

Table 10.25 Reasons that Made Residual Fuel Oil Unswitchable, 2006;
Level: National Data;
Row: NAICS Codes;
Column: Reasons that Made Quantity Unswitchable;
Unit: Million barrels.

Reasons that Made Residual Fuel Oil Unswitchable												
NAICS Code(a)	Subsector and Industry	Total Amount of Residual Fuel Oil Consumed as a Fuel	Total Amount of Unswitchable Residual Fuel Oil 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 Columns F, G, H, I, J, and K	Don't Know
Total United States												
311	Food	4,124	454	280	16	27	35	0	0	0	0	Q
3112	Grain and Oilseed Milling	260	45	29	16	0	0	0	0	0	0	0
311221	Wet Corn Milling	27	27	27	0	0	0	0	0	0	0	0
31131	Sugar Manufacturing	1,359	48	48	0	0	0	0	0	0	0	0
3114	Fruit and Vegetable Preserving and Specialty Foods	393	27	0	0	27	0	0	0	0	0	0
3115	Dairy Products	209	Q	Q	0	0	0	0	0	0	0	0
3116	Animal Slaughtering and Processing	539	172	Q	0	0	35	0	0	0	0	Q
312	Beverage and Tobacco Products	431	107	48	0	58	0	0	0	0	0	1
3121	Beverages	290	58	0	0	58	0	0	0	0	0	0
3122	Tobacco	141	49	48	0	0	0	0	0	0	0	1
313	Textile Mills	396	228	Q	0	Q	0	0	0	0	0	54
314	Textile Product Mills	Q	Q	Q	0	0	0	0	0	0	0	0
315	Apparel	Q	0	0	0	0	0	0	0	0	0	0
316	Leather and Allied Products	42	19	19	0	0	0	0	0	0	0	0
321	Wood Products	604	117	87	0	0	0	0	0	0	0	Q
321113	Sawmills	58	58	28	0	0	0	0	0	0	0	Q
3212	Veneer, Plywood, and Engineered Woods	64	59	59	0	0	0	0	0	0	0	0
3219	Other Wood Products	Q	0	0	0	0	0	0	0	0	0	0
322	Paper	14,528	8,539	6,873	189	417	492	0	0	0	141	427
322110	Pulp Mills	1,796	1,131	1,073	0	0	58	0	0	0	0	0
322121	Paper Mills, except Newsprint	7,521	5,290	4,449	0	0	434	0	0	0	5	402
322122	Newsprint Mills	373	307	307	0	0	0	0	0	0	0	0
322130	Paperboard Mills	4,555	1,779	1,012	189	417	0	0	0	0	136	25
323	Printing and Related Support	Q	Q	*	0	0	0	0	0	0	0	Q
324	Petroleum and Coal Products	9,198	903	802	0	0	88	0	12	0	0	0
324110	Petroleum Refineries	8,292	903	802	0	0	88	0	12	0	0	0
324199	Other Petroleum and Coal Products	0	0	0	0	0	0	0	0	0	0	0
325	Chemicals	3,733	1,468	839	0	0	474	128	0	0	0	27
325110	Petrochemicals	732	593	593	0	0	0	0	0	0	0	0
325120	Industrial Gases	0	0	0	0	0	0	0	0	0	0	0
325181	Alkalies and Chlorine	0	0	0	0	0	0	0	0	0	0	0
325182	Carbon Black	72	0	0	0	0	0	0	0	0	0	0
325188	Other Basic Inorganic Chemicals	1,406	622	148	0	0	474	0	0	0	0	0
325192	Cyclic Crudes and Intermediates	93	8	8	0	0	0	0	0	0	0	0
325193	Ethyl Alcohol	0	0	0	0	0	0	0	0	0	0	0
325199	Other Basic Organic Chemicals	254	59	32	0	0	0	0	0	0	0	27
325211	Plastics Materials and Resins	58	0	0	0	0	0	0	0	0	0	0
325212	Synthetic Rubber	5	0	0	0	0	0	0	0	0	0	0
325222	Noncellulosic Organic Fibers	434	0	0	0	0	0	0	0	0	0	0
325311	Nitrogenous Fertilizers	0	0	0	0	0	0	0	0	0	0	0
325312	Phosphatic Fertilizers	39	39	39	0	0	0	0	0	0	0	0
3254	Pharmaceuticals and Medicines	173	128	*	0	0	0	128	0	0	0	0
325412	Pharmaceutical Preparation	173	128	*	0	0	0	128	0	0	0	0
325992	Photographic Film, Paper, Plate, and Chemicals	21	18	18	0	0	0	0	0	0	0	0
326	Plastics and Rubber Products	1,414	Q	Q	0	0	0	0	0	0	0	0
327	Nonmetallic Mineral Products	513	129	Q	0	0	0	0	0	0	81	17
327211	Flat Glass	218	0	0	0	0	0	0	0	0	0	0
327212	Other Pressed and Blown Glass and Glassware	0	0	0	0	0	0	0	0	0	0	0
327213	Glass Containers	0	0	0	0	0	0	0	0	0	0	0
327215	Glass Products from Purchased Glass	0	0	0	0	0	0	0	0	0	0	0
327310	Cements	156	98	0	0	0	0	0	0	0	81	17
327410	Lime	60	0	0	0	0	0	0	0	0	0	0
327420	Gypsum	*	0	0	0	0	0	0	0	0	0	0
327993	Mineral Wool	0	0	0	0	0	0	0	0	0	0	0
331	Primary Metals	3,097	545	15	530	0	0	0	0	0	0	0

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331111	Iron and Steel Mills	3,042	539	10	530	0	0	0	0	0	0	0
331112	Electrometallurgical Ferroalloy Products	0	0	0	0	0	0	0	0	0	0	0
3312	Steel Products from Purchased Steel	0	0	0	0	0	0	0	0	0	0	0
3313	Alumina and Aluminum	43	0	0	0	0	0	0	0	0	0	0
331314	Secondary Smelting and Alloying of Aluminum	18	0	0	0	0	0	0	0	0	0	0
331315	Aluminum Sheet, Plate and Foils	0	0	0	0	0	0	0	0	0	0	0
331316	Aluminum Extruded Products	4	0	0	0	0	0	0	0	0	0	0
3314	Nonferrous Metals, except Aluminum	10	3	3	0	0	0	0	0	0	0	0
3315	Foundries	Q	Q	Q	0	0	0	0	0	0	0	0
331511	Iron Foundries	*	0	0	0	0	0	0	0	0	0	0
331521	Aluminum Die-Casting Foundries	0	0	0	0	0	0	0	0	0	0	0
331524	Aluminum Foundries, except Die-Casting	Q	Q	Q	0	0	0	0	0	0	0	0
332	Fabricated Metal Products	Q	Q	Q	0	0	0	0	0	0	0	9
333	Machinery	Q	0	0	0	0	0	0	0	0	0	0
334	Computer and Electronic Products	58	Q	Q	0	0	0	0	0	0	0	0
334413	Semiconductors and Related Devices	4	4	4	0	0	0	0	0	0	0	0
335	Electrical Equip., Appliances, and Components	0	0	0	0	0	0	0	0	0	0	0
336	Transportation Equipment	1,038	194	192	0	1	*	0	*	0	0	Q
336111	Automobiles	27	20	20	0	0	0	0	*	0	0	0
336112	Light Trucks and Utility Vehicles	6	0	0	0	0	0	0	0	0	0	0
3364	Aerospace Product and Parts	490	106	104	0	1	0	0	0	0	0	Q
336411	Aircraft	1	1	0	0	1	0	0	0	0	0	0
337	Furniture and Related Products	Q	*	*	0	0	0	0	0	0	0	0
339	Miscellaneous	Q	*	*	0	0	0	0	0	0	0	0
	Total	39,925	13,283	9,840	734	589	1,089	128	12	0	222	668

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

(b) The environmental restrictions related to air quality that limit 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 requires the purchase of a 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.

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: To obtain the RSE percentage for any table cell, multiply the cell's corresponding RSE column and RSE row factors. Totals may not equal sum of components because of independent rounding. Establishment percents may not equal 100 percent because of unknown and/or unreported fuel-switching guesstimate.

Source: Energy Information Administration, Office of Energy Markets and End Use, Energy Consumption Division, Form EIA-846, '2006 Manufacturing Energy Consumption Survey.'