

APPENDIX E: COUNTRY BALANCES AND INTENSITIES

Country balances and energy intensity in terms of value added for Canada, Denmark, Norway, Japan, South Africa, United States and United Kingdom are included.

Canada 1999	Persons Engaged	Value added bill 1986 \$	PJ	MJ/1986\$ value added
Agriculture	328600	14.59	175.43	12.02
Mining				
Metal Mining	30300	3.74	71.42	19.09
Gold Mining				
Non metal mining		1.00	43.79	43.97
Quarries and sand pits			4.14	
Food Industry	211100	10.95	93.15	8.51
Beverage	28400	2.70	13.61	5.04
Tobacco	4400	0.55	1.103	1.99
Rubber Products	26000	1.82	11.80	6.48
Plastic Products	72700	3.06	17.84	5.82
Leather and allied products	11800	0.24	1.27	5.41
Primary textile industry	21300	1.18	13.72	11.58
Textile products industry	33400	1.06	8.89	8.4
Clothing	93200	2.18	5.49	2.52
Wood industry	150700	6.36	72.26	11.36
Furniture and Fixture	67300	2.66	6.68	2.51
Paper and pulp	105400	6.75	872.95	129.34
Printing and publishing	157100	4.26	11.54	2.71
Iron and Steel	87300	2.95	257.77	87.46
Non-ferrous metals		3.11	244.96	78.86
Fabricated metal products	191500			
Machinery	95700	3.80	14.85	3.91
Transportation Equipment industry	255500	21.15	70.20	3.32
Electric and electronic products	139700	19.54	18.37	0.94
Non metallic minerals	54300	3.33	134.74	40.51
Cement		0.49	68.07	137.78
Glass and glass products		0.55	12.34	22.43
Refined petroleum and Coal products	15400	2.27	315.62	139.10
Chemical and Petrochemical products	95700	9.05	308.95	34.13
Industrial inorganic		2.50	89.29	35.71
Industrial organic		2.50	104.51	41.8
Agricultural chemical		0.73	70.52	96.07
Other	87800	2.97	7.37	2.48

Sources: Statistics Canada, CIEEDAC, IEA 2002

Denmark 2000	Persons Engaged	Value added Mill \$	PJ	MJ/ \$ Value Added
Iron and Steel, Metal and Metal products	191268	9872.99	4.605	0.46
Non ferrous metals		153.431	0.418	2.72
Mining	3162	2225.78	3.349	1.50
Textile and clothing	15071	898.80	2.512	2.79
Pulp and Paper and printing	71372	2695.29	7.117	2.64
Chemical and Petrochemical	50390	5625.27	10.467	1.86
Non Metallic Minerals	21292	1210.75	27.214	22.47
Furniture and other industry	33061	3394.87	4.605	1.35
Construction	174092	7570.58	7.536	0.99
Transport Equipment		884.49	2.093	2.36

Source: Statbank.dk, IEA 2002.

Norway 1999	Persons Engaged	Value added mill \$	PJ	MJ/\$ Value added
Industry	291383		321.96	
Chemical and Petrochemical	20725	1578.26	67.30	42.64
Rubber Products	331.85	1774.64	0.0053	
Basic Metals		1125.65	102.82	91.35
Non Metallic Minerals	9802	607.56	13.16	21.66
Metals Processing		915.94	2.79	3.05
Transport Equipment	20996	1091.96	3.76	3.45
Machinery	23712	1241.86	3.06	2.47
Mining	3839	272.93	3.62	13.27
Food and Tobacco	53973	2239.95	18.00	8.04
Paper and Pulp, printing	9514	631.40	53.93	85.41
Publishing and Printing		1712.14	2.07	1.21
Wood and wood products	14522			
Furniture and other		596.83	2.32	3.89
Wood handling and processing	14522	606.42	8.35	13.78
Textile and leather	7166	287.69	1.25	4.37
other	94900	5226.75	2.09	0.40
Electrical and optical		1314.92	2.17	1.66
Oil Platforms		957.83	1.31	1.37
Construction		5263.60	7.54	1.43
Agriculture				

Source: Statistics Norway

Japan 1999	Establishments	Persons Engaged	Value added mill \$	PJ	MJ/ \$ Value added
Agriculture		3070000	914455.28		
mining		60000	9156.4222	12	1.32
Food products beverages and tobacco	39,656	1,133,749	78440.017	230	2.93
beverage and tobacco	5,211	115,190	28325.562	60	2.12
Textile, textile products and leather	12,304	201,232	11623.569	73	6.30
aparrell	25,820	439,651	15659.178	11	0.70
leather	3,932	48,024	2416.2781	1	0.43
wood and wood products	13,400	171,048	10351.844	11	1.02
furniture and fixtures	13,003	172,213	10394.235	6	0.59
pulp and paper	9,717	250,257	24671.471	610	24.71
publishing and printing	25,275	516,554	56803.73	38	0.67
chemical and chemical products	5,280	370,694	97295.464	2,640	27.13
petroleum and coal products	1,156	28,904	8139.042	1,593	195.74
Plastic	18,582	430,349	35074.184	97	2.76
Rubber and plastic products	4,357	134,737	47316.66	37	0.79
non-metallic minerals	17,704	373,225	35498.092	516	14.55
Iron and Steel	5,223	242,616	32420.517	3,426	105.68
non ferrous metals	3,573	140,814	13963.544	136	9.72
fabricated metal products	42,385	728,199	57439.593	86	1.49
machinery and equipment	38,991	1,041,627	94285.714	89	0.95
electronic and other	27,522	1,604,147	150911.4	227	1.51
transport equipment	13,327	857,039	105926.24	192	1.81
precision instruments and machinery	5,469	178,251	14845.273	13	0.88
Other	13,570	199,230	150487.49	10	0.07

Source: Japan information network www.jcic.or.jp

South Africa 2000	Persons Engaged	Value added mill Rands	PJ	TJ/mill rand Value Added
Agriculture	808498	25375	94.5	3.72
Mining	408841	51563	153.8	2.98
Food products beverages and tobacco	187497	51678	101.9	1.97
Textile, textile products and leather	219253	8870	12.5	1.41
wood and wood products	76796	2724		
pulp and paper	42183	31110	109.9	3.53
publishing and printing	58075	6791		
chemical and chemical products	177661	66343	289.9	4.37
non-metallic minerals	42030	5144	57.6	11.20
Iron and Steel	36879	9209	297.8	32.34
non ferrous metals	12430	5491	40.7	7.41
fabricated metal products	104408	7841		
machinery and equipment	70080	7067	5.833	0.83
electronic and other	23277	2018		
motor vehicles and accessories	77135	10548	0.19	0.02
other transport equipment	9301	700		
Furniture	46391	4381		
Other	18976	10651		
Construction	259477	22152		

Source: Statistics South Africa, ABSA (South African Sectoral Outlook 2001-2006)

United States 1998	Persons Engaged (thou)	Value added bill \$	PJ	MJ/\$ Value Added
Agriculture		135.80	563.96	4.15
Mining		127.10	136.07	1.07
Food products beverages and tobacco				
-Food	1359.86	176.95	1101.52	6.23
- Beverage and tobacco	154.06	63.53	113.95	1.79
Textile, textile products	369.97	23.74	268.00	11.29
Textile products	209.42	12.89	51.70	4.01
Apparel	724.05	34.29	50.64	1.48
Leather	65.96	5.33	8.44	1.58
Wood and wood products	514.70	32.52	531.77	16.35
Furniture and fittings	623.73	40.00	92.85	2.32
Pulp and paper	532.82	69.12	2895.19	41.89
Pulp mills	7.42	1.25	208.91	166.92
Paper mills	110.62	19.76	1215.48	61.51
Newsprint mills	12.41	3.01	184.64	61.41
Paper board mills	52.19	9.54	1038.22	108.78
Publishing and printing	762.13	57.65	103.40	1.79
Petroleum and coal products	105.46	31.14	3821.57	122.71
Chemical and chemical products	857.23	223.13	3908.09	17.51
Petrochemicals	10.67	8.18	580.31	70.90
Industrial gases	13.11	3.97	193.08	48.64
Alkalis and chlorine	5.62	1.51	155.10	102.66
Other basic inorganic chemicals	51.20	10.54	286.99	27.22
Cyclic crudes and intermediates	8.04	1.62	84.41	52.23
Other basic organic chemicals	88.33	26.90	1081.48	40.20
Plastic materials and resins	61.50	20.21	415.71	20.57
Synthetic rubber	11.98	2.72	112.90	41.57
Noncellulosic organic fibres	37.92	6.36	110.79	17.41
Nitrogenous fertilizers	6.08	1.29	264.83	204.69
Phosphatic fertilizers	7.11	1.82	64.36	35.35
Rubber and plastic products	970.99	81.75	345.02	4.22
Non-metallic minerals	459.81	47.97	1022.39	21.31
Glass and glass products	114.80	13.18	214.19	16.25
Cements	16.15	3.56	374.56	105.09
Primary metal industries	601.91	68.51	2717.94	39.67
- Iron and Steel	147.44	23.06	1764.13	76.49
- Electrometallurgical Ferroalloys Products	3.80	0.60	31.65	52.97
- Steel products from purchased steel	61.17	6.28	56.98	9.07
- Alumina and Aluminium	86.50	11.67	465.30	39.88
- Primary Aluminium	16.81	2.02	223.68	110.79
- Foundries	230.87	17.79	245.84	13.82
Fabricated metal products	1643.84	133.64	465.30	3.48
Machinery and equipment	1395.02	142.00	224.74	1.58
Electronic and other	1638.84	256.25	216.30	0.84
Transport equipment	1710.09	235.79	472.68	2.00
Other	668.25	62.86	92.85	1.48

Source: EIA 1998 manufacturing energy consumption survey - www.bea.doe.gov / www.eia.doe.gov

United Kingdom 1999	Number of Establishments 1996	Value added mill\$	PJ	MJ/ \$ Value added
Agriculture	150535	15287.36	51.497	3.36
Mining and quarrying	1615	27617.44	14.653	0.53
Food Industry and tobacco	7610	32745.008	165.797	5.06
Textile and leather products industry	15440	11722.464	45.217	3.85
Wood and wood products	8050	3408.144	0.837	0.24
Paper and pulp, printing and publishing	2905	32654.512	103.414	3.16
Iron and Steel		3787.904	155.330	41.00
Non-ferrous metals		1979.6	48.986	24.74
Machinery	13125	15230.8	135.234	8.87
Transportation Equipment industry	4645	17517.44	44.799	2.55
Non metallic minerals	4555	7852.144	92.947	11.83
Chemical and Petrochemical products, Rubber and plastic	4090	41106.192	602.481	14.65
Fabricated metal products	27150	14497.136	288.471	53.59
Electric and electronic products	13655	11381.488		
The following are included above				
- Printing and publishing	25935	25922.256		
- Rubber and Plastic Products	6620	12557.936		

Source: Statbase, stats.gov.uk, IEA 2002