CHP and/or Cogeneration Process	--	0.0	78.6	2.5	29.7	0.0
Direct Uses—Total Process	4.6	20.4	56.2	4.6	5.0	26.2
Process Heating	7.0	20.4	13.8	5.1	5.3	29.5
Process Cooling and Refrigeration	10.0	X	94.6	17.8	69.2	X
Machine Drive	4.6	X	52.9	19.3	14.7	0.0
Electro-Chemical Processes	13.5	--	--	--	--	--
Other Process Use	4.9	X	5.0	4.7	23.9	0.0
Direct Uses—Total Nonprocess	6.2	41.7	15.0	5.4	15.1	0.0
Facility HVAC ^e	7.1	41.7	44.6	6.2	26.7	0.0
Facility Lighting	8.6	--	--	--	--	--
Other Facility Support	5.9	X	39.4	11.1	45.2	X
Onsite Transportation	8.6	--	12.6	16.1	16.1	--
Conventional Electricity Generation	--	X	45.6	6.6	35.0	X
Other Nonprocess Use	16.9	X	51.1	26.3	35.3	0.0
End use not reported	20.3	X	68.2	26.6	36.9	0.0

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* Estimate less than 0.5.

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NA=Not available.

-- Estimation is not applicable.

S=Negative value.

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

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