

Table 10.8 Capability to Switch Distillate Fuel Oil to Alternative Energy Sources, 2002;
Level: National Data and Regional Totals;
Row: NAICS Codes, Value of Shipments and Employment Sizes;
Column: Energy Sources;
Unit: Thousand Barrels.

NAICS Code(a)	Subsector and Industry	Distillate Fuel Oil			Alternative Energy Sources(b)							RSE Row Factors
		Total Consumed(c)	Switchable	Not Switchable	Electricity Receipts(d)	Natural Gas	Residual Fuel Oil	Coal	LPG	Coal Coke and Breeze	Other(e)	
Total United States												
	RSE Column Factors:	1.7	1.6	1.7	0.9	1.5	0.6	0.7	1.7	0.3	0.8	
311	Food	3,177	986	767	Q	297	Q	1	Q	0	Q	10.4
311221	Wet Corn Milling	14	4	10	*	3	0	1	2	0	*	0.8
31131	Sugar	169	W	143	W	W	0	0	0	0	0	0.7
311421	Fruit and Vegetable Canning	242	Q	121	0	Q	0	0	0	0	*	27.1
312	Beverage and Tobacco Products	253	19	170	1	18	1	3	*	0	*	3.8
3121	Beverages	Q	15	Q	1	14	1	2	*	0	0	4.7
3122	Tobacco	48	4	31	0	3	*	*	*	0	*	0.9
313	Textile Mills	342	145	Q	0	145	Q	*	Q	0	0	9.4
314	Textile Product Mills	Q	53	Q	0	30	7	W	4	0	Q	13
315	Apparel	250	Q	61	0	Q	0	0	Q	0	0	28
316	Leather and Allied Products	41	30	9	0	*	0	0	30	0	0	1.7
321	Wood Products	1,720	138	1,183	84	29	5	1	23	W	15	10.4
321113	Sawmills	944	89	654	Q	1	2	0	10	0	5	21
3212	Veneer, Plywood, and Engineered Woods	326	10	286	3	5	1	0	5	0	Q	5.6
3219	Other Wood Products	329	21	186	5	9	Q	0	3	0	Q	21.9
322	Paper	2,263	1,297	902	50	1,176	265	50	13	W	154	2.1
322110	Pulp Mills	806	621	179	0	621	0	0	0	0	*	0.7
322121	Paper Mills, except Newsprint	682	262	402	45	185	56	38	6	0	54	2
322122	Newsprint Mills	22	W	11	0	W	0	0	0	0	0	0.6
322130	Paperboard Mills	661	358	285	6	318	W	W	1	W	W	1.4
323	Printing and Related Support	75	13	37	*	4	0	0	Q	0	*	8.9
324	Petroleum and Coal Products	2,821	522	1,586	10	443	Q	W	170	0	3	11.5
324110	Petroleum Refineries	853	90	735	7	82	0	W	W	0	1	1.6
324199	Other Petroleum and Coal Products	33	*	31	*	0	0	0	0	0	0	3.4
325	Chemicals	2,422	403	1,654	39	314	Q	23	1	0	3	4.8
325110	Petrochemicals	41	W	10	W	W	0	0	0	0	0	1.1
325120	Industrial Gases	6	W	W	*	1	0	0	*	0	0	0.7
325181	Alkalies and Chlorine	16	W	9	0	W	0	0	*	0	0	0.6
325182	Carbon Black	3	0	3	0	0	0	0	0	0	0	0.6
325188	Other Basic Inorganic Chemicals	351	8	221	0	6	1	0	*	0	0	1.4
325192	Cyclic Crudes and Intermediates	39	3	W	0	W	0	0	0	0	3	0.7
325193	Ethyl Alcohol	10	8	2	0	1	0	7	0	0	*	0.8
325199	Other Basic Organic Chemicals	292	Q	140	1	31	Q	0	*	0	*	2.7
325211	Plastics Materials and Resins	251	W	72	Q	W	0	0	*	0	0	2.2
325212	Synthetic Rubber	26	21	3	0	21	Q	13	0	0	0	5.2

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NAICS Code(a)	Subsector and Industry	Distillate Fuel Oil			Alternative Energy Sources(b)							RSE Row Factors	
		Total Consumed(c)	Switchable	Not Switchable	Electricity Receipts(d)	Natural Gas	Residual Fuel Oil	Coal	LPG	Coal Coke and Breeze	Other(e)		
325222	Noncellulosic Organic Fibers	27	19	8	0	19	0	*	0	0	0	0	0.7
325311	Nitrogenous Fertilizers	12	1	10	0	1	*	0	*	0	0	0	0.7
325312	Phosphatic Fertilizers	153	3	148	3	3	0	0	0	0	0	0	0.7
3254	Pharmaceuticals and Medicines	473	28	424	1	27	0	0	*	0	0	0	5.9
325412	Pharmaceutical Preparation	105	13	73	*	13	0	0	*	0	0	0	2.4
325992	Photographic Film, Paper, Plate, and Chemicals	75	Q	15	0	Q	0	W	0	0	0	0	9
326	Plastics and Rubber Products	323	106	182	Q	74	Q	0	Q	0	Q	Q	18.6
327	Nonmetallic Mineral Products	5,366	417	2,912	1	206	150	162	94	0	Q	Q	9.1
3272	Glass and Glass Products	W	20	W	1	20	0	0	1	0	0	0	2.1
327211	Flat Glass	W	W	W	0	W	0	0	0	0	0	0	0.6
327213	Glass Containers	13	0	13	0	0	0	0	0	0	0	0	0.6
327310	Cements	967	298	604	0	W	W	162	1	0	*	*	1.4
327410	Lime	210	11	194	0	0	W	0	W	0	1	0	0.8
327993	Mineral Wool	Q	*	Q	*	*	0	0	*	0	*	*	8.5
331	Primary Metals	2,560	101	2,288	5	87	Q	0	Q	0	Q	Q	10
331111	Iron and Steel Mills	1,767	Q	1,632	4	Q	Q	0	Q	0	0	0	1.2
331112	Electrometallurgical Ferroalloy Products	9	0	9	0	0	0	0	0	0	0	0	15.5
3312	Steel Products from Purchased Steel	76	43	29	0	43	0	0	0	0	*	*	10.9
3313	Alumina and Aluminum	203	5	191	0	*	0	0	5	0	Q	Q	10.3
331312	Primary Aluminum	36	0	36	0	0	0	0	0	0	0	0	0.6
3314	Nonferrous Metals, except Aluminum	369	7	334	Q	5	*	0	2	0	*	*	3.2
3315	Foundries	135	11	92	*	5	0	0	8	0	2	5	5
331511	Iron Foundries	87	6	72	*	5	0	0	4	0	2	6.4	6.4
331521	Aluminum Die-Casting Foundries	3	0	1	0	0	0	0	0	0	0	0	1.2
331524	Aluminum Foundries, except Die-Casting	9	*	7	*	*	0	0	*	0	0	0	8.1
332	Fabricated Metal Products	959	Q	438	Q	Q	Q	*	Q	*	Q	Q	18.5
333	Machinery	371	21	252	Q	18	0	0	7	0	0	0	11.2
334	Computer and Electronic Products	172	37	132	Q	34	*	W	Q	0	0	0	8.1
334413	Semiconductors and Related Devices	35	28	6	*	27	*	0	*	0	0	0	1
335	Electrical Equip., Appliances, and Components	107	9	81	Q	9	Q	0	4	0	0	0	16.1
336	Transportation Equipment	552	107	345	18	96	3	*	Q	0	4	17	17
336112	Light Trucks and Utility Vehicles	W	0	W	0	0	0	0	0	0	0	0	0.6
337	Furniture and Related Products	91	14	43	Q	7	Q	0	*	0	0	0	18.1
339	Miscellaneous	71	Q	31	Q	Q	0	0	Q	0	*	*	23.4
	Total	24,446	4,920	13,621	314	3,381	1,135	263	1,739	W	220	9.3	9.3
Northeast Census Region													
RSE Column Factors:		1.7	1.6	1.7	0.9	1.5	0.6	0.7	1.7	0.3	0.8		

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NAICS Code(a)	Subsector and Industry	Distillate Fuel Oil			Alternative Energy Sources(b)							RSE Row Factors
		Total Consumed(c)	Switchable	Not Switchable	Electricity Receipts(d)	Natural Gas	Residual Fuel Oil	Coal	LPG	Coal Coke and Breeze	Other(e)	
	Total	5,104	1,093	2,997	164	818	488	30	214	*	57	16.4
Midwest Census Region												
	RSE Column Factors:	1.7	1.6	1.7	0.9	1.5	0.6	0.7	1.7	0.3	0.8	
	Total	5,183	736	3,389	25	Q	24	24	Q	0	20	16.9
South Census Region												
	RSE Column Factors:	1.7	1.6	1.7	0.9	1.5	0.6	0.7	1.7	0.3	0.8	
	Total	9,374	2,305	4,977	116	1,464	404	209	Q	W	53	9.9
West Census Region												
	RSE Column Factors:	1.7	1.6	1.7	0.9	1.5	0.6	0.7	1.7	0.3	0.8	
	Total	4,784	787	2,259	9	459	220	0	Q	0	91	13.3
Economic Characteristic (f)												
	RSE Column Factors:	1.1	1.2	1.2	1.3	1.2	0.8	0.5	3.3	0.2	1.2	
Value of Shipments and Receipts (million dollars)												
	Under 20	8,676	1,442	3,890	160	991	569	Q	920	1	24	25
	20-49	3,760	907	1,970	5	219	Q	Q	Q	0	8	20.4
	50-99	2,562	536	1,589	15	349	186	149	49	0	12	10.4
	100-249	2,863	386	1,967	30	285	*	22	104	0	39	11.7
	250-499	2,993	1,259	1,192	46	1,170	259	68	17	W	125	3.2
	500 and Over	3,591	391	3,013	59	368	8	5	55	0	13	1.4
	Total	24,446	4,920	13,621	314	3,381	1,135	263	1,739	W	220	9.3
Employment Size												
	Under 50	6,739	857	3,185	Q	387	Q	Q	Q	1	22	16.7
	50-99	2,869	553	1,190	7	212	263	*	Q	0	7	33.3

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	100-249	4,966	1,036	2,967	65	528	351	170	213	*	8	11.9
	250-499	2,517	Q	1,478	26	Q	Q	33	Q	0	24	8.3
	500-999	3,124	1,140	1,878	22	1,075	25	41	115	0	34	10.7
	1000 and Over	4,230	631	2,923	61	527	243	14	52	W	124	2.7
	Total	24,446	4,920	13,621	314	3,381	1,135	263	1,739	W	220	9.3

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

(b) 'Alternative Energy Sources' consist of those energy sources that could have been substituted for distillate fuel oil during 2002. The quantities are expressed in thousands of barrels, and therefore represent the quantity of distillate fuel oil that could have been displaced by the given alternative type of energy.

(c) 'Total Consumed' represents those quantities (Total Inputs) of distillate fuel oil that were ascertained switchable or not switchable, plus an additional quantity for which the switching status was not ascertained.

(d) 'Electricity Receipts' represents those quantities of electricity generated off the manufacturing establishment site and available at the site for consumption. It includes those quantities for which payment was made, quantities transferred in, quantities purchased and paid for by a central purchasing entity, and quantities for which payment was made in kind. It does not include electricity generated onsite. 'Electricity Receipts' has not been adjusted to account for any quantities that might have been resold or transferred out. The estimates include those quantities that were ascertained switchable or not switchable, plus an additional quantity for which the switching status was not ascertained.

(e) 'Other' includes all other types of energy not already identified that respondents indicated could have been consumed in place of distillate fuel oil.

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

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.

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		Total Consumed(c)	Switchable	Not Switchable	Electricity Receipts(d)	Natural Gas	Residual Fuel Oil	Coal	LPG	Coal Coke and Breeze	

Source: Energy Information Administration, Office of Energy Markets and End Use, Energy Consumption Division, Form EIA-846, '2002 Manufacturing Energy Consumption Survey,' and the Bureau of the Census, data files for the '2002 Economic Census, Manufacturing - Industry Series.'