

Table A57. Capability to Switch from Coal to Alternative Energy Sources by Industry Group, Selected Industries, and Selected Characteristics, 1991
(Estimates in Thousand Short Tons)

SIC Code ^a	Industry Groups and Industry	Coal			Alternative Types of Energy ^b						RSE Row Factors
		Total Consumed ^c	Switchable	Not Switchable	Electricity Receipts ^d	Natural Gas	Distillate Fuel Oil	Residual Fuel Oil	LPG	Other ^e	
	RSE Column Factors:	0.8	0.8	0.9	1.1	0.9	1.1	1.0	1.2	1.4	
20	Food and Kindred Products	6,913	3,728	2,882	576	2,683	2,066	642	W	*	10.3
2011	Meat Packing Plants	27	W	W	1	W	0	0	1	0	25.5
2033	Canned Fruits and Vegetables	Q	0	Q	0	0	0	0	0	0	0.0
2037	Frozen Fruits and Vegetables	0	0	0	0	0	0	0	0	0	0.0
2046	Wet Corn Milling	3,051	2,145	810	W	1,871	W	0	0	*	14.1
2051	Bread, Cake and Related Products	0	0	0	0	0	0	0	0	0	0.0
2063	Beet Sugar	1,901	W	1,394	W	W	W	0	W	0	10.2
2075	Soybean Oil Mills	592	241	351	W	149	136	0	0	0	5.7
2082	Malt Beverages	706	681	18	W	W	W	W	0	0	18.2
21	Tobacco Manufactures	692	242	W	W	W	W	W	0	0	6.7
22	Textile Mill Products	1,362	827	445	Q	684	408	310	125	W	11.0
23	Apparel and Other Textile Products	88	W	80	0	0	0	W	0	0	35.6
24	Lumber and Wood Products	92	8	83	0	0	0	*	0	8	36.8
25	Furniture and Fixtures	157	Q	54	0	Q	Q	Q	Q	Q	34.9
26	Paper and Allied Products	13,252	6,148	6,844	701	2,734	2,027	3,207	215	429	4.2
2611	Pulp Mills	331	171	161	10	15	62	171	*	18	30.3
2621	Paper Mills	8,634	3,929	4,562	583	2,041	1,522	1,739	0	W	3.0
2631	Paperboard Mills	W	1,938	W	W	636	425	1,289	215	170	7.5
27	Printing and Publishing	0	0	0	0	0	0	0	0	0	0.0
28	Chemicals and Allied Products	11,345	3,702	7,176	213	2,590	1,825	1,380	749	W	6.0
2812	Alkalies and Chlorine	W	W	W	0	W	0	0	0	0	29.3
2813	Industrial Gases	0	0	0	0	0	0	0	0	0	0.0
2819	Industrial Inorganic Chemicals, nec	743	113	408	W	79	54	W	W	W	11.5
2821	Plastics Materials and Resins	1,074	354	719	0	313	0	185	0	0	8.2
2822	Synthetic Rubber	W	W	1	0	W	W	0	0	0	22.7
2823	Cellulosic Manmade Fibers	1,202	0	1,202	0	0	0	0	0	0	23.2
2824	Organic Fibers, Noncellulosic	1,558	W	759	W	W	W	W	0	0	4.3
2865	Cyclic Crudes and Intermediates	W	41	W	0	W	W	0	0	W	18.1
2869	Industrial Organic Chemicals, nec	3,819	1,758	2,048	66	1,591	1,115	W	737	0	8.0
2873	Nitrogenous Fertilizers	0	0	0	0	0	0	0	0	0	0.0
2874	Phosphatic Fertilizers	W	W	0	0	0	W	W	0	0	6.7
29	Petroleum and Coal Products	W	W	W	W	97	88	124	W	0	8.7
2911	Petroleum Refining	134	116	17	1	91	88	98	W	0	11.5
30	Rubber and Misc. Plastics Products	295	128	130	0	102	37	35	0	Q	15.9
3011	Tires and Inner Tubes	75	W	W	0	23	W	W	0	1	5.9
308	Miscellaneous Plastic Products, nec	130	75	33	0	W	0	26	0	Q	29.6
31	Leather and Leather Products	Q	0	Q	0	0	0	0	0	0	0.0
32	Stone, Clay and Glass Products	13,127	6,129	6,767	0	5,276	1,241	1,786	671	822	12.2
3211	Flat Glass	*	0	*	0	0	0	0	0	0	7.3
3221	Glass Containers	0	0	0	0	0	0	0	0	0	0.0
3229	Pressed and Blown Glass, nec	0	0	0	0	0	0	0	0	0	0.0
3241	Cement, Hydraulic	8,736	4,631	4,016	0	3,871	1,085	1,679	569	775	11.0
3274	Lime	3,926	1,359	Q	0	1,359	128	W	W	W	20.2
3296	Mineral Wool	*	0	*	0	0	0	0	0	0	2.4
33	Primary Metal Industries	2,054	1,236	790	W	W	10	W	0	W	8.1
3312	Blast Furnaces and Steel Mills	1,075	W	W	W	W	8	W	0	W	12.0
3313	Electrometallurgical Products	W	0	W	0	0	0	0	0	0	13.4
3321	Gray and Ductile Iron Foundries	5	4	1	0	0	0	0	0	W	22.4
3331	Primary Copper	W	0	0	0	0	0	0	0	0	1.3
3334	Primary Aluminum	0	0	0	0	0	0	0	0	0	0.0
3339	Primary Nonferrous Metals, nec	W	W	W	W	0	0	0	0	0	1.1
3353	Aluminum Sheet, Plate, and Foil	W	W	0	0	W	0	0	0	0	1.2
34	Fabricated Metal Products	245	54	189	W	51	46	W	0	0	22.9
35	Industrial Machinery and Equipment	480	178	302	0	178	W	W	W	0	18.7
357	Computer and Office Equipment	0	0	0	0	0	0	0	0	0	0.0
36	Electronic and Other Electric Equipment	W	37	W	0	15	3	4	0	0	25.1
37	Transportation Equipment	1,464	277	1,074	Q	239	36	W	W	W	7.6
3711	Motor Vehicles and Car Bodies	W	W	330	0	W	0	0	W	W	6.4
3714	Motor Vehicle Parts and Accessories	W	W	W	Q	W	13	W	W	W	10.1
38	Instruments and Related Products	W	W	W	W	0	W	W	0	0	29.0
3841	Surgical and Medical Instruments	0	0	0	0	0	0	0	0	0	0.0
39	Misc. Manufacturing Industries	32	32	0	0	32	Q	22	20	0	35.6
	Total	53,035	23,610	27,779	1,821	15,656	8,129	8,352	2,003	1,456	5.1

See footnotes at end of table.

Table A57. Capability to Switch from Coal to Alternative Energy Sources by Industry Group, Selected Industries, and Selected Characteristics, 1991 (Continued)
(Estimates in Thousand Short Tons)

Selected Characteristics	Coal			Alternative Types of Energy ^b						RSE Row Factors
	Total Consumed ^c	Switchable	Not Switchable	Electricity Receipts ^d	Natural Gas	Distillate Fuel Oil	Residual Fuel Oil	LPG	Other ^e	
RSE Column Factors:	0.7	0.8	0.9	1.0	0.9	1.0	0.9	1.4	1.7	
Census Region										
Northeast	7,420	2,162	5,007	W	572	629	886	W	0	14.7
Midwest	18,828	8,185	10,119	564	6,597	3,398	909	691	554	7.0
South	22,514	10,359	11,402	759	6,328	3,245	5,341	1,164	871	4.9
West	4,274	2,904	1,251	W	2,160	859	1,216	W	30	14.6
Total	53,035	23,610	27,779	1,821	15,656	8,129	8,352	2,003	1,456	5.1
Value of Shipments and Receipts^f (million dollars)										
Under 20	4,709	1,497	Q	Q	1,250	495	181	185	172	18.8
20-49	9,384	4,177	4,712	W	3,478	970	1,453	632	679	11.0
50-99	5,398	2,302	2,938	31	1,597	533	872	W	W	8.9
100-249	11,587	4,962	6,371	564	3,197	2,065	1,538	788	141	4.9
250-499	10,593	5,356	4,987	584	2,802	1,627	2,591	W	W	5.5
500 and Over	11,365	5,316	5,736	598	3,332	2,438	1,717	307	W	8.1
Total	53,035	23,610	27,779	1,821	15,656	8,129	8,352	2,003	1,456	5.1
Employment Size^g										
Under 50	467	Q	126	0	Q	0	Q	0	0	52.2
50-99	2,454	1,222	1,113	W	933	451	153	Q	157	23.3
100-249	14,468	5,587	8,249	W	4,627	2,303	1,347	653	809	11.2
250-499	7,707	4,283	3,197	W	3,358	1,715	1,696	330	18	7.5
500-999	9,250	4,403	4,742	550	2,305	1,382	1,376	391	150	5.8
1,000 and Over	18,689	7,789	10,351	666	4,107	2,277	3,768	548	322	5.0
Total	53,035	23,610	27,779	1,821	15,656	8,129	8,352	2,003	1,456	5.1

^a See Appendices B and F for descriptions of the Standard Industrial Classification system.

^b "Alternative Types of Energy" consist of those energy sources that could have been substituted for coal during 1991. The quantities are expressed in thousands of short tons, and therefore represent the quantity of coal that could have been displaced by the given alternative type of energy.

^c "Total Consumed" represents those quantities of coal 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 coal.

^f Value of Shipments and Receipts and Employment Size categories were supplied by the Bureau of the Census. See Appendix B.

* Estimate less than 0.5. Data are included in higher level totals.

W=Withheld to avoid disclosing data for individual establishments. Data are included in higher level totals.

Q=Withheld because Relative Standard Error is greater than 50 percent. Data are included in higher level totals.

Notes: • To obtain a 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.

Source: Energy Information Administration, Office of Energy Markets and End Use, Energy End Use Division, Form EIA-846, "1991 Manufacturing Energy Consumption Survey."