

		Non switchable amount attributed to:										
NAICS code ^a	Subsector and industry	Total amount of natural gas consumed as fuel	Total amount of unswitchable natural gas fuel use	Equipment is not capable of using another fuel	Switching adversely affects the products	Unavailable alternative fuel supply	Environmental restrictions ^b	Long-term contract in place ^c	Unavailable storage for alternative fuels ^d	Another reason	Combinations of cols. F, G, H, I, J, and K	Don't know/ didn't answer
Total United States												
311	Food	679	630	457	7	Q	6	2	2	10	26	119
3112	Grain and Oilseed Milling	164	155	120	1	Q	2	*	*	1	3	24
311221	Wet Corn Milling and Starch Manufacturing	67	67	46	0	0	0	0	0	0	0	20
31131	Sugar Manufacturing	38	37	29	0	*	*	0	0	*	2	7
3114	Fruit and Vegetable Preserving and Specialty Food	85	81	63	2	0	0	*	Q	1	8	6
3115	Dairy Product Manufacturing	114	101	65	*	*	0	*	*	1	4	31
3116	Animal Slaughtering and Processing	157	143	85	Q	1	4	*	1	Q	9	38
312	Beverage and Tobacco Products	204	Q	Q	1	*	Q	*	*	2	*	9
3121	Beverages	Q	Q	Q	1	*	Q	*	*	2	*	9
3122	Tobacco	4	2	2	*	0	0	0	0	*	0	*
313	Textile Mills	23	19	14	2	*	0	*	*	*	*	3
314	Textile Product Mills	10	9	5	*	0	*	0	0	2	Q	*
315	Apparel	1	1	*	0	0	*	*	0	*	0	*
316	Leather and Allied Products	2	2	1	0	0	*	0	*	Q	*	*
321	Wood Products	77	76	57	*	1	Q	*	*	3	*	14
321113	Sawmills	17	17	14	*	*	0	*	*	1	0	1
3212	Veneer, Plywood, and Engineered Wood Product Manufacturing	36	36	31	0	Q	*	*	*	1	*	3
321219	Reconstituted Wood Products	21	21	19	0	Q	*	0	*	*	0	1
3219	Other Wood Products	20	20	9	*	*	*	*	*	*	*	Q
322	Paper	595	523	355	0	16	18	17	1	16	8	92
322110	Pulp Mills	53	46	25	0	2	1	2	*	1	0	16
322120	Paper Mills	181	168	138	0	1	1	3	0	4	4	17
322130	Paperboard Mills	269	224	130	0	10	17	12	1	4	4	47
323	Printing and Related Support	20	20	8	*	Q	0	*	*	4	0	6
324	Petroleum and Coal Products	1,068	976	721	27	34	16	2	*	12	25	139
324110	Petroleum Refineries	984	899	668	D	33	14	1	0	9	D	127
324121	Asphalt Paving Mixture and Block	51	45	28	D	1	Q	1	*	2	D	8
324122	Asphalt Shingle and Coating Materials	11	11	9	*	*	*	*	*	*	*	1
324191	Petroleum Lubricating Oil and Grease Manufacturing	12	12	9	*	0	0	*	0	*	*	Q
324199	All Other Petroleum and Coal Products Manufacturing	10	10	6	0	*	*	0	0	0	1	1
325	Chemicals	2,490	2,388	1,880	6	111	49	15	*	46	Q	189
325110	Petrochemicals	390	360	348	0	0	0	0	0	9	2	1
325120	Industrial Gases	90	90	14	0	0	D	0	0	D	0	D
325180	Other Basic Inorganic Chemical Manufacturing	207	206	148	*	3	D	1	0	D	1	51
325193	Ethyl Alcohol	368	368	291	4	7	*	9	0	0	8	49
325194	Cyclic Crudes, Intermediate and Gum and Wood Chemicals	38	37	35	*	0	0	0	0	0	1	*
325199	All Other Basic Organic Chemical Manufacturing	298	266	224	0	1	2	Q	0	*	9	27
325211	Plastics Materials and Resins	484	472	364	*	95	*	1	0	3	2	7
325212	Synthetic Rubber	26	24	23	0	0	0	0	*	*	*	1
325220	Artificial and Synthetic Fibers and Filaments	16	9	6	0	*	*	2	0	*	0	*
325311	Nitrogenous Fertilizers	189	189	181	*	0	0	0	0	0	0	7
325312	Phosphatic Fertilizers	3	3	2	0	0	*	0	0	0	*	*
3254	Pharmaceuticals and Medicines	68	60	31	*	*	3	1	*	2	5	Q
325412	Pharmaceutical Preparation	37	32	16	*	*	2	*	0	1	*	Q
325992	Photographic Film, Paper, Plate, Chemical, and Copy Toner Manufacturing	3	2	2	0	0	0	0	0	*	*	*
326	Plastics and Rubber Products	102	98	61	*	*	Q	*	Q	5	11	17
327	Nonmetallic Mineral Products	402	366	209	16	7	1	2	2	14	46	69
327120	Clay Building Material and Refractories	29	27	18	1	0	0	*	0	3	1	3

327211	Flat Glass	37	27	14	8	*	0	0	*	4	*	*
327212	Other Pressed and Blown Glass and Glassware	18	17	13	0	*	0	0	0	1	1	2
327213	Glass Containers	40	40	29	0	3	1	0	0	0	1	6
327215	Glass Products from Purchased Glass	9	8	8	*	*	0	*	*	0	*	*
327310	Cements	86	72	31	6	0	0	1	2	*	23	9
327410	Lime	25	22	3	1	*	*	1	0	2	7	8
327420	Gypsum	68	68	51	0	2	0	0	*	4	6	5
327993	Mineral Wool	31	30	19	0	*	0	0	0	*	4	Q
331	Primary Metals	603	580	448	6	17	*	8	*	13	46	41
331110	Iron and Steel Mills and Ferroalloys	374	359	D	*	15	*	D	0	*	39	26
3312	Steel Products from Purchased Steel	31	30	19	*	1	0	*	*	2	4	5
3313	Alumina and Aluminum Production and Processing	114	113	D	3	1	0	D	*	8	3	5
331314	Secondary Smelting and Alloying of Aluminum	19	19	15	0	0	0	0	0	*	2	1
331315	Aluminum Sheet, Plate and Foils	60	59	48	0	1	0	0	*	7	0	3
331318	Other Aluminum Rolling, Drawing and Extruding	18	18	16	*	*	0	0	0	*	*	1
3314	Nonferrous Metal (except Aluminum) Production and Processing	42	40	32	3	*	*	*	*	3	*	*
331410	Nonferrous Metal (except Aluminum) Smelting and Refining	13	13	10	0	0	0	*	0	3	*	*
3315	Foundries	41	38	31	*	*	*	1	*	1	*	4
331511	Iron Foundries	11	10	8	*	*	*	1	*	0	0	1
331523	Nonferrous Metal Die-Casting Foundries	15	14	12	*	*	0	1	0	*	*	1
331524	Aluminum Foundries, except Die-Casting	4	4	3	*	*	0	*	0	*	*	1
332	Fabricated Metal Products	265	264	194	*	Q	*	*	*	1	Q	Q
333	Machinery	58	53	35	1	*	0	0	*	Q	Q	10
334	Computer and Electronic Products	31	28	18	*	*	2	*	*	1	1	5
334413	Semiconductors and Related Devices	18	15	9	0	*	2	*	0	1	*	2
335	Electrical Equip., Appliances, and Components	35	35	23	Q	3	*	0	*	Q	0	4
336	Transportation Equipment	126	119	83	1	*	2	*	*	12	8	13
336110	Automobile and Light Duty Motor Vehicle Manufacturing	39	38	26	0	0	0	0	*	7	2	3
3364	Aerospace Product and Parts	26	22	13	*	*	2	*	*	2	1	4
336411	Aircraft	8	6	5	0	*	*	0	0	*	0	1
337	Furniture and Related Products	13	13	8	*	*	0	*	*	*	*	3
339	Miscellaneous	23	22	19	Q	*	0	0	*	*	*	3
	Total	6,827	6,422	4,773	70	196	110	49	8	148	274	794

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

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

^a The Bureau of the Census classifies establishments using the 2022 North American Industry Classification System (NAICS).

^b The environmental restrictions related to air quality limiting the amount of the usable alternative fuel that could be used instead.

^c Long-term contracts are typically with a utility or third-party supplier such as an energy broker and require the purchase of fuel for an extended amount of time.

^d The storage of usable alternative fuels is not available due to the potential environmental impact of storage tanks.

* 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.

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).

		Non switchable amount attributed to:										
NAICS code ^a	Subsector and industry	Total amount of natural gas consumed as fuel	Total amount of unswitchable natural gas fuel use	Equipment is not capable of using another fuel	Switching adversely affects the products	Unavailable alternative fuel supply	Environmental restrictions ^b	Long-term contract in place ^c	Unavailable storage for alternative fuels ^d	Another reason	Combinations of cols. F, G, H, I, J, and K	Don't know/ didn't answer
Total United States												
311	Food	3.5	3.7	5.0	35.0	55.3	4.1	22.4	38.1	25.5	5.2	4.9
3112	Grain and Oilseed Milling	4.1	4.2	5.3	0.0	76.3	12.3	0.0	0.0	7.5	22.8	2.4
311221	Wet Corn Milling and Starch Manufacturing	0.0	0.0	0.0	X	X	X	X	X	X	X	0.0
31131	Sugar Manufacturing	0.0	0.0	0.0	X	0.0	0.0	X	X	0.0	0.0	0.0
3114	Fruit and Vegetable Preserving and Specialty Food	3.0	3.1	3.8	21.1	X	X	6.4	80.9	19.2	5.1	14.2
3115	Dairy Product Manufacturing	3.4	3.2	4.9	40.4	0.0	X	31.4	89.4	16.5	13.7	3.3
3116	Animal Slaughtering and Processing	5.0	5.5	8.0	75.1	0.0	0.0	0.0	45.9	57.5	8.4	9.8
312	Beverage and Tobacco Products	49.8	50.8	56.9	25.1	58.5	93.5	35.5	79.7	8.4	48.5	40.1
3121	Beverages	50.9	51.3	57.5	25.2	58.5	93.5	35.5	79.7	9.5	48.5	40.1
3122	Tobacco	0.0	0.0	0.0	0.0	X	X	X	X	0.0	X	0.0
313	Textile Mills	10.5	12.7	14.8	25.7	96.2	X	80.9	17.2	6.9	76.2	47.5
314	Textile Product Mills	13.5	14.4	15.3	83.7	X	25.9	X	X	41.0	65.0	82.1
315	Apparel	17.9	18.8	24.6	X	X	0.0	64.1	X	88.9	X	38.7
316	Leather and Allied Products	44.4	44.4	10.0	X	X	67.7	X	15.5	64.9	25.0	6.7
321	Wood Products	7.2	7.3	4.6	33.8	43.7	62.0	39.6	36.7	8.5	11.8	35.0
321113	Sawmills	7.5	7.6	8.9	0.0	0.0	X	0.0	0.0	0.8	X	24.4
3212	Veneer, Plywood, and Engineered Wood Product Manufacturing	2.0	2.0	1.3	X	79.4	0.0	68.5	0.0	1.0	0.0	2.8
321219	Reconstituted Wood Products	2.7	2.7	0.4	X	93.2	0.0	X	0.0	2.2	X	0.0
3219	Other Wood Products	26.1	26.7	23.3	36.4	0.3	93.4	69.0	59.7	46.5	71.6	54.0
322	Paper	1.4	1.5	2.0	X	14.7	0.0	0.0	0.0	6.9	2.1	4.3
322110	Pulp Mills	0.0	0.0	0.0	X	0.0	0.0	0.0	0.0	0.0	X	0.0
322120	Paper Mills	0.0	0.0	0.0	X	0.0	0.0	0.0	X	0.0	0.0	0.0
322130	Paperboard Mills	0.0	0.0	0.0	X	0.0	0.0	0.0	0.0	0.0	0.0	0.0
323	Printing and Related Support	13.8	14.0	19.3	72.4	61.4	X	97.1	99.0	26.7	X	32.6
324	Petroleum and Coal Products	0.2	0.3	0.2	0.3	0.3	7.0	3.0	43.5	4.4	1.0	1.4
324110	Petroleum Refineries	0.0	0.0	0.0	D	0.0	0.0	0.0	X	0.0	D	0.0
324121	Asphalt Paving Mixture and Block	4.1	4.4	4.2	D	14.4	76.7	7.7	74.1	25.3	D	14.0
324122	Asphalt Shingle and Coating Materials	0.6	0.6	0.7	0.0	0.0	0.0	0.0	0.0	25.8	0.0	4.1
324191	Petroleum Lubricating Oil and Grease Manufacturing	12.5	12.5	3.0	0.0	X	X	0.0	X	6.1	0.0	65.2
324199	All Other Petroleum and Coal Products Manufacturing	0.0	0.0	0.0	X	0.0	0.0	X	X	X	0.0	0.0
325	Chemicals	2.9	3.0	2.8	18.5	2.1	5.0	10.3	68.1	3.3	54.7	7.9
325110	Petrochemicals	0.0	0.0	0.0	X	X	X	X	X	0.0	0.0	0.0
325120	Industrial Gases	0.2	0.1	0.9	X	X	D	X	X	D	X	D
325180	Other Basic Inorganic Chemical Manufacturing	3.3	3.3	4.4	87.5	14.2	D	0.0	X	D	0.0	4.3
325193	Ethyl Alcohol	2.7	2.7	3.2	0.0	22.1	66.1	14.1	X	X	45.9	13.1
325194	Cyclic Crudes, Intermediate and Gum and Wood Chemicals	0.0	0.0	0.0	0.0	X	X	X	X	X	0.0	0.0
325199	All Other Basic Organic Chemical Manufacturing	3.9	4.4	3.8	X	20.7	0.0	61.8	X	77.6	33.8	28.3
325211	Plastics Materials and Resins	1.3	1.3	1.7	49.2	0.0	0.0	0.0	X	22.8	3.1	3.2
325212	Synthetic Rubber	0.1	0.1	0.0	X	X	X	X	99.0	0.0	0.0	0.0
325220	Artificial and Synthetic Fibers and Filaments	0.1	0.2	0.3	X	0.0	0.0	0.0	X	0.0	X	0.0
325311	Nitrogenous Fertilizers	0.0	0.0	0.0	0.0	X	X	X	X	X	X	0.0
325312	Phosphatic Fertilizers	0.0	0.0	0.0	X	X	0.0	X	X	X	0.0	0.0
3254	Pharmaceuticals and Medicines	14.1	16.0	7.5	43.4	0.0	0.0	0.3	73.4	34.1	47.9	53.5
325412	Pharmaceutical Preparation	24.8	28.6	10.4	43.4	0.0	0.0	71.2	X	33.4	10.0	71.7
325992	Photographic Film, Paper, Plate, Chemical, and Copy Toner Manufacturing	0.0	0.0	0.0	X	X	X	X	X	0.0	0.0	0.0
326	Plastics and Rubber Products	16.0	16.3	22.1	97.7	94.4	90.0	91.6	72.6	47.8	49.9	40.7
327	Nonmetallic Mineral Products	4.9	5.3	2.9	11.6	24.2	0.0	11.3	2.3	4.6	1.8	27.0
327120	Clay Building Material and Refractories	3.9	3.1	3.6	19.2	X	X	46.0	X	7.4	35.0	5.5
327211	Flat Glass	0.1	0.1	0.1	0.0	0.0	X	X	0.0	0.1	0.0	0.0
327212	Other Pressed and Blown Glass and Glassware	0.5	0.5	0.6	X	0.0	X	X	X	0.0	0.0	1.4

327213	Glass Containers	0.1	0.1	0.1	X	0.0	0.0	X	X	X	0.0	0.0
327215	Glass Products from Purchased Glass	1.7	1.7	1.7	85.8	42.2	X	83.8	14.5	X	78.7	17.3
327310	Cements	2.1	2.5	2.7	32.9	X	X	0.0	0.0	0.0	0.5	0.0
327410	Lime	0.0	0.0	0.0	0.0	0.0	0.0	0.0	X	0.0	0.0	0.0
327420	Gypsum	2.9	2.9	3.8	X	0.0	X	X	0.0	0.0	0.9	0.0
327993	Mineral Wool	16.9	17.1	0.1	X	0.0	X	X	X	87.4	0.0	76.3
331	Primary Metals	0.2	0.2	0.2	1.9	1.1	39.6	1.0	12.0	0.6	0.7	0.8
331110	Iron and Steel Mills and Ferroalloys	0.0	0.0	D	0.0	0.0	0.0	D	X	0.0	0.0	0.0
3312	Steel Products from Purchased Steel	3.6	2.2	2.8	11.1	19.1	X	14.7	49.4	3.4	8.8	5.9
3313	Alumina and Aluminum Production and Processing	0.1	0.1	D	0.0	0.1	X	D	0.0	0.2	0.4	0.5
331314	Secondary Smelting and Alloying of Aluminum	0.0	0.0	0.0	X	X	X	X	X	0.0	0.0	0.0
331315	Aluminum Sheet, Plate and Foils	0.1	0.1	0.2	X	0.0	X	X	0.0	0.0	X	0.0
331318	Other Aluminum Rolling, Drawing and Extruding	0.7	0.7	0.7	0.0	36.1	X	X	X	32.5	2.8	2.6
3314	Nonferrous Metal (except Aluminum) Production and Processing	1.2	1.1	1.3	3.7	34.8	72.2	2.7	11.8	1.1	21.8	25.2
331410	Nonferrous Metal (except Aluminum) Smelting and Refining	0.4	0.4	0.5	X	X	X	0.0	X	0.0	0.0	43.1
3315	Foundries	1.3	1.4	1.7	17.4	17.5	0.0	3.2	68.7	3.7	0.0	3.7
331511	Iron Foundries	1.2	1.3	1.2	91.9	24.1	0.0	2.6	68.7	X	X	9.5
331523	Nonferrous Metal Die-Casting Foundries	3.1	3.2	3.8	0.0	28.0	X	0.0	X	5.3	0.0	1.4
331524	Aluminum Foundries, except Die-Casting	3.7	3.7	3.8	19.5	26.3	X	35.1	X	0.0	0.0	12.3
332	Fabricated Metal Products	29.7	29.8	35.3	81.5	74.7	0.0	98.1	73.0	42.3	55.3	65.8
333	Machinery	13.3	14.2	19.0	46.9	80.2	X	X	73.2	68.0	57.8	25.2
334	Computer and Electronic Products	8.8	9.8	13.9	96.8	30.7	0.0	84.1	52.6	13.9	39.1	20.8
334413	Semiconductors and Related Devices	5.9	7.0	11.2	X	50.3	0.0	86.4	X	14.2	0.0	1.0
335	Electrical Equip., Appliances, and Components	14.4	14.7	19.5	88.3	29.4	98.9	X	87.7	61.9	X	40.0
336	Transportation Equipment	6.7	7.0	9.2	37.4	27.7	7.2	35.9	0.0	8.3	41.3	15.1
336110	Automobile and Light Duty Motor Vehicle Manufacturing	0.5	0.5	0.7	X	X	X	X	0.0	0.0	0.0	0.0
3364	Aerospace Product and Parts	3.1	3.7	4.6	48.9	25.6	0.0	45.6	0.0	33.4	2.0	0.9
336411	Aircraft	4.3	5.4	7.2	X	0.0	0.0	X	X	2.3	X	2.0
337	Furniture and Related Products	15.9	16.6	20.6	59.1	86.6	X	79.6	65.6	73.7	99.0	40.0
339	Miscellaneous	20.5	20.8	24.6	82.5	99.0	X	X	99.0	40.9	99.0	26.6
	Total	2.2	2.4	2.9	5.3	2.3	9.6	3.7	12.2	3.3	18.4	6.0

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

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

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^b The environmental restrictions related to air quality limiting the amount of the usable alternative fuel that could be used instead.

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* Estimate less than 0.5.

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Q=Withheld because relative standard error (RSE) is greater than 50%.

NA=Not available.

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

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).