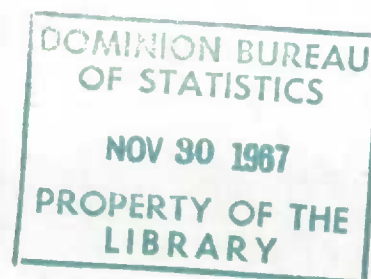


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MANUFACTURERS OF ELECTRICAL INDUSTRIAL EQUIPMENT

1965

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PUBLICATIONS

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MANUFACTURERS OF ELECTRICAL INDUSTRIAL EQUIPMENT

1965

For statistical purposes the industry titled Manufacturers of Electrical Industrial Equipment covers the operations of establishments primarily engaged in manufacturing electric motors, generators and other electric power equipment for use in the generation, transmission and utilization of electric energy. Important products of this industry are steam turbine generator sets, motors (except railway, motor vehicle and aircraft), generators, transformers, switchgear, pole-line hardware, lightning arresters, electric welding equipment, electric meters. Establishments primarily engaged in manufacturing electric wire and cable are in Industry No. 338—Manufacturers of Electric Wire and Cable.

A review of the Principal Statistics for this industry indicates that during 1965 the value of shipments increased 16 per cent, the value of production increased 15 per cent, and value added increased 8 per cent. During the same period the ratio of cost of materials used to value of production was 41 per cent whereas in 1964 it was 37 per cent.

The total value of industrial electrical equipment produced during 1965 represented 84 per cent of the total value of production reported by firms classified to this industry. Some of the other items reported were telecommunications equipment, welding apparatus, railway maintenance equipment, pumps, fixtures, jigs and toolage, tobacco tying machines and metal stampings.

SYMBOLS

The following standard symbols are used in Dominion Bureau of Statistics publications:

- .. figures not available.
- ... figures not appropriate or not applicable.
- nil or zero.
- amount too small to be expressed.
- P preliminary figures.
- r revised figures.
- x confidential to meet secrecy requirements of the Statistics Act.

TABLE 1. Principal Statistics, 1961-65

Year and province	Estab- lish- ments	Manufacturing activity							Total activity				
		Production and related workers			Cost of fuel and elec- tricity	Cost of materials and supplies	Value of shipments of goods of own manu- facture	Value added	Working owners and partners		Employees		Value added
		Number	Man- hours paid	Wages					Number	With- drawals	Number	Salaries and wages	
	No.		'000				\$'000			\$'000			\$'000
1961													
Totals	98	9,856	21,382	43,786	2,365	86,555	218,951	129,640	x	x	16,558	82,495	135,562
1962													
Totals	103	11,131	23,909	51,504	2,371	98,555	256,124	158,749	x	x	18,192	93,133	163,568
1963													
Totals	112	12,255	26,011	57,573	2,643	108,794	294,099	182,553	5	28	19,679	102,750	189,164
1964													
Newfoundland	-	-	-	-	-	-	-	-	-	-	-	-	-
Prince Edward Island	-	-	-	-	-	-	-	-	-	-	-	-	-
Nova Scotia	-	-	-	-	-	-	-	-	-	-	-	-	-
New Brunswick	-	-	-	-	-	-	-	-	-	-	-	-	-
Quebec	20	1,234	2,726	5,288	255	11,349	27,710	16,198	-	-	1,819	8,666	16,972
Ontario	84	11,197	24,419	56,872	2,508	103,677	286,930	181,705	3	21	17,903	100,053	186,837
Manitoba	2	329	708	1,169	53	4,331	7,880	3,413	-	-	422	1,643	3,656
Saskatchewan	2												
Alberta	3												
British Columbia	8	199	412	941	40	2,935	5,935	2,998	-	-	303	1,605	3,072
Yukon and Northwest Territories	-	-	-	-	-	-	-	-	-	-	-	-	-
Totals	119	12,959	28,265	64,270	2,857	122,292	328,455	204,314	3	21	20,447	111,967	210,538
1965													
Newfoundland	-	-	-	-	-	-	-	-	-	-	-	-	-
Prince Edward Island	-	-	-	-	-	-	-	-	-	-	-	-	-
Nova Scotia	-	-	-	-	-	-	-	-	-	-	-	-	-
New Brunswick	-	-	-	-	-	-	-	-	-	-	-	-	-
Quebec	24	1,669	3,516	7,154	271	19,545	40,791	22,231	-	-	2,411	11,410	22,607
Ontario	84	11,700	25,286	61,313	2,559	127,040	317,445	189,129	3	15	18,478	105,832	192,825
Manitoba	3	373	820	1,371	74	53,313	9,687	4,797	2	13	473	1,898	4,821
Saskatchewan	2												
Alberta	3												
British Columbia	8	253	505	1,194	41	3,990	7,527	4,401	-	-	377	1,997	4,387
Yukon and Northwest Territories	-	-	-	-	-	-	-	-	-	-	-	-	-
Totals	124	13,995	30,128	71,032	2,946	155,888	375,451	220,559	5	28	21,739	121,137	224,640

TABLE 2. Principal Statistics classified by Size Group based on Value of Shipments of Goods of Own Manufacture, 1964 and 1965

Size group	Estab- lish- ments	Manufacturing activity							Total activity					
		Production and related workers			Cost of fuel and elec- tricity	Cost of materials and supplies	Value of shipments of goods of own manu- facture	Value added	Working owners and partners		Employees		Value added	
		Number	Man- hours paid	Wages					Number	With- drawals	Number	Salaries and wages		
	No.		'000			\$'000				\$'000		\$'000		
1964														
Under \$10,000	-	-	-	-	-	-	-	-	-	-	-	-	-	
\$ 10,000 to \$ 24,999	}	4	6	13	19	3	56	123	76	-	-	14	53	76
25,000 " 49,999		8	27	54	96	7	325	598	278	1	5	45	175	304
50,000 " 99,999		18	140	286	540	36	1,291	2,607	1,346	2	16	204	900	1,454
100,000 " 199,999		25	378	781	1,402	113	4,288	8,646	4,326	-	-	618	2,890	5,218
200,000 " 499,999		14	504	1,075	1,964	105	4,281	9,754	5,121	-	-	721	3,222	5,278
500,000 " 999,999	36	3,267	7,058	13,250	551	38,574	78,687	41,648	-	-	4,830	22,571	44,857	
1,000,000 " 4,999,999	14	8,637	18,999	46,998	2,042	73,476	228,040	151,519	-	-	13,706	80,094	152,934	
5,000,000 and over .....	...	...	...	...	...	...	...	...	...	...	...	...	...
Head offices, sales offices and auxiliary units	309	2,061	416
Totals	119	12,959	28,265	64,270	2,857	122,292	328,455	204,314	3	21	20,447	111,967	210,538	
1965														
Under \$10,000	-	-	-	-	-	-	-	-	-	-	-	-	-	
\$ 10,000 to \$ 24,999	}	4	12	24	39	3	59	147	93	-	-	19	80	134
25,000 " 49,999		9	27	55	97	10	378	647	293	3	21	43	168	316
50,000 " 99,999		14	82	164	298	29	1,174	2,065	963	2	7	133	591	1,063
100,000 " 199,999		29	452	936	1,805	97	4,887	9,938	5,188	-	-	651	2,988	5,241
200,000 " 499,999		21	770	1,591	2,778	141	8,704	16,220	7,988	-	-	1,162	5,055	8,633
500,000 " 999,999	31	2,970	6,285	12,366	450	37,878	71,922	36,725	-	-	4,225	19,856	38,810	
1,000,000 " 4,999,999	16	9,682	21,074	53,648	2,215	102,808	274,513	169,307	-	-	15,207	90,243	170,433	
5,000,000 and over	299	2,155	10
Head offices, sales offices and auxiliary units
Totals	124	13,995	30,128	71,032	2,946	155,888	375,451	220,559	5	28	21,739	121,137	224,630	

TABLE 3. Principal Statistics classified by Size Group based on Manufacturing Value Added, 1964 and 1965

Size group	Estab- lish- ments	Manufacturing activity						Total activity					
		Production and related workers			Cost of fuel and elec- tricity	Cost of materials and supplies	Value of shipments of goods of own manu- facture	Value added	Working owners and partners		Employees		Value added
		Number	Man- hours paid	Wages					Number	With- drawals	Number	Salaries and wages	
	No.		'000							'000			'000
1964													
Under \$10,000	—	—	—	—	—	—	—	—	—	—	—	—	—
\$ 10,000 to \$ 24,999	6	11	23	37	4	147	256	121	1	5	20	76	121
25,000 " 49,999	13	50	100	182	14	966	1,479	541	—	—	86	353	600
50,000 " 99,999	14	130	279	563	52	1,806	3,068	1,117	2	16	199	944	1,228
100,000 " 199,999	14	172	359	681	39	2,174	4,176	1,991	—	—	267	1,255	1,991
200,000 " 499,999	24	827	1,729	3,043	161	7,587	16,183	8,022	—	—	1,198	5,283	9,111
500,000 " 999,999	14	732	1,556	2,740	126	8,738	17,935	9,815	—	—	1,141	4,911	10,592
1,000,000 " 4,999,999	28	4,569	9,904	20,365	916	49,861	112,882	63,201	—	—	7,339	37,688	66,887
5,000,000 and over	6	6,468	14,315	36,659	1,545	51,014	172,475	119,506	—	—	9,888	59,435	119,593
Head offices, sales offices and auxiliary units .....	...	...	...	...	...	...	...	...	...	...	309	2,061	416
Totals	119	12,959	28,265	64,270	2,857	122,292	328,455	204,314	3	21	20,447	111,967	210,538
1965													
Under \$10,000	—	—	—	—	—	—	—	—	—	—	—	—	—
\$ 10,000 to \$ 24,999	3	7	14	22	3	63	121	54	—	—	13	58	95
25,000 " 49,999	11	35	71	125	11	440	775	368	3	21	55	215	392
50,000 " 99,999	18	121	246	471	41	2,004	3,312	1,356	2	7	203	924	1,411
100,000 " 199,999	16	175	359	672	45	4,035	6,226	2,457	—	—	265	1,237	2,548
200,000 " 499,999	27	895	1,853	3,262	159	9,323	17,763	8,654	—	—	1,223	5,227	8,877
500,000 " 999,999	15	928	1,951	3,544	143	10,134	19,918	9,746	—	—	1,415	6,192	11,558
1,000,000 " 4,999,999	27	4,370	9,158	19,796	836	52,888	113,064	64,330	—	—	6,870	35,960	65,717
5,000,000 and over	7	7,464	16,477	43,140	1,707	77,000	214,272	133,593	—	—	11,396	69,167	134,033
Head offices, sales offices and auxiliary units .....	...	...	...	...	...	...	...	...	...	...	299	2,155	400
Totals	124	13,995	30,128	71,032	2,946	155,888	375,451	220,559	5	28	21,739	121,137	224,600

TABLE 4. Principal Statistics classified by Size Group based on Total Value Added, 1964 and 1965

Size group	Estab- lish- ments	Manufacturing activity							Total activity					
		Production and related workers			Cost of fuel and elec- tricity	Cost of materials and supplies	Value of shipments of goods of own manu- facture	Value added	Working owners and partners		Employees		Value added	
		Number	Man- hours paid	Wages					Number	With- drawals	Number	Salaries and wages		
	No.		'000			\$'000				\$'000		\$'000		
1964														
Under \$10,000	—	—	—	—	—	—	—	—	—	—	—	—	—	
\$ 10,000 to \$ 24,999	6	11	23	37	4	147	256	121	1	5	20	76	121	
25,000 " 49,999	11	41	84	151	11	819	1,252	447	—	—	68	267	467	
50,000 " 99,999	14	118	251	494	37	1,849	2,979	1,061	2	16	184	851	1,137	
100,000 " 199,999	16	193	404	781	57	2,279	4,491	2,141	—	—	300	1,435	2,216	
200,000 " 499,999	19	611	1,262	2,125	111	5,535	11,687	6,018	—	—	810	3,319	6,246	
500,000 " 999,999	16	783	1,676	2,964	131	8,311	17,390	8,938	—	—	1,196	5,200	10,067	
1,000,000 " 4,999,999	31	4,734	10,251	21,059	962	52,340	117,923	66,082	—	—	7,672	39,323	70,276	
5,000,000 and over	6	6,468	14,315	36,659	1,545	51,014	172,475	119,506	—	—	9,888	59,435	119,593	
Head offices, sales offices and auxiliary units .....	...	...	...	...	...	...	...	...	...	...	309	2,061	416
Totals	119	12,959	28,265	64,270	2,857	122,292	328,455	204,314	3	21	20,447	111,967	210,538	
1965														
Under \$10,000	—	—	—	—	—	—	—	—	—	—	—	—	—	
\$ 10,000 to \$ 24,999	}	12	33	67	120	10	441	782	373	3	21	51	199	374
25,000 " 49,999		18	118	237	441	40	1,850	3,014	1,232	2	7	185	766	1,317
50,000 " 99,999		18	187	386	730	50	4,250	6,639	2,632	—	—	300	1,469	2,754
100,000 " 199,999		26	799	1,640	2,971	153	8,898	16,854	8,169	—	—	1,110	4,811	8,241
200,000 " 499,999		15	968	2,023	3,572	124	10,212	19,672	9,617	—	—	1,337	5,647	10,396
500,000 " 999,999	28	4,426	9,299	20,060	862	53,235	114,219	64,944	—	—	7,061	36,922	67,515	
1,000,000 " 4,999,999	7	7,464	16,477	43,140	1,708	77,001	214,272	133,593	—	—	11,396	69,167	134,032	
5,000,000 and over .....	...	...	...	...	...	...	...	...	...	...	299	2,155	10
Head offices, sales offices and auxiliary units .....	...	...	...	...	...	...	...	...	...	...	299	2,155	10
Totals	124	13,995	30,128	71,032	2,946	155,888	375,451	220,559	5	28	21,739	121,137	224,640	

TABLE 5. Principal Statistics classified by Size Group based on Total Employed, 1964 and 1965

Size group	Estab- lish- ments	Manufacturing activity							Total activity				
		Production and related workers			Cost of fuel and elec- tricity	Cost of materials and supplies	Value of shipments of goods of own manu- facture	Value added	Working owners and partners		Employees		Value added
		Number	Man- hours paid	Wages					Number	With- drawals	Number	Salaries and wages	
	No.		'000			\$'000				\$'000		\$'000	
1964													
Under 5 employed	8	14	28	50	4	298	537	270	1	5	24	101	270
5- 14 employed	27	140	294	597	40	2,497	4,568	2,224	2	16	233	1,086	2,311
15- 49 "	28	583	1,214	2,213	149	7,377	14,981	7,282	—	—	868	3,833	7,643
50- 99 "	21	1,015	2,166	3,903	178	9,709	21,666	12,276	—	—	1,432	6,431	13,339
100-199 "	13	1,172	2,517	4,999	220	18,191	33,103	15,378	—	—	1,896	9,337	16,938
200-499 "	14	2,892	6,233	12,514	590	27,689	66,144	39,348	—	—	4,343	21,331	41,995
500 employed and over	8	7,143	15,812	39,995	1,676	56,531	187,455	127,536	—	—	11,342	67,788	127,625
Head offices, sales offices and auxiliary units .....	...	...	...	...	...	...	...	...	...	...	309	2,061	416
Totals	119	12,959	28,265	64,270	2,857	122,292	328,455	204,314	3	21	20,447	111,967	210,538
1965													
Under 5 employed	7	13	26	46	4	247	447	204	—	—	23	88	204
5- 14 employed	32	172	352	694	60	3,965	6,750	3,058	5	28	293	1,371	3,220
15- 49 "	28	581	1,215	2,363	121	7,725	14,575	7,079	—	—	802	3,753	7,119
50- 99 "	23	1,158	2,396	4,342	211	15,379	29,851	15,386	—	—	1,683	7,441	15,764
100-199 "	10	880	1,892	4,064	164	15,643	27,976	13,412	—	—	1,423	7,475	15,353
200-499 "	16	3,398	7,104	14,847	612	33,891	77,932	45,204	—	—	5,026	24,869	46,303
500 employed and over	8	7,793	17,144	44,677	1,774	79,039	217,921	136,216	—	—	12,190	73,984	136,667
Head offices, sales offices and auxiliary units .....	...	...	...	...	...	...	...	...	...	...	299	2,155	10
Totals	124	13,995	30,128	71,032	2,946	155,888	375,451	220,559	5	28	21,739	121,137	224,640

TABLE 6. Principal Statistics classified by Type of Organization, 1964 and 1965

Type of organization	Establishments	Manufacturing activity							Total activity				
		Production and related workers			Cost of fuel and electricity	Cost of materials and supplies	Value of shipments of goods of own manufacture	Value added	Working owners and partners		Employees		Value added
		Number	Man-hours paid	Wages					Number	Withdrawals	Number	Salaries and wages	
	No.		'000			\$'000				\$'000		\$'000	
1964													
Individual ownerships	1	12,959	28,265	64,270	2,857	122,292	328,455	204,314	3	21	20,138	109,906	210,121
Partnerships	1												
Incorporated companies	117												
Co-operatives .....	-	-	-	-	-	-	-	-	...	...	-	-	-
Head offices, sales offices and auxiliary units .....	...	...	...	...	...	...	...	...	...	...	309	2,061	416
Totals	119	12,959	28,265	64,270	2,857	122,292	328,455	204,314	3	21	20,447	111,967	210,538
1965													
Individual ownerships	1	12	24	45	1	133	256	125	5	28	13	50	125
Partnerships	2												
Incorporated companies	121	13,983	30,104	70,987	2,944	155,755	375,195	220,434	...	...	21,427	118,932	224,505
Co-operatives .....	-	-	-	-	-	-	-	-	...	...	-	-	-
Head offices, sales offices and auxiliary units .....	...	...	...	...	...	...	...	...	...	...	299	2,155	10
Totals	124	13,995	30,128	71,032	2,946	155,888	375,451	220,559	5	28	21,739	121,137	224,640

TABLE 7. Calculation of Output, Input and Value Added, 1964 and 1965

	Manufacturing activity		Non-manufacturing activities		Total activity	
	1964	1965	1964	1965	1964	1965
\$'000						
Output						
1. Shipments and other revenue	328,455	375,451	33,524	35,015	361,979	410,466
Inventories—Goods of own manufacture:						
Add closing—Goods in process	20,257	26,089	...	...	20,257	26,089
Finished goods	26,672	23,354	...	...	26,672	23,354
Deduct opening—Goods in process	23,813	19,412	...	...	23,813	19,412
Finished goods	22,108	26,090	...	...	22,108	26,090
2. Net inventory change	1,008	3,941	...	...	1,008	3,941
3. Gross output (1 + 2)	329,463	379,392	33,524	35,015	362,987	414,407
Input						
4. Purchases of goods not of own manufacture .....	...	...	25,625	28,978	25,635	28,978
Inventories—Goods not of own manufacture:						
Add opening .....	...	...	2,775	2,063	2,775	2,063
Deduct closing .....	...	...	3,002	2,052	3,002	2,052
5. Cost of goods sold (not of own manufacture) .....	...	...	25,398	28,989	25,398	28,989
6. Materials, supplies, etc.	122,292	155,888	1,901	1,944	124,193	157,832
7. Fuel and electricity	2,857	2,946	...	...	2,857	2,946
8. Gross input (5 + 6 + 7)	125,149	158,834	27,299	30,933	152,448	189,767
Value added (3 - 8)	204,314	220,559	6,224	4,082	210,538	224,640

TABLE 8. Employment and Payroll, 1964 and 1965

Year and province	Employees										Salaries and wages				
	Production and related workers				Adminis- trative and office		Sales and distribution		Total		Production and related workers		Admin- istra- tive and office	Sales and distrib- ution	Total
	Manufacturing		Other												
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Manufacturing	Other			
number										\$'000					
1964															
Newfoundland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Prince Edward Island	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nova Scotia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Brunswick	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Quebec	903	331	-	-	349	101	107	28	1,359	460	5,288	1	2,301	1,076	8,666
Ontario	9,205	1,992	51	5	4,449	1,281	741	179	14,446	3,457	56,872	274	36,357	6,550	100,053
Manitoba	302	27	-	-	69	19	4	1	375	47	1,169	-	435	39	1,643
Saskatchewan															
Alberta															
British Columbia	191	8	-	-	57	23	19	5	267	36	941	-	492	172	1,605
Yukon and Northwest Terri- tories	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Totals	10,601	2,358	51	5	4,924	1,424	871	213	16,447	4,000	64,270	275	39,585	7,837	111,967
1965															
Newfoundland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Prince Edward Island	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nova Scotia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Brunswick	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Quebec	1,286	383	-	-	440	137	132	33	1,858	553	7,154	-	3,184	1,072	11,410
Ontario	9,525	2,175	-	-	4,445	1,303	835	195	14,805	3,673	61,313	-	37,174	7,345	105,832
Manitoba	338	35	-	-	75	20	4	1	417	56	1,371	-	483	43	1,898
Saskatchewan															
Alberta															
British Columbia	242	11	-	-	71	26	22	5	335	42	1,194	-	606	197	1,997
Yukon and Northwest Terri- tories	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Totals	11,391	2,604	-	-	5,031	1,486	993	234	17,415	4,324	71,032	-	41,448	8,657	121,137

TABLE 9. Production and Related Workers, - Manufacturing Activity, 1964 and 1965

Month	1964		1965	
	Male	Female	Male	Female
	number			
Establishments reporting monthly detail (large establishments only):				
January	9,901	2,214	10,600	2,376
February	9,959	2,220	10,612	2,401
March	10,066	2,201	10,675	2,428
April	10,165	2,204	10,862	2,512
May	10,160	2,123	11,071	2,524
June	10,342	2,153	11,297	2,517
July	10,506	2,207	11,225	2,504
August	10,673	2,299	11,395	2,477
September	10,733	2,409	11,173	2,509
October	10,680	2,437	11,368	2,576
November	10,771	2,420	11,479	2,628
December	10,813	2,349	11,663	2,589
Averages	10,405	2,271	11,124	2,511
Establishments reporting annual averages (small establishments only)	196	87	267	93
Average for all establishments	10,601	2,358	11,391	2,604

TABLE 10. Inventories, 1965

Province	Manufacturing				Non-manufacturing	Total inventories
	Materials, supplies, etc.	Goods in process	Finished goods of own manufacture	Total	Products or materials purchased for resale	
book value \$'000						
Opening:						
Newfoundland	—	—	—	—	—	—
Prince Edward Island	—	—	—	—	—	—
Nova Scotia	—	—	—	—	—	—
New Brunswick	—	—	—	—	—	—
Quebec	3,347	2,213	1,240	6,801	301	7,101
Ontario	23,071	16,586	24,261	63,919	1,670	65,589
Manitoba	963	186	380	1,529	34	1,563
Saskatchewan						
Alberta						
British Columbia	673	427	208	1,308	59	1,367
Yukon and Northwest Territories	—	—	—	—	—	—
Totals	28,055	19,412	26,090	73,557	2,063	75,620
Closing:						
Newfoundland	—	—	—	—	—	—
Prince Edward Island	—	—	—	—	—	—
Nova Scotia	—	—	—	—	—	—
New Brunswick	—	—	—	—	—	—
Quebec	4,237	3,201	1,509	8,946	599	9,545
Ontario	28,283	20,898	21,234	70,415	1,421	71,836
Manitoba	1,259	711	351	2,322	32	2,354
Saskatchewan						
Alberta						
British Columbia	440	1,280	261	1,981	—	1,981
Yukon and Northwest Territories	—	—	—	—	—	—
Totals	34,220	26,089	23,354	83,664	2,052	85,716

TABLE 11. Purchased Fuel and Electricity Used, 1964 and 1965

Description	1964		1965	
	Quantity	Cost	Quantity	Cost
		\$'000		\$'000
1. Large establishments reporting commodity detail:				
Bituminous coal:				
(a) From Canadian mines	ton	—	—	—
(b) Imported	"	31,897	29,756	316
Sub-bituminous coal (from Alberta mines only)	"	—	—	—
Anthracite coal	"	55	1	—
Lignite coal	"	—	—	—
Coke	"	—	—	—
Gasoline (including gasoline used in cars and trucks)	Imp. gal.	249,952	279,149	112
Fuel oil including kerosene or coal oil	"	4,663,085	4,661,642	459
Wood	cord	—	—	—
Gas:				
(a) Liquefied petroleum gases	Imp. gal.	93,939	110,218	29
(b) Other manufactured gas	M cu. ft.	—	—	—
(c) Natural gas	"	265,515	283,290	261
Other fuel .....	...	6	...	1
Electricity purchased	kwh.	183,951,961	210,216,138	1,625
Steam purchased .....	...	31	...	31
2. Small establishments not reporting commodity detail:				
Estimate for fuel and electricity .....	...	77	...	172
3. All establishments:				
Total fuel and electricity used .....	...	2,857	...	2,946

TABLE 12. Materials and Supplies—Manufacturing Activity, 1964 and 1965

Description	1964		1965		
	Quantity	Cost	Quantity	Cost	
		\$'000		\$'000	
1. Materials used:					
Aluminum:					
Castings.....	lb.	1,387,989	1,150	2,768,994	1,634
Wire rods.....	"	96,024	67	100,552	74
Sheets and strip.....	"	1,013,423	503	1,091,196	552
Other.....	...	1,150	...	909	
Brass and Bronze:					
Castings.....	lb.	1,565,583	1,304	1,755,655	1,470
Wire rods.....	"	291,765	162	413,122	259
Sheets and strip.....	"	574,024	371	562,493	367
Other.....	...	318	...	306	
Copper:					
Wire rods.....	lb.	2,776,593	1,489	4,460,951	2,821
Sheets and strip.....	"	2,367,991	1,460	3,119,690	2,012
Piping and pipe.....	"	358,678	246	356,404	253
Wire, enamelled.....	"	10,965,937	7,613	15,160,147	10,810
Wire, other insulated.....	...	5,440	...	5,986	
Other.....	...	1,844	...	3,832	
Insulating varnishes, japans, enamels and lacquers.....	...	407	...	467	
Insulators, porcelain and glass.....	...	2,966	...	3,326	
Iron and steel (except alloy):					
Castings:					
Iron.....	ton	7,802	3,193	8,474	4,148
Steel.....	"	8,586	1,906	9,172	2,199
Steel bars and rods.....	"	19,525	3,205	27,492	5,033
Steel sheets and strip:					
Plain.....	"	38,168	6,245	34,335	6,008
Galvanized.....	"	1,361	295	1,310	230
Steel wire.....	"	1,772	279	2,753	486
Structural steel.....	"	4,075	716	4,312	833
Other (except alloy).....	...	986	...	1,270	
Alloy steel:					
Stainless.....	...	665	...	828	
Aluminum sheets and strips.....	ton	27,841	11,844	31,476	13,153
Other alloy including tool steel.....	...	467	...	1,380	
Lead.....	lb.	516,104	75	498,516	135
Zinc.....	"	459,945	689	379,468	650
Motors, electric:					
Under 1 h.p.....	No.	20,092	223	21,202	259
1 h.p. and over A.C. or D.C.....	"	2,058	64	2,401	285
Paints, stains, lacquers.....	...	496	...	648	
Resins, synthetic.....	...	667	...	910	
Resistance wire, ribbon and strip.....	lb.	34,845	91	55,622	133
Sulphuric acid.....	"	431,536	15	1,382,847	44
All other materials and components used ¹.....	...	57,131	...	72,638	
2. Containers and other packaging materials and supplies used.....					1,847
3. Operating, maintenance and repair supplies used (excluding fuel).....					6,244
4. Amount paid out to others for work done on materials owned by establishments.....					1,449
Totals.....	...	122,292	...	155,888	

¹ No detailed information on materials used was collected from small establishments, the estimated costs for which are included here. These estimated costs were \$2,245,000¹ in 1964 and \$4,090,000 in 1965.

TABLE 13. Shipments of Goods of Own Manufacture, 1964 and 1965

Description	Value	
	1964	1965
	\$'000	
1. Products:		
Electrical industrial equipment:		
Industrial control equipment	35,769	44,094
Converter equipment	5,013	8,146
Electric generators and parts	16,067	15,155
Electric motors and parts	57,094	62,328
Transformers and parts	73,079	85,221
Electrical switchgear and protective equipment (except telephone switchboards)	51,492	60,771
Electric welding apparatus and welding rod	9,335	9,392
Cutouts and fuses	3,749	4,192
Instruments and meters	12,979	13,038
Pole line hardware	9,586	10,220
Miscellaneous electrical equipment:		
Industrial electric heating equipment	1,254	1,961
Lighting equipment	2,114	2,772
Telecommunication equipment other than domestic radio and television receiving sets	7,548	4,613
Rectifiers (other than power) (semi-conductor and/or electron tube type) (see Table 8H)	1,305	1,570
Miscellaneous electrical products	11,521	5,258
All other products	23,847	43,534
2. Amount received in payment for work done on materials and products owned by others	1,094	659
Less adjustment for value of sales taxes, excise duties and outward transportation charges which could not be deducted from individual commodity items described above	(2,282)	(2,198)
Net adjustment for establishments receiving progress payments	7,890	4,723
Total adjusted value of shipments and work done	328,455	375,451

TABLE 14. Shipments of Selected Goods of Own Manufacture — All Industries
(Includes shipments from other industries which manufacture, as a secondary activity, the commodities listed)
A. Electric Generators and Parts, 1964 and 1965

Item	1964			1965		
	Number	Total rating	Value	Number	Total rating	Value
		h.p.	\$'000		h.p.	\$'000
A.C. generators (except for vehicle and marine use) including horizontal water-wheel driven synchronous generators but not including vertical water-wheel synchronous generators:						
Up to and including 100 kw.	675	71,172	1,370	2,350	92,805	3,527
101 to 500 kw.						
501 to 1,500 kw.						
1,501 and above						
A.C. vertical water-wheel driven generators, all ratings .....	...	...	14,691	...	...	11,628
Accessories and parts for a.c. generators						
Steam or gas turbo-driven a.c. generators 5,001 kw. and above						
Totals .....	...	...	16,061	...	...	15,155

TABLE 14. Shipments of Selected Goods of Own Manufacture - All Industries - Continued
B. Electric Motors¹ and Parts, 1964 and 1965

Item	1964			1965		
	Number	Total rating	Value	Number	Total rating	Value
		h.p.	\$'000		h.p.	\$'000
A.C. motors (except for railway and vehicle use):						
Single phase induction:						
1/3 h.p. and under (except shaded pole or universal motors)	1,167,200	..	15,129	1,219,471	..	15,727
1/2 h.p. and 3/4 h.p.	107,116	..	2,862	109,125	..	3,003
1 h.p. to 5 h.p. inclusive-open type	15,819	..	1,067	17,317	..	1,194
1 h.p. to 5 h.p. inclusive-enclosed type	3,129	7,335	321	3,883	..	392
Polyphase induction:						
1/3 h.p. and under	6,931	1,808	219	6,918	4,434	227
1/2 h.p. and 3/4 h.p.	12,809	7,515	434	15,329	7,177	503
1 h.p. to 5 h.p. inclusive-open type	24,180	59,837	1,565	29,582	61,029	1,992
1 h.p. to 5 h.p. inclusive-enclosed type	15,035	39,582	1,362	16,705	41,295	1,565
6 h.p. to 25 h.p. inclusive-open type	9,004	109,749	1,596	10,976	124,701	1,955
6 h.p. to 25 h.p. inclusive-enclosed type	7,743	101,380	1,916	9,090	119,146	2,270
26 h.p. to 100 h.p. inclusive-open type	2,840	144,786	1,727	3,053	148,255	2,234
26 h.p. to 100 h.p. inclusive-enclosed type	2,378	124,951	2,270	2,866	149,617	2,668
101 h.p. to 200 h.p. inclusive-open type	620	74,813	1,270	759	115,006	1,690
101 h.p. to 200 h.p. inclusive-enclosed type	300	43,311	840	420	64,159	1,239
201 h.p. to 1000 h.p. inclusive	605	232,257	3,479	527	198,400	3,237
1001 h.p. and over	41	73,500	994	53	99,050	1,240
Synchronous motors and condensers:						
Up to and including 500 h.p. ....	..	..	3	38	8,128	312
501 h.p. to 2000 h.p.	74	94,436	1,239	66	71,254	1,328
2001 h.p. and above .....	..	..	..	25	99,250	2,070
Accessories and parts for a.c. motors .....	..	..	1,149	..	..	634
Railway and vehicle motors, a.c. and d.c. ....	..	..	..	..	..	..
Shaded pole type motors, all ratings	1,313,541	..	3,700	717,560	..	3,717
Universal type motors, all ratings	55,878	..	1,153	95,684	..	1,246
D.C. motors and generators, including exciters, (except for railway and vehicle use):						
D.C. motors:						
1/3 kw. and under	442,880	..	2,763	1,023,069	..	3,317
1/2 kw. and 3/4 kw. ....	..	..	..	..	..	..
D.C. motors or generators:						
1 h.p. or kw. to 5 h.p. or kw.	177	..	117	176	..	62
6 h.p. or kw. to 25 h.p. or kw.	263	5,053	523	121	2,227	319
26 h.p. or kw. to 100 h.p. or kw.	452	25,658	2,036	488	28,677	2,406
101 h.p. or kw. to 200 h.p. or kw.	76	11,763	541	..	..	..
201 h.p. or kw. to 1000 h.p. or kw.	107	58,852	3,136	..	..	..
1001 h.p. or kw. and over .....	..	..	..	..	..	..
Accessories and parts for d.c. motors and generators .....	..	..	2,059	..	..	2,154
All other motors or generators ² .....	..	..	17,843	..	..	20,797
Totals .....	..	..	73,310	..	..	79,498

C. Transformers, by Types, 1964 and 1965

Type	1964			1965		
	Number	Total rating	Value	Number	Total rating	Value
		kva.	\$'000		kva.	\$'000
Distribution transformers - Dry type up to and including 200 kva. 1 phase, 15 kv. and below; except dry type transformers 2 kva. and below	8,265	339,753	2,358	9,859	213,615	2,551
Distribution transformers - Dry type up to and including 225 kva. 3 phase, 15 kv. and below; except dry type transformers 1 kva. and below	3,037	159,505	1,947	4,227	214,061	2,951
Distribution transformers - Liquid filled type, up to and including 200 kva. 1 phase, 15 kv. and below	63,175	1,527,889	15,042	57,983	1,708,403	14,893
Distribution transformers - Liquid filled type, up to and including 225 kva. 3 phase, 15 kv. and below	1,699	139,471	1,544	2,272	859,339	5,368
Power transformers 7,500 kva. and less, up to and including 138 kv. class	1,684	2,547,918	12,007	2,019	5,084,404	18,959
Power transformers above 7,500 kva. at all voltages, also all kva. rating in voltages above 138 kv. class	130	5,260,250	18,186	201	6,304,749	17,648
Feeder regulators:						
Single phase step voltage regulators	185	17,486	568	166	8,533	520
Three phase step voltage regulators with 750 kva. of regulation or less	40	13,031	477	8	..	86
Current transformers:						
Up to and including 15 kv.	31,190	..	1,768	33,616	..	2,151
Above 15 kv.						
Potential transformers:						
Up to and including 15 kv.	9,076	..	1,191	10,927	..	1,405
Above 15 kv.						

See footnotes at end of table.

TABLE 14. Shipments of Selected Goods of Own Manufacture - All Industries - Continued
C. Transformers, by Types, 1964 and 1965 - Continued

	1964			1965		
	Number	Total rating kva.	Value \$'000	Number	Total rating kva.	Value \$'000
Metering outfits (combination of current and potential transformers in one enclosure):						
Up to and including 15 kv.	493	..	427	478	..	536
Above 15 kv.						
Luminous tube transformers .....	..	..	2,193	..	..	4
Ignition transformers (oil and gas)						
Radio and TV transformers:						
Air core	3,540,747	..	2,932	3,512,445	..	2,298
Powdered iron and ferrite core						
Laminated core						
Transformers for electronic equipment (other than radio and TV)	1,248,375	..	2,214	..	..	2,869
Fluorescent transformers and ballasts	283,838	..	1,807	457,848	..	3,650
Mercury lamp transformers	2,106,620	..	12,158	2,848,707	..	13,392
Bell ringing and chime transformers	84,330	..	2,614	80,915	..	2,779
Control and signalling transformers .....	..	..	4	..	..	4
General purpose dry type transformers, up to and including 2 kva.	72,654	..	598	85,951	..	696
All other transformers .....	..	..	936	..	..	4
Parts and supplies for transformers .....	..	..	5,687	..	..	7,436
Totals .....	..	..	838	..	..	1,084
Totals .....	..	..	87,502	..	..	100,272

D. Electrical Switch Gear and Protective Equipment (Except Telephone Switchboards), 1964 and 1965

Item	Value	
	1964	1965
	\$'000	
Switchgear assemblies:		
Metalclad switchgear, 5 kv. and 15 kv. with drawout oil circuit breakers	2,044	1,499
Metalclad switchgear, 5 kv. and 15 kv. with drawout oilless circuit breakers (includes air and airblast breakers)	6,477	9,427
600 volt metal-enclosed switchgear (drawout or fixed breakers, but not including moulded case breakers)	4,365	6,049
Control desks, duplex and open switchboards and supervisory control	3,051	2,567
Metal-enclosed fusegear assemblies (above 600 volts)	3,543	5,455
Power circuit breakers (sold apart from assemblies and not including sectionalizers or reclosers):		
Indoor oil or oilless circuit breakers	6,601	7,352
Outdoor oil circuit breakers		
Outdoor oilless circuit breakers		
Low voltage air circuit breakers (sold apart from assemblies but not including moulded case breakers)	1,255	893
Disconnecting switches:		
Indoor type	698	1,850
Outdoor type	5,886	3,876
Lightning arresters:		
15 kv. and under	779	1,163
Over 15 kv.		
Power capacitors:		
Units (sold apart from assemblies)	1,326	2,977
Assemblies (including units)		
Low voltage switchboards (fused or circuit breaker types)	4,224	7,373
Distribution, lighting and residential panelboards (with fuses or moulded case circuit breakers)	13,353	13,982
Industrial and residential enclosed safety switches and circuit breakers	6,258	6,339
Miscellaneous cabinets, wireways, gutters, surface raceways (excluding conduit and metallic tubing) and bus ducts including feeder, plug and trolley types	5,256 ^r	6,340
Oil circuit reclosers and sectionalizers, up to and including 15,000 volts and repair parts	5	5
Relays, switchgear type, protective, auxiliary, regulation, etc. (sold apart from switchgear assemblies)	1,682	2,124
Potheads	5	5
Other switchgear and protective equipment	6,234	7,400
Totals	73,032 ^r	86,975

See footnotes at end of table.

TABLE 14. Shipments of Selected Goods of Own Manufacture - All Industries - Continued
E. Electric Welding Apparatus and Welding Rod, 1956 - 65

Year	Welding apparatus		Welding rod*	
	Electric arc welding equipment with controls	Other electric welding apparatus ⁷	Quantity	Value
	\$'000	\$'000	tons	\$'000
1956	2,324	3,215	20,230	6,823
1957	2,426	1,738	20,199	7,675
1958	1,816	1,176	18,474	7,436
1959	1,975	2,300	21,777	8,459
1960	2,175	1,650	19,490	7,342
1961	1,861	2,068	21,236	9,053
1962	2,242	2,094	26,039	11,073
1963	3,192	2,368	25,620	12,230
1964	3,677 ^r	3,360 ^r	34,626	14,279
1965	4,479	2,605	39,043	15,944

F. Industrial Control Equipment, 1964 and 1965

Item	Value	
	1964	1965
	\$'000	
A.C. single phase and d.c. full voltage fractional horsepower low voltage manual starting switches including horsepower rated snap switches 1 h.p., 250 v. max.	541	634
A.C. and d.c. full voltage single phase and 3 phase integral horsepower manual low voltage starters 7½ h.p., 600 v. max.	788	825
A.C. full voltage single speed and multispeed low voltage magnetic line starters size 0 and up, for squirrel cage motors, 600 v. max. (ampere rated starters for hermetic motors not included)	5,169	6,278
A.C. low voltage magnetic contractors size 0 and up, and a.c. or d.c. magnetic multipole relays including single-voltage, double-voltage and timing relays and thermal and magnetic relays intended for starting and running protection of motors, 600 v. max. (thermal overload relay heaters furnished separately not included)	3,062	3,768
A.C. reduced voltage manual low voltage starters for squirrel cage motors, 600 v. max. (synchronous and wound-rotor motor controllers not included)	226	255
A.C. reduced voltage magnetic low voltage starters for squirrel cage motors, auto-transformer, resistor, reactor, part-winding and wye-delta types, 600 v. max. (synchronous, hermetic and wound-rotor motor controllers not included)	654	727
A.C. full voltage and reduced voltage ampere-rated low voltage controllers for hermetic motors, 600 v. max.	160	233
A.C. motor control centres consisting of factory assembled groups of low voltage combination magnetic starters, 600 v. max. (self-standing starter racks and assemblies not included)	6,997	7,493
A.C. high voltage class E-1 and E-2 induction and synchronous motor controllers, 5,000 v. max. incorporating short circuit current interrupting means higher than 10 times contactor ampere rating	1,890	2,077
A.C. low-voltage and unfused high voltage synchronous motor controllers and field panels	87	180
A.C. combined motor drives including mine hoist and paper-machine drives and liquid rheostats (packaged adjustable voltage drives not included)	279	353
All other a.c. motor control equipment including a.c. machine tool control and general purpose panels, wall, floor or machine mounted, consisting of grouped general purpose components, devices and starters; racked group control; a.c. magnetic crane and traffic bridge control and a.c. crane protective panels; a.c. magnetic low voltage and unfused high voltage wound-rotor motor control including magnetic secondary panels; a.c. high voltage contactors; low voltage firepump control; static adjustable voltage drives having static power conversion components; all other a.c. magnetic control n.o.p. all push button and indicating light stations larger than ordinarily listed by manufacturers. (Packaged adjustable voltage drives with rotating amplifiers and/or rotating converters, mine hoist drives and motor control centres not included)	3,878	2,996
D.C. low voltage magnetic contactors, controllers, starters and time starters including d.c. magnetic machine tool control, d.c. magnetic crane and traffic bridge control, d.c. crane protective panels, d.c. mill auxiliaries, and all other d.c. magnetic control n.o.p. (mine hoist drives not included)	747	798
D.C. mine and mill combined drives including steelmill, paper machine and rubber-mill drives, and static electronic and semi-conductor rectifier drives (d.c. mill auxiliaries not included)	3,480	6,583
A.C. and d.c. drum and cam switches and controllers, dial starters and rheostats and motor starting and speed controlling resistors mounted separately	430	598
Brakes with a.c. coils or d.c. coils, their clutches and actuators	397	235
Pushbutton and indicating light stations up to maximum grouping ordinarily listed by manufacturers, and pushbutton and indicating light components (not including pushbutton and indicating light stations)	1,868	2,402
Limit switches and all other pilot control equipment including pressure, vacuum, temperature, and liquid-level switches, plugging switches, speed switches, solenoids and terminal blocks. (Linestarter modification kits, pilot devices used in appliances, air-conditioning, refrigeration, heating and domestic installations not included)	1,360	1,746
Resistance welding and electronic control equipment including electronic and static control assemblies, electronic and static magnetic amplifiers, electronic relays, photoelectric controllers, voltage, speed, followup, position, inspection and gauging apparatus and solid-state control devices. (Packaged static adjustable voltage drives not included)	726	1,402
Renewal parts for industrial control equipment including modification, accessory and repair kits and separately furnished overload relay heaters	2,344	2,809
All other industrial control equipment	3,751	3,749
Totals	38,834	46,141

See footnotes at end of table.

TABLE 14. Shipments of Selected Goods of Own Manufacture - All Industries - Continued
G. Cutouts and Fuses, 1964 and 1965

Item	Value	
	1964	1965
	\$'000	
Cutouts and fuses:		
Open, semi-enclosed and enclosed distribution cutouts (601 volts and above), indoor and outdoor fused disconnect switches including porcelain housed, removable switch blades for use therewith (do not include fuse links therefor) and repair parts	1,999	2,144
Fuse links for distribution cutouts	343	358
Oil fuse cutouts including fuse links therefor and repair parts	"	"
Power fuses (solid material type) - Up to and including 600 volts.....	716	627
Power fuses 601 volts and above (solid material and current limiting types), fuse supports, fuse mountings and repair parts		
Fuse links for power fuses 601 volts and above (solid material and current limiting types).....	"	681
Cartridge fuses.....	1,117	"
Plug fuses.....		
Individual cutouts for cartridge and plug fuses.....	"	"
All other fuses.....	1,259	2,190
Renewal elements for cartridge fuses.....	"	176
Totals	5,434	6,176

H. Converter Equipment, 1964 and 1965

Type	1964			1965		
	Number	Total rating	Value	Number	Total rating	Value
		kv.	\$'000		kv.	\$'000
Motor-generator sets up to and including 150 kw. — Induction and synchronous types (including frequency changers)	109	5,398	483	143	9,492	675
Motor-generator sets larger than 150 kw. — Induction and synchronous types (including frequency changers).....	..	..	2,821 ^r	}	..	7,471
Mercury arc power rectifier and excitation cubicles (does not include associated switchgear or transformers).....	}	..	1,709			
Semi-conductor power rectifier equipment including plate and crystal junction types (does not include associated switchgear, transformers or commercial battery chargers):						
5 kw. to 50 kw.....						
Over 50 kw.....	..	..	x	..	..	8,146
Parts and supplies for converter equipment.....	...	...	5,013 ^r	...	...	1,617
Totals of above items.....	...	...	1,700	...	...
Rectifiers for storage battery charging (semi-conductor and/or electron tube type).....	...	...		...	...

I. Watt-hour Meters, 1956 - 65

Year	Quantity	Value	Year	Quantity	Value
	No.	\$'000		No.	\$'000
1956.....	534,742	8,019	1961.....	364,089	6,292
1957.....	469,188	7,951	1962.....	340,752	5,991
1958.....	399,935	6,915	1963.....	392,065	6,326
1959.....	410,943	7,493	1964.....	389,889	7,062
1960.....	315,992	5,978	1965.....	387,948	7,390

See footnote at end of table.

TABLE 14. Shipments of Selected Goods of Own Manufacture - All Industries - Concluded
J. Pole Line Hardware, 1956-65

Year	Value	Year	Value
	\$'000		\$'000
1956	11,888	1961	10,617
1957	11,988	1962	11,962
1958	12,303	1963	12,642
1959	12,251	1964	13,828
1960	11,146	1965	13,533

- ¹ Electric motors and/or generators as indicated.
² Included with "All other motors or generators".
³ Includes rotors and stators.
⁴ Included in "All other transformers".
⁵ Included with "Other".
⁶ Includes both gas and electric welding rod of ferrous type only.
⁷ Includes "Resistance welding equipment with controls".
⁸ Included in "All other fuses".

List of Establishments classified to this Industry, 1965

(Does not include establishments classified to other industries, which as a secondary activity, manufacture products typical of this industry)

Name	Location
Quebec:	
Beaupre Engineering Works	2216 Church Ave., Montreal
Canada Iron Foundries Ltd.	Lachine
Canadian General Electric Co. Ltd.	1130 Charest Blvd. West., Quebec
Canadian Westinghouse Co. (Quebec) Ltd.	Bouvari Blvd., St. Jean
Dominion M.I. Ltd.	8355 Mountain Sights, Quebec
Electrical Mfg. Co. Ltd.	Montmagny
Electrical Switchgear Ltd.	115 St. Denis St., St-Lambert
Federal Pacific Electric of Canada	Granby
Ferranti-Packard Electric Ltd.	Trois-Rivières
J. & R. Electric Co.	2520 Charland St., Montreal 12
Klockner-Moeller Canada Ltd.	110 Peacock St., Pointe-Claire
Klockner-Moeller Canada Ltd.	Granby
Klockner-Moeller Canada Ltd.	915 boul. Pierre Bertrand, Québec
La Cie Electrique Pioneer de Québec Inc.	Granby
Les Appareillages Electriques Keamy Inc.	Montreal - Nord
Les Transformateurs de Québec Inc.	280 St-Dominique St., Quebec
Mackey Automation and Controls Ltd.	8594-10th Ave., Ville St-Michel
Marcus Transformers of Canada Ltd.	999 College St., Montreal 30
Miller Welders Canada Ltd.	8451 Parkway Blvd., Ville d'Anjou
Payer Electrical Fittings Co. Ltd.	Nicolet
Payer, R., & Cie Ltée	Warwick
Power Survey Equipment Ltd.	2216 Ave. de l'Eglise, Verdun
Société Industrielle d'Appareillage Technique Inc.	Lauzon
Sangamo Co. Ltd.	Trois-Rivières
Ontario:	
Al-Ma Equipment Co. Ltd.	430 Comstock Rd., Scarborough
Allanson Manufacturing Corp. Ltd.	33 Cranfield Rd., Toronto 16
Allen-Bradley Canada Ltd.	Galt
Bach-Simpson Ltd.	1255 Brydges St., London
Berlet Electronics Ltd.	361 Elgin St., Brantford
Brevel Products Ltd.	1370 Birchmount, Scarborough
Bogue Electric of Canada Ltd.	Station "B", Ottawa
Canadian Controllers Ltd.	Birchmount Rd., Scarborough
Canadian General Electric Co. Ltd.	Guelph
Canadian General Electric Co. Ltd.	940 Lansdowne Ave., Toronto 4
Canadian General Electric Co. Ltd.	Peterborough
Canadian Sterling Electric Ltd.	799 Rennie St., Hamilton
Canadian Westinghouse Co. Ltd.	286 Sanford Ave. N., Hamilton
Canadian Westinghouse Co. Ltd.	Clarke Sideroad & Huron St., London
Canadian Westinghouse Co. Ltd.	1475 The Queensway, Toronto 18
Cansfield Electrical Works Ltd.	260 Geary St., Toronto 4
Chumplain Power Products Ltd.	76 Six Point Rd., Toronto
Clare Canada Ltd., C.P.	840 Caledonia Rd., Toronto
Clark Coil Company	938 Walker Rd., Windsor
Controls Company Canada Limited	St. Thomas
Cutler-Hammer Can. Ltd.	45 Progress Rd., Scarborough
Dayless Manufacturing (Canada) Ltd.	44 Haas Rd., Rexdale
Dominion Cutout Ltd.	155 Nantucket Blvd., Scarboro
Dresser Electric Ltd.	877 Walker Rd., Windsor
Electric Control & Engineering Co. Ltd.	1199 Finch Ave. West, Downsview
Electronic Controls Ltd.	11 Water St., Belleville
Engineered Electric Controls Ltd.	38 Ainslie St. S., Galt
Ferranti-Packard Electric Ltd.	Dieppe Rd., St. Catharines
Ferranti-Packard Electric Ltd.	Industry St., Toronto 15
F.H. Welding Machines Ltd.	92 North Queen St., Toronto 18
Franklin Electric of Canada Ltd.	Strathroy
Industrial & Machine Control Co.	1720 Langlois Ave., Windsor
Industrial Wire and Cable Ltd.	Newmarket

List of Establishments classified to this Industry, 1965 - Concluded

Name	Location
Ontario - Concluded:	
Insul-8-Corp. (Canada) Ltd.	24 Ronson Dr., Rexdale
I.T.E. Circuit Breaker (Canada) Ltd.	Port Credit
Johnston Soper Ltd.	230 Weber St., N., Waterloo
Jones & Moore Electric Co. Ltd.	296 Adelaide St., W., Toronto 2B.
Kearney National Canada Ltd.	430 Elizabeth St., Guelph
Kirkwood Commutators (Canada) Ltd.	Spalding Drive, Brantford
Klockner-Moeller Canada Ltd.	19 Haas Rd., Rexdale
Klockner-Moeller Canada Ltd.	380 Saskatoon St., London
Leece Neville of Canada Ltd.	359 Frankcom St., Ajax
Lincoln Electric Co. of Canada Ltd.	179 Wicksteed Ave., Leaside
Lorain Products (Canada) Ltd.	St. Thomas
Lovatt Engineering Ltd.	Chesley
Marquette Equipment (Canada) Ltd.	296 Rexdale Blvd., Rexdale
Mechron Engineering Products Ltd.	2437 Kaladar Ave., Ottawa
McGraw-Edison (Canada) Ltd.	3595 St. Clair Ave. East, Scarborough
Moloney Electric Co. of Canada Ltd.	213 Sterling Rd., Toronto 3
Murray-Jensen Mfg. Ltd.	216 Norseman St., Toronto 18
Onan Generators Canada Ltd.	Hwy 7, Guelph
Osborne Electric Company Ltd.	95 Wesley St., Toronto 18
Penzer Products Ltd.	72 Vine St., St. Catharines
Pierce Fuse Limited	18 Dorchester Ave., Toronto 18
Pioneer Electric Ontario Ltd.	445 Horner Ave., Toronto
Polygon Services Ltd., Acme Electric Div.	50 Northline Rd., Toronto
Powertronic Equipment Ltd.	50 Bermondsey Rd., Toronto
Precision Welder & Flexopress (Canada) Ltd.	72 Carnforth Rd., Toronto
Progressive Welder (Canada) Ltd.	Chatham
Quindar Products Ltd.	29 Shaft Rd., Rexdale
Reliance-Reeves-Master Ltd.	Stratford
Robbins & Myers Co. of Canada Ltd., The	Brantford
Robotron of Canada Ltd.	Sandwich
Sangamo Co. Ltd.	215 Laird Dr., Leaside
Sangamo Co. Ltd.	Guelph
S. & C. Electric Canada Ltd.	90 Belfield Rd., Rexdale
Sherley Controls Ltd.	30 Fifth Ave., Ottawa 1
Shoe Machine Parts Ltd.	60 Tecumseh St., Toronto
Slater Steel Industries Ltd.	681 King St., Hamilton
Sola-Basic Products Ltd.	377 Evans Ave., Toronto 18
Square D. Company Canada Ltd.	Mount Dennis
Stacion Ltd.	2220 Midland Ave., Scarborough
Stegg Electric Ltd.	34 Bertram Blvd., Belleville
Syntroon (Canada) Ltd.	Stoney Creek
T. & H. Controls Limited	Chatham
Toledo Commutator of Canada	Barrie
Trench Electric Ltd.	15 Prince Andrew Place, Don Mills
Trigon Associates Ltd.	32 B.C.D. Howden Rd., Scarborough
Volta Welders Ltd.	673 Wellington Ave., Windsor
Vulcan Electric Products Limited	3160 Dundas St., West, Toronto
Ward Leonard of Canada Ltd.	1070 Birchmount Rd., Scarborough
Weld-O-Matic Machines Ltd.	144 Barland Crescent, Hamilton
Welltronic Co. - Canada Division	3201 Marentette Ave., Windsor
Western Controls Ltd.	342 Munster Ave., Toronto
Manitoba:	
Krushel, L., & Sons	Morden
Pioneer Electric Limited	1 Rockwood Place, Winnipeg 19
Pioneer Electric Brandon Ltd.	11th Street & Richmond Ave., Brandon
Saskatchewan:	
Pioneer Electric (Sask) Limited	1600 First Ave., Regina
Smith-Roles Ltd.	34th St. & Alberta Ave., Saskatoon
Alberta:	
Lefebvre Eng. Ltd., Y.H.	208-37th Ave. N.E., Calgary
Nemco Electric Mfg. Ltd.	344-39th Ave., S.E., Calgary
Pioneer Electric (Alberta) Ltd.	Red Deer
British Columbia:	
British Columbia Transformer Co. Ltd.	4336 Lougheed Hwy., North Burnaby
Canadian Westinghouse Co. Ltd.	281 Industrial Ave., Vancouver
Federal Pacific Electric of Canada	22 E. 5th Ave., Vancouver
I.T.E. Circuit Breaker (Can.) Ltd.	8650 Barnard St., Vancouver 14
Klockner-Moeller Canada Ltd.	1350 East 4th Ave., Vancouver 12
Research Industries Ltd.	2971 Lake City Way, Burnaby 2
Tranco Mfg. Ltd.	1430 River Rd., RR 2, Richmond
Vancouver Electric Works Ltd.	176 Salisbury Dr., Vancouver 6

CONCEPTS AND DEFINITIONS

Census of Manufactures

General

The Census of Manufactures is an annual mail survey covering Canada's Manufacturing Industries. It is based on the Standard Classification of Industries and full details concerning the system may be found in the Standard Industrial Classification manual, Catalogue No. 12-501 which is available from the Queen's Printer or the Dominion Bureau of Statistics. In summary, the Classification as it relates to the manufacturing industries provides for a breakdown into 140 industries arranged in 20 major industry groups. Of the 140 (3 digit) industries, 18 are further broken down into 55 (4 digit) sub classes. At the Canada level, principal statistics are collected and compiled for 176 separate industries. They cannot all be published separately by province, however, because of the confidential nature of the data in certain provinces.

The reporting unit for the Census is designated as the **establishment** (see definition of "Establishment" in following section) and a return is requested from every establishment classified to a manufacturing industry. Although respondents are required to submit reports covering the calendar year, financial year reports other than the calendar year are accepted in instances where respondents find it impossible to supply calendar year data from accounting records. When an establishment is operated for only part of a year a report is required covering the period of operation.

There are four different questionnaires used in the Census of Manufactures: (a) short form (b) long form (c) head office questionnaire and (d) commodity questionnaire. The short and long forms are used to obtain principal statistics and commodities shipped from establishments classified to manufacturing industries and differ only in the amount of detail requested. The short form is a single-sheet questionnaire sent to small manufacturers generally reporting shipments of less than \$100,000; this cut-off, however, varies somewhat between industries. The head office questionnaire is generally used for company head offices and/or auxiliary units separately located from the manufacturing establishment(s), (see following notes on Head offices and auxiliary units). The Commodity questionnaire is used to survey certain establishments which are coded (on the basis of their principal activity) to industries other than manufacturing in the Standard Industrial Classification system, but which undertake some manufacturing as a subsidiary activity. This single-sheet questionnaire is designed to collect information on the quantity and value of goods of own manufacture shipped by such establishments in order to achieve full coverage of domestically manufactured commodities (see the following note under Shipments).

The results of the Census are presented in some 135 publications. In addition to these annual industry publications there are annual summary reports for Canada and the provinces and special reports giving principal statistics by detailed geographic areas, by type of ownership and size of establishment. A special annual report covering the shipments of all manufactured commodities arranged in alphabetical order is also published.

Since 1960 the following major changes have been implemented in the Census of Manufactures; (a) a revised Standard Industrial Classification (b) a new establishment definition and (c) an extension of the establishment definition to cover the non-manufacturing activities of manufacturing establishments. The statistics presented in the reports reflect the complete implementation of these changes and enable comparisons to be made back to and including 1961. For a complete description of the procedures followed in establishing the revised series, reference should be made to the Explanatory Notes included in the 1960, 1961 and 1962 industry publications. The statistical framework within which the Census of Manufactures is now carried out is based on the following concepts and definitions which have been developed as part of a general programme to achieve a fully integrated system of economic statistics.

Establishment

A manufacturing establishment is typically a factory, mill or plant principally engaged in manufacturing activities. The majority of such establishments are firms but many firms have more than one establishment. Such firms are requested to submit a separate Census of Manufactures report for each manufacturing establishment which can meet the reporting requirements embodied in the following definition of the "establishment":

"The smallest unit which is a separate operating entity capable of reporting the following principal statistics:

- Materials and supplies used
- Goods purchased for resale as such
- Fuel and power consumed
- Number of employees and salaries and wages
- Man-hours worked and paid
- Inventories
- Shipments or sales."

Each establishment is required to report on all the activities carried out within its accounting boundaries (except income from investments such as rent, interest and dividends) and data on the different activities (manufacturing, trading in goods not of own manufacture, construction by own labour

force, revenue from services, etc.) are requested to be reported separately. It should be noted that the statistics for separate activities are not completely consistent since some respondents cannot distinguish, in their records, materials, shipments and inventories relating solely to their own manufacturing activities. For example, inventory of goods purchased for re-sale may not be distinguishable from inventory of own manufactured goods. Complete consistency, therefore, can be obtained only at the "all operations" (total activity) level and for studies or statistical measures requiring accurate coordinated data, the "total" statistics should be used.

The number of establishments represents the number of operating units that are principally engaged in the activities of the manufacturing industries to which they have been classified. These units do not necessarily represent the total number engaged in the production of a commodity mainly produced in a certain industry. Some commodities are produced as secondary products in other manufacturing and non-manufacturing industries. It should be noted that head offices and auxiliary units which are surveyed separately are not included in the establishment count, (see following notes on head offices and auxiliary units).

Head Offices and Auxiliary Units

All head offices and auxiliary units of companies classified to the manufacturing industries such as sales offices, administrative offices, warehouses, laboratories, etc. are now surveyed as part of the Census of Manufactures.

These head offices and auxiliary units are either included in an establishment report or are surveyed by means of the head office questionnaire. The former is the most common case where a single establishment firm has its executive personnel, sales office, etc. located at the site of the manufacturing plant (establishment). The special head office questionnaire is generally used where a firm, regardless of the number of establishments, has separately located offices or auxiliary units. Such offices or units do not constitute establishments within the Census of Manufactures as they do not normally generate operational revenues, but give rise only to costs of operations (mainly salaries and wages) which are automatically included in the value of shipments or sales. Although not considered as establishments, and hence, not included in the "establishment" count for an industry, the operational costs are reflected in either the "Industry" statistics (3 or 4 digit level) or the "Major group" statistics (2 digit level) according to the following rules:

(a) In the case of single establishment firms, statistics for separately located offices and units are classified to the same industry (3 or 4 digit) as the establishment;

(b) In the case of multi-establishment firms, the statistics for such offices and units are coded to the same industry as the establishments of the firm, when all establishments are in the same industry (3 or 4 digit). When establishments of

such firms are coded (1) to different industries within a major group, (2) to industries in different major groups or (3) to industries in different divisions of the Standard Industrial Classification, then the statistics are included in the major group totals (2 digit level) in which the major part of the company's operations are classified. Although this may result in some distortion of major group statistics in the case of (2) and (3) the statistics at the industry (3 or 4 digit) level in all cases will be left free of these company-wide data.

Employees

(a) Production and related workers — Manufacturing activities

In addition to those engaged in production and assembling activities, they include those employed in storing, inspecting, handling, packing, warehousing, etc. They also include employees engaged in maintenance, repair, janitorial and watchman services and line supervisors (working foremen) engaged in similar work to that of the employees they supervise. For those establishments reporting on the "long" form, production and related workers engaged in manufacturing activity are reported as those receiving pay during the last pay period of each month, an average for the year being obtained by summing the monthly figures and dividing by 12. This procedure is followed even though the establishment did not operate in all months in order to arrive at equivalent annual full-time employment. The numbers are somewhat affected by turnover, in that employment is overstated when an employee changes employment during a pay period. In the case of those establishments reporting on the "short" form, respondents are requested to report average annual figures. The man-hours of production and related workers in manufacturing activity represent total man-hours paid (total hours at work during the calendar year plus hours not worked but nevertheless paid for, such as paid vacations, sick leave, statutory holidays, etc.). Data on man-hours are not collected from establishments reporting on the short form. Man-hours for these establishments are estimated on the basis of ratios derived from the 1958 census. During this census all establishments reported on the long form. In reporting overtime hours, respondents are requested to report only hours actually at work. It should be noted that the division of hours paid into production and related workers payrolls results in average hourly earnings and does not represent hourly wage rates which are collected and published by the Department of Labour and which are based on selected occupations.

(b) Production and related workers — Non-manufacturing activities

Such employees include those on manufacturing establishments' payrolls engaged in activities such as construction undertaken for the use of these establishments, some outside piece-workers employed in certain industries, logging employees who are reported as part of a sawmilling establishment and any other production workers who are not engaged in manufacturing-type operations.

(c) Administrative and office employees

This category includes all executive and supervisory officials such as presidents, vice-presidents, comptrollers, secretaries, treasurers, etc., together with managers, professional, technical and research employees, superintendents and factory supervisors above the line supervisor or working foreman level, and clerical staffs. Also included are employees in activities such as advertising, credit collections, purchasing, personnel, legal, medical, etc. It should be noted that prior to 1961 this category also included working owners and partners. Also included in this category are employees located at head offices or auxiliary units separately located from the establishment; these are generally included in the figures for the province in which they are located according to the rules outlined under "Head offices and auxiliary units" above.

(d) Sales and distribution workers

This category includes office personnel whose salaries are charged to selling expense, travelling salesmen, driver salesmen, truckdrivers and their helpers, etc. It may also include some sales employees who are reported as part of a manufacturing establishment but are not working at the establishment's location. These are generally broken down by province in cases where more than 15 employees are involved in any one province. The figures exclude persons working on a commission basis who are not considered regular employees of the establishment.

(e) Total Employees

This total comprises the foregoing categories including employees located at separately located head offices and auxiliary units. The numbers of employees included under categories (b), (c) and (d) are reported in the form of annual averages and represent as closely as possible full time employment; adjustments are made when reported figures indicate the existence of part time or seasonal employment. In all the above categories, figures on employment refer to the calendar year whether or not other establishment statistics can only be reported on a fiscal year other than the calendar year.

Working Owners or Partners

These are not now included in the statistics of employees and salaries and wages. There is some duplication in numbers when a person owns more than one establishment and is reported as a working owner on each Census return. Withdrawals of working owners are defined as amounts withdrawn by owners or partners for normal living expenses excluding withdrawals for payment of income tax.

Salaries and Wages

Salaries and wages refer to gross earnings of employees before deductions for income tax and employees contributions to social services such as sickness, accident and unemployment insurance, pensions, etc. They include all salaries, wages,

bonuses, profits shared with employees, the value of room and board where provided, commissions (paid to regular employees only) as well as any other allowance forming part of the worker's earnings. Payments for over-time are included. Figures on salaries and wages refer to the calendar year.

Fuel and Electricity

Figures for fuel refer to amounts actually used (including fuel used in cars, trucks, locomotives, etc.), not to purchases unless the quantities are substantially the same. **Any fuel and electricity produced by establishments for internal consumption are not included in the total cost.** Values represent laid down cost at the establishment including freight, duty, etc. Although fuel and electricity used is considered part of manufacturing activity it should be noted that it also includes relatively small amounts used in non-manufacturing activities since these cannot be reported separately.

Materials and Supplies

(a) Manufacturing activities

Figures represent quantities and laid down cost values, at the establishment, of materials, supplies and purchased components owned and used during the year in manufacturing activities and related processes. These statistics represent only commodity items or physical goods (cost of services or overhead charges such as advertising, insurance, depreciation, etc. are not included) whether purchased from others or received as transfers (in the form of materials, components or semi-processed goods) from other establishments of the reporting company. Included are maintenance and repair supplies not chargeable to fixed assets accounts and any amounts charged by other establishments for work done on materials owned by the reporting establishment. Cost of repairs or maintenance done by outside contractors and cost of returnable containers are not included.

(b) Non-manufacturing activities

1. Purchases for re-sale as such

Figures represent cost of materials or products purchased from others by the reporting establishment (or received as transfers from other establishments of the reporting company) for re-sale as such in the same condition as purchased. Included are any finished products received on consignment from other countries.

2. Other materials and supplies used

Figures represent the cost of materials and supplies, if any, used in new construction and in the production of machinery and equipment (for the use of the reporting establishment) by the establishment's own employees. Included are materials used for any capital repairs and alterations carried out by the establishment's employees. Amounts paid to outside contractors for construction and repair work are not included nor is the cost of

purchased machinery and equipment. Also included is the cost of office supplies not chargeable to fixed assets accounts and the cost of such other items of materials and supplies used as food, beverages and supplies for establishment-operated cafeterias and lunch counters, first aid and medical supplies, laboratory supplies, etc.

Shipments

(a) General

The figures represent revenue from all production, sales, services and related activities of reporting establishments with shipments valued in Canadian dollars at the point at which the establishment relinquishes control. The unsold portion at year end of consignment shipments in Canada is treated as inventory and not as shipments but all shipments to foreign countries for which the form B13 "Customs Canada Export Entry" has been completed, are treated as shipments.

In those industries where work on principal products extends over a relatively long period, (Fabricated Structural Metal Industry, Aircraft and Parts Manufacturers, Railroad Rolling Stock Industry and Shipbuilding and Repair Industry) the value of production rather than the value of shipments is recorded. There are certain establishments in other industries which also operate on a basis of progress payments. For these establishments, shipments are also adjusted to work put in place on the basis of the net change in progress payments over the year.

(b) Shipments of goods of own manufacture

These figures represent shipments of goods made from own materials either in the reporting establishments or by other manufacturers on the basis of a charge to the reporting establishments for work done. Included are revenue from repair and custom work, amounts received in payment for work done on materials owned by other establishments and the cost (book value) of any goods shipped on a rental basis.

All products and by-products of own manufacture shipped from the establishment are covered, including transfer shipments to sales outlets, distributing warehouses or to other manufacturing plants of the reporting firm, when such units are treated as separate establishments. The value of shipments are net of returned goods, discounts, returns, allowances, sales tax and excise taxes and duties, returnable containers and charges for outward transportation by common or contract carriers. Transportation or delivery expense incurred by the reporting establishment's own carriers are included.

Shipments of goods of own manufacture of establishments which are coded to some other division of the Standard Industrial Classification (on the basis of principal activity) but which are engaged in manufacturing as a subsidiary activity

are collected by means of the Commodity questionnaire referred to earlier. Such shipments together with shipments of goods of own manufacture of establishments forming the universe of manufacturing industries are compiled and recorded in the various industry publications.

(c) Shipments of goods not of own manufacture

These figures represent the net selling value at establishment (net of discounts, returns, allowances, sales taxes and excise duties and taxes and transportation charges by common or contract carriers) of all products or materials (including products transferred from other establishments of the reporting firm) sold as such in the same condition as purchased or received as transfers. For those industries which ship such goods on a rental basis, the value of shipments represents the book value of these goods. All sales of consignment goods from other countries are included.

(d) Other revenue

Figures represent the book value of fixed assets, if any, (new construction and machinery and equipment including major repairs, alterations, additions, modifications, installation and assembly work) produced during the year for the use of reporting establishments by the establishment's own employees and for which depreciation accounts are maintained. Included also are any revenues from the sale of electricity and from any operations performed by the establishment's own employees, such as revenue from goods produced or purchased for rental (the book value of such goods are included as part of shipments of goods of own manufacture or shipments of goods not of own manufacture), servicing revenues, commissions on sales (when not included in value of sales), revenue for company-operated cafeterias and lunch counters and revenue from outside installation or construction work not related to the establishment's own products, sale of used materials (excluding sale of used fixed assets) research and development work, etc. As mentioned previously the figures do not include non-operating revenue such as rent, dividends, interest, etc.

Inventories

(a) Manufacturing activities

Values represent the book values of manufacturing inventory owned in Canada. Inventories held for which progress payments have been received are not included. Where progress payment accounts are maintained, the change in these accounts is treated as a net adjustment to shipments. Figures consist of inventory owned at the plant and at warehouses or selling outlets which are treated as extensions of establishments for the purpose of reporting shipments. Inventory owned in transit in Canada or on consignment in Canada is included. Goods shipped abroad and held in inventory are included in shipments. Opening inventories may differ from the closing inventories of the previous year because of changes in classification, the

receipt of revised data, the inclusion of new establishments and the removal of establishments which did not operate during the survey year.

(b) Non-manufacturing activities

Figures represent the book value of inventory of goods purchased for re-sale as such without further processing, owned by the reporting establishments and held at plants and at any warehouses or selling outlets which are treated as extensions of establishments. Other characteristics are the same as in (a) above.

Value Added

(a) By manufacturing activities

Figures are compiled by deducting the cost of manufacturing materials, supplies, etc. and fuel and electricity consumed from the (value of shipments of goods of own manufacture adjusted for changes in the value of inventories of finished goods and goods in process).

(b) By non-manufacturing activities

The figures are compiled by deducting the cost of goods purchased for re-sale (adjusted for changes in the value of inventories of goods pur-

chased for re-sale) and the cost of non-manufacturing materials and supplies used from the value of shipments of goods not of own manufacture, plus other revenue.

(c) By Total activities

The figures consist of value added by manufacturing activities plus value added by non-manufacturing activities. This total value added figure may, in some cases, be less than value added by manufacturing activities as a result of expenditures associated with non-manufacturing exceeding revenues from such activities or because of a decrease in inventory of goods not of own manufacture exceeding the mark-up on the sale of such goods. "Value added" is sometimes referred to as net output or net production. However, to arrive at the National Accounts concept of net production, or Gross Domestic Product at "Factor cost" it would be necessary to subtract also the cost of advertising, insurance and other business expenses which are not collected as part of the annual Census of Manufactures. "Value added" figures for the primary industries, manufacturing and construction are published in DBS publication Catalogue No. 61-202, "Survey of Production".

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