

Table 10.24 Reasons that Made Distillate Fuel Oil Unswitchable, 2006;
Level: National Data;
Row: NAICS Codes;
Column: Reasons that Made Quantity Unswitchable;
Unit: Million barrels.

Reasons that Made Distillate Fuel Oil Unswitchable

| NAICS Code(a) | Subsector and Industry | Total Amount of Distillate Fuel Oil Consumed as a Fuel | Total Amount of Unswitchable Distillate Fuel Oil Fuel Use | Equipment is Not Capable of Using Another Fuel | Switching Adversely Affects the Products | Unavailable Fuel Supply | Long-Term Contract in Place(c) | Unavailable Storage for Alternative Fuels(d) | Combinations of Another Reason H, I, J, and K | Columns F, G, H, I, J, and K | Don't Know | |
|----------------------------|--|--|---|--|--|-------------------------|--------------------------------|--|---|------------------------------|------------|-----|
| Total United States | | | | | | | | | | | | |
| 311 | Food | 2,723 | 2,141 | 1,595 | 10 | Q | 1 | Q | 20 | 0 | 0 | 287 |
| 3112 | Grain and Oilseed Milling | 153 | 144 | 134 | 1 | 0 | 0 | Q | 0 | 0 | 0 | 7 |
| 311221 | Wet Corn Milling | 32 | 31 | 24 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 31131 | Sugar Manufacturing | 148 | 116 | 68 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 38 |
| 3114 | Fruit and Vegetable Preserving and Specialty Foods | 210 | 43 | 42 | 0 | 0 | 0 | 0 | * | 0 | 0 | * |
| 3115 | Dairy Products | 235 | 229 | 226 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | Q |
| 3116 | Animal Slaughtering and Processing | 789 | 618 | 435 | 0 | 7 | 0 | 0 | 20 | 0 | 0 | Q |
| 312 | Beverage and Tobacco Products | 204 | 104 | 59 | * | 33 | * | 0 | Q | 0 | 0 | Q |
| 3121 | Beverages | 171 | 75 | 42 | * | 21 | * | 0 | Q | 0 | 0 | Q |
| 3122 | Tobacco | 33 | 29 | 17 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 |
| 313 | Textile Mills | 43 | Q | Q | 0 | 0 | Q | 0 | 0 | 0 | 0 | 0 |
| 314 | Textile Product Mills | 36 | 31 | 29 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 315 | Apparel | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 316 | Leather and Allied Products | 10 | Q | Q | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 321 | Wood Products | 2,635 | 2,167 | 1,913 | 24 | 27 | 8 | 1 | 4 | 0 | 0 | 190 |
| 321113 | Sawmills | 1,422 | 1,126 | 976 | 10 | 25 | 0 | 0 | 4 | 0 | 0 | 110 |
| 3212 | Veneer, Plywood, and Engineered Woods | 234 | 194 | 169 | Q | 0 | 5 | 0 | 0 | 0 | 0 | 13 |
| 3219 | Other Wood Products | 775 | 718 | 675 | Q | Q | Q | 1 | 0 | 0 | 0 | 32 |
| 322 | Paper | 2,181 | 881 | 847 | 0 | 2 | 4 | 0 | 0 | 0 | 0 | 29 |
| 322110 | Pulp Mills | 648 | 44 | 44 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 322121 | Paper Mills, except Newsprint | 372 | 262 | 238 | 0 | 2 | * | 0 | 0 | 0 | 0 | 21 |
| 322122 | Newsprint Mills | 20 | 14 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 322130 | Paperboard Mills | 1,054 | 482 | 471 | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 7 |
| 323 | Printing and Related Support | Q | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 324 | Petroleum and Coal Products | 4,275 | 2,760 | 2,530 | 1 | 1 | Q | 0 | 0 | 0 | 0 | Q |
| 324110 | Petroleum Refineries | 1,387 | 839 | 805 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 32 |
| 324199 | Other Petroleum and Coal Products | 30 | 23 | 18 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 325 | Chemicals | 1,616 | 1,211 | 930 | 1 | Q | 26 | 0 | * | 0 | 7 | Q |
| 325110 | Petrochemicals | 103 | 103 | 103 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 325120 | Industrial Gases | 6 | 6 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | * |
| 325181 | Alkalies and Chlorine | 15 | 12 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 325182 | Carbon Black | 1 | * | * | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 325188 | Other Basic Inorganic Chemicals | 178 | 94 | 91 | * | 0 | 0 | 0 | * | 0 | 1 | 1 |
| 325192 | Cyclic Crudes and Intermediates | 18 | 6 | 6 | 0 | 0 | 1 | 0 | * | 0 | 0 | * |
| 325193 | Ethyl Alcohol | 11 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | * |
| 325199 | Other Basic Organic Chemicals | 387 | 272 | 250 | * | Q | * | 0 | 0 | 0 | 3 | 3 |
| 325211 | Plastics Materials and Resins | 226 | Q | 50 | 0 | 0 | 0 | 0 | * | 0 | 0 | Q |
| 325212 | Synthetic Rubber | 59 | 6 | 5 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 325222 | Noncellulosic Organic Fibers | 23 | 17 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 325311 | Nitrogenous Fertilizers | 24 | 23 | 9 | * | 1 | 12 | 0 | 0 | 0 | 0 | 0 |
| 325312 | Phosphatic Fertilizers | 129 | 129 | 117 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| 3254 | Pharmaceuticals and Medicines | 198 | 179 | 178 | 0 | 0 | * | 0 | 0 | 0 | 0 | 2 |
| 325412 | Pharmaceutical Preparation | 175 | 160 | 159 | 0 | 0 | * | 0 | 0 | 0 | 0 | 1 |
| 325992 | Photographic Film, Paper, Plate, and Chemicals | 11 | 10 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| 326 | Plastics and Rubber Products | 540 | Q | Q | Q | 0 | 0 | 0 | 0 | 0 | Q | 0 |
| 327 | Nonmetallic Mineral Products | 5,150 | 4,141 | 3,795 | * | Q | 7 | * | 0 | 0 | Q | 250 |
| 327211 | Flat Glass | 10 | 9 | 9 | * | 0 | 0 | 0 | 0 | 0 | 0 | * |
| 327212 | Other Pressed and Blown Glass and Glassware | 12 | 6 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 327213 | Glass Containers | 15 | 15 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 327215 | Glass Products from Purchased Glass | Q | Q | Q | 0 | * | 0 | 0 | 0 | 0 | 0 | 0 |
| 327310 | Cements | 596 | 409 | 371 | 0 | 1 | 7 | 0 | 0 | 0 | 0 | 30 |
| 327410 | Lime | 224 | 190 | 179 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| 327420 | Gypsum | 115 | 104 | 104 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 327993 | Mineral Wool | 5 | 4 | 3 | 0 | 0 | 0 | * | 0 | 0 | 0 | * |
| 331 | Primary Metals | 1,016 | 780 | 563 | 34 | Q | 6 | 2 | 2 | 0 | 4 | 161 |

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Row: NAICS Codes;
Column: Reasons that Made Quantity Unswitchable;
Unit: Million barrels.

Reasons that Made Distillate Fuel Oil Unswitchable

| NAICS Code(a) | Subsector and Industry | Total Amount of | Total Amount of | Equipment is Not | Switching | Unavailable | Long-Term | Unavailable | Combinations of | | | |
|---------------|---|--|---|-------------------------------|--|---|-------------------------------|----------------------------|-----------------|------------|---|-------|
| | | Distillate Fuel Oil Consumed as a Fuel | Unswitchable Distillate Fuel Oil Fuel Use | Capable of Using Another Fuel | the Products Adversely Affects Fuel Supply | Alternative Environmental Restrictions(b) in Place(c) | Contract Alternative Fuels(d) | Storage for Another Reason | H, I, J, and K | Don't Know | | |
| 331111 | Iron and Steel Mills | 529 | 458 | 319 | 10 | 0 | 0 | 2 | 0 | 0 | 0 | 127 |
| 331112 | Electrometallurgical Ferroalloy Products | 17 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3312 | Steel Products from Purchased Steel | 46 | 18 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 3313 | Alumina and Aluminum | 136 | 89 | 76 | 4 | * | 0 | 0 | 1 | 0 | 3 | 5 |
| 331314 | Secondary Smelting and Alloying of Aluminum | 37 | 32 | 23 | 4 | 0 | 0 | 0 | 1 | 0 | 0 | 4 |
| 331315 | Aluminum Sheet, Plate and Foils | 58 | 22 | 18 | 0 | * | 0 | 0 | * | 0 | 3 | 1 |
| 331316 | Aluminum Extruded Products | 12 | 12 | 11 | 0 | 0 | 0 | 0 | * | 0 | 0 | * |
| 3314 | Nonferrous Metals, except Aluminum | 96 | 87 | 57 | 0 | Q | 0 | 0 | 0 | 0 | 1 | 21 |
| 3315 | Foundries | 193 | 119 | 88 | 20 | * | 6 | * | * | 0 | 0 | 6 |
| 331511 | Iron Foundries | 100 | 84 | 58 | 20 | 0 | 6 | 0 | 0 | 0 | 0 | 2 |
| 331521 | Aluminum Die-Casting Foundries | 45 | * | * | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 331524 | Aluminum Foundries, except Die-Casting | 10 | 3 | 2 | 0 | 0 | 0 | * | * | 0 | 0 | * |
| 332 | Fabricated Metal Products | 410 | 295 | 272 | 0 | Q | 0 | 0 | 0 | 0 | * | Q |
| 333 | Machinery | 274 | 184 | 181 | Q | 0 | 0 | 0 | 0 | 0 | * | * |
| 334 | Computer and Electronic Products | 155 | 63 | 61 | 0 | * | * | 0 | 0 | 0 | 0 | Q |
| 334413 | Semiconductors and Related Devices | 19 | 5 | 5 | 0 | * | * | 0 | 0 | 0 | 0 | * |
| 335 | Electrical Equip., Appliances, and Components | Q | Q | Q | * | 0 | 0 | 0 | 0 | 0 | 0 | * |
| 336 | Transportation Equipment | 488 | 198 | 162 | Q | 15 | * | Q | * | 0 | 4 | 9 |
| 336111 | Automobiles | 4 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | * |
| 336112 | Light Trucks and Utility Vehicles | 5 | 3 | 3 | 0 | 0 | 0 | 0 | * | 0 | * | 0 |
| 3364 | Aerospace Product and Parts | 98 | 82 | 66 | 0 | 8 | 0 | 0 | 0 | 0 | 4 | 4 |
| 336411 | Aircraft | 22 | 21 | 11 | 0 | 5 | 0 | 0 | 0 | 0 | 1 | 4 |
| 337 | Furniture and Related Products | Q | Q | Q | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 339 | Miscellaneous | 28 | 9 | Q | 0 | * | 0 | 0 | 0 | 0 | 0 | Q |
| | Total | 22,139 | 15,529 | 13,252 | 107 | 349 | Q | 9 | 37 | 0 | Q | 1,284 |

(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.'