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87016-RR



IMPORT ANALYSIS

Market Research Support

AC INDUSTRIAL GENERATORS

JANUARY TO DECEMBER 1986

Pub. No.: 87016-RR March 1988



Government
of Canada

Regional Industrial
Expansion

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Expansion industrielle
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AC INDUSTRIAL GENERATORS

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EXPLANATORY NOTES

Method

The data shown in this analysis is extracted from Revenue Canada Customs documents. These documents provide a description of the products, names of importers, exporters, quantities, dollar values, unit prices, countries of origin, provinces of entry, tariff applications and rates of exchange.

The information presented in this report is more detailed than that generally available from Statistics Canada or other publications. Data which might reveal information about individual importers is aggregated.

Valuation

Dollar values shown in this report are based on selling price F.O.B. plant, in Canadian dollars. This selling price represents the value paid by the importer, excluding all freight, packing and insurance costs when specified. All trade discounts, when applicable, are also deducted from the selling price.

Rounding

Figures may not add due to rounding.

REFERENCE SOURCES

Department of Regional Industrial Expansion
Statistics Canada
Revenue Canada

FOR MORE INFORMATION PLEASE CONTACT:

Market Information and Analysis Division
Market Development Branch
Department of Regional Industrial Expansion
235 Queen Street
Ottawa, Ontario
K1A 0H5
Tel: (613) 954-4970

OR

Electrical Equipment Division
Surface Transportation and
Machinery Branch
Department of Regional Industrial
Expansion
235 Queen Street
Ottawa, Ontario
K1A 0H5
Tel: (613) 954-3262

OR

The nearest DRIE Regional Office.
These offices are listed on the last
page of this publication.

T A B L E O F C O N T E N T S

	<u>PAGE</u>
I. INTRODUCTION AND SCOPE	4
II. IMPORT TRENDS	4
III. ANALYSIS OF IMPORTS	6
IV. CANADIAN PRODUCTION	10
V. MARKET SUMMARY	11
 <u>APPENDICES</u>	
A IMPORTS OF AC INDUSTRIAL GENERATORS, BY POWER OUTPUT	13
B IMPORTS OF AC INDUSTRIAL GENERATORS, BY PRICE RANGE	13
C IMPORTS OF AC INDUSTRIAL GENERATORS, BY COUNTRY OF ORIGIN	14
D IMPORTS OF AC INDUSTRIAL GENERATORS, BY PROVINCE OF CLEARANCE	14
E CANADIAN IMPORTERS	15
F FOREIGN EXPORTERS TO CANADA	17
G CANADIAN SUPPLIERS	18
H CANADIAN AND FOREIGN TARIFFS	20
I RECONCILIATION	21
J STATISTICS CANADA BREAKDOWN OF ELECTRIC GENERATORS	22
DRIE REGIONAL OFFICES	23

IMPORT ANALYSIS

AC INDUSTRIAL GENERATORS

I. INTRODUCTION AND SCOPE

This Import Analysis is one of a series prepared in order to assist businesses and other organizations in their market research of specific products. The detailed import information provided in these reports supports studies by organizations seeking to expand existing production lines, change individual product characteristics or engage in new manufacturing investment in Canada. The coverage of an import analysis is developed in close consultation with the client, and is tailored to meet those specific requirements. It is important to emphasize that this report does not attempt any assessment as to the feasibility of competing in a particular market.

This analysis of imports of alternating current (AC) industrial generators is based on a detailed examination of Revenue Canada Customs import documents for the period January to December 1986. The following Canadian International Trade Classification (C.I.T.C.) import commodity codes were analysed:

503-09-20 Generators, AC under 150 kw
503-09-30 Generators, AC 150 kw and over

Within these classes, generators for use in railway rolling stock and in self-propelled trucks (\$12 million imported in 1986) were specifically excluded. Such generators are usually over 2000 kw in capacity and have very high unit prices. In addition, due to the large volume of documents classified to the aforementioned C.I.T.C. import commodity codes, only those shipments having a value of \$7000 and over were examined.

Total figures in this report do not correspond to those published by Statistics Canada. The differences are explained in Appendix I.

Note that this report does not include AC generator sets or turbo generator sets: (see Appendix J for further information on these classes).

II. IMPORT TRENDS 1982-1986 AC INDUSTRIAL GENERATORS

During the years 1982 to 1986, imports of AC generators under 150 kw decreased at an average annual rate of 3 per cent in quantity, but increased slightly in value by 4 per cent. During the same period, generators over 150 kw increased in number by 3 per cent, but decreased in value by 9 per cent.

The following trends table should be interpreted with care. Imports of AC generators under 150 kw were valued at \$5 million in 1986 and over 150 kw at \$16 million. Of the latter, however, only \$4 million was analysed in the remainder of the report, as \$12 million was for use in railway and automotive industries.

II. IMPORT TRENDS 1982-1986
IMPORTS BY MAJOR FOREIGN COUNTRY OF EXPORT
GENERATORS, AC UNDER 150 KW (503-09-20)

Country of Export	1982		1983		1984		1985		1986		% Growth Per Annum 1982 - 1986	
	(No.)	(\$000)	(No.)	(\$000)	(No.)	(\$000)	(No.)	(\$000)	(No.)	(\$000)	(No.)	(\$)
United States	3 226	2 001	1 869	2 058	1 930	1 936	2 002	2 573	2 356	2 026	-8	*
United Kingdom	580	882	315	475	574	2 913	1 209	1 478	968	1 246	14	9
France	146	335	485	606	693	864	755	1 174	506	752	36	22
Japan	2 589	1 028	1 285	466	381	197	1 144	404	1 878	1 057	-8	1
Other	7	42	35	48	17	22	7	16	81	31	84	-7
TOTAL	6 548	4 288	3 989	3 653	3 595	5 932	5 117	5 645	5 789	5 112	-3	4

IMPORTS BY MAJOR FOREIGN COUNTRY OF EXPORT
GENERATORS, AC 150 KW AND OVER (503-09-30)

Country of Export	1982		1983		1984		1985		1986		% Growth Per Annum 1982 - 1986	
	(No.)	(\$000)	(No.)	(\$000)	(No.)	(\$000)	(No.)	(\$000)	(No.)	(\$000)	(No.)	(\$)
United States	460	16 587	251	8 239	271	12 896	301	20 830	301	11 963	-10	-8
United Kingdom	190	1 194	69	1 147	162	3 421	254	1 449	195	1 312	*	2
France	34	243	103	649	123	591	224	1 124	161	1 144	48	47
Federal Republic of Germany	13	505	3	25	5	37	7	82	123	1 681	75	35
Other	11	5 358	0	0	65	287	4	104	2	24	-35	-74
TOTAL	708	23 887	426	10 060	626	17 232	790	23 389	782	16 124	3	-9
GRAND TOTAL	7 256	28 175	4 415	13 713	4 221	23 164	5 907	29 034	6 571	21 236	-2	-7

* Less than one per cent

NOTE: Figures published by Statistics Canada above include shipments under \$7 000, as well as generators for use in railway rolling stock and automotive industries. Following sections of analysis exclude these shipments.

III. ANALYSIS OF IMPORTS

Imports of AC industrial generators included in this analysis, for the period January to December 1986, totalled 4 691 units, valued at \$7.1 million. (Note difference from figure published by Statistics Canada as explained in Appendix I).

Of the total import market, AC generators under 50 kw represent 3 805 units or 81 per cent of the total quantity analysed.

The value was divided about evenly among the categories shown below, ranging from \$1.3 million for the category 500 kw and over to \$1.5 million in the category from 50 kw to 150 kw. Average unit prices, as expected, increased with higher power output. Further details on imports by power output are shown in Appendix A.

SUMMARY OF IMPORTS - BY POWER OUTPUT - 1986

<u>Power</u> Kw-Kilowatt	<u>Quantity</u> (No.)	<u>Value</u> (\$000)	<u>Average Price</u> (\$)
Under 5	2 528	1 340	530
5 to Under 50	1 277	1 373	1 075
50 to Under 150	489	1 515	3 099
150 to Under 500	230	1 335	5 805
500 and Over	97	1 292	13 317
Kilowatt not reported	70	255	3 643
	-----	-----	-----
	4 691	7 110	1 516

III. ANALYSIS OF IMPORTS (CONT'D)

Generators with a unit value of less than \$3 000 represent ninety-one per cent of the total quantity. Generators under \$1 000 account for 71 per cent by quantity and 26 per cent by value of the total import market. Generators over \$5000 account for the largest proportion (42 %) of the imports by value and were primarily generators over 150 kw in capacity. As shown, on the detailed table (Appendix B), generators in the ranges of \$500 to \$1 000, \$5 000 to \$10 000 and over \$15 000 were the most significant with import values of over \$1 million in each of these ranges.

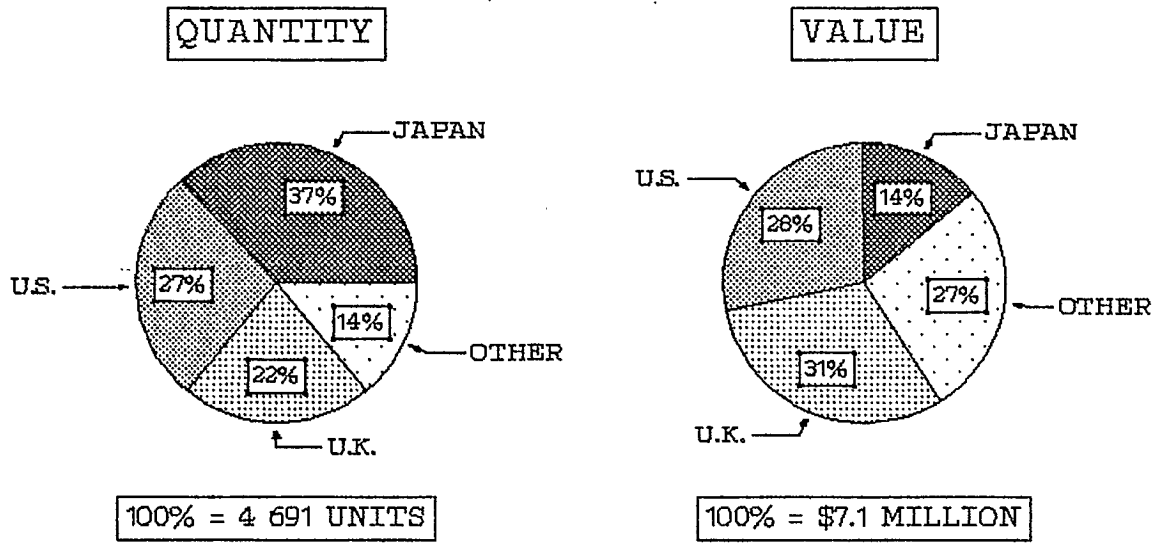
SUMMARY OF IMPORTS - BY UNIT PRICE RANGE - 1986

<u>Unit Price Range</u> (<u>\$</u>)	<u>Quantity</u> (<u>No.</u>)	<u>% of Quantity</u>	<u>Value</u> (<u>\$000</u>)	<u>% of Value</u>
Over 150 to 1000	3 304	71	1 861	26
Over 1000 to 3000	959	20	1 612	23
Over 3000 to 5000	161	3	627	9
Over 5000	267	6	3 011	42
	<hr/>	<hr/>	<hr/>	<hr/>
	4 691	100	7 110	100

SUMMARY OF IMPORTS
BY RANGE OF POWER OUTPUT (KW) AND PRICE RANGE - 1986

<u>Power Output</u> kw-kilowatt	<u>TOTAL</u>		<u>PRICE RANGE (\$)</u>							
			<u>150 to 1 000</u>		<u>1 001 to 3 000</u>		<u>3 001 to 5 000</u>		<u>Over 5 000</u>	
	<u>Qty.</u>	<u>Value</u>	<u>Qty.</u>	<u>Value</u>	<u>Qty.</u>	<u>Value</u>	<u>Qty.</u>	<u>Value</u>	<u>Qty.</u>	<u>Value</u>
	(<u>No.</u>)	(<u>\$000</u>)	(<u>No.</u>)	(<u>\$000</u>)	(<u>No.</u>)	(<u>\$000</u>)	(<u>No.</u>)	(<u>\$000</u>)	(<u>No.</u>)	(<u>\$000</u>)
Under 150	4 294	4 228	3 281	1 843	911	1 513	32	107	70	765
Over 150	327	2 627	-	-	12	33	129	519	186	2 075
Not Known	<u>70</u>	<u>255</u>	<u>23</u>	<u>18</u>	<u>36</u>	<u>66</u>	<u>-</u>	<u>-</u>	<u>11</u>	<u>171</u>
TOTAL	4 691	7 110	3 304	1 861	959	1 612	161	626	267	3 011

IMPORTS OF AC INDUSTRIAL GENERATORS, ALL CAPACITIES, BY COUNTRY OF ORIGIN

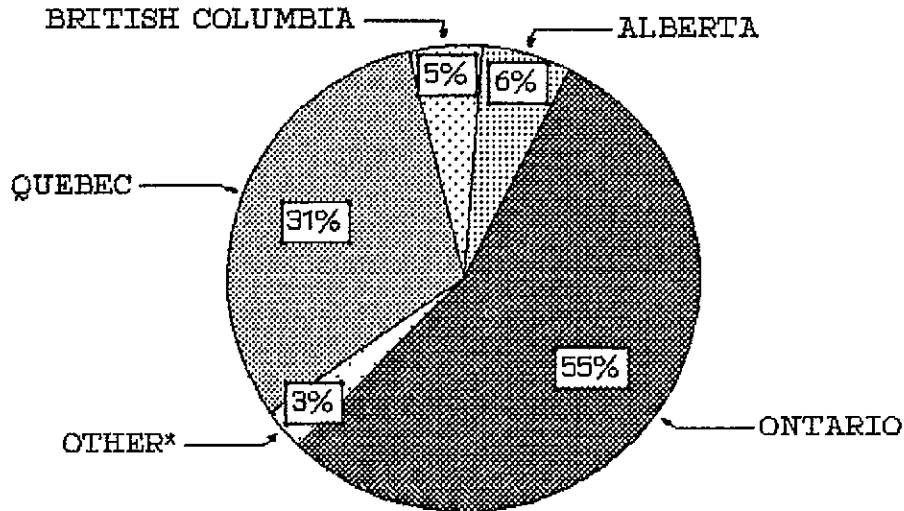


In 1986 imports of generators exported from Japan totalled 1 741 units, or 37 per cent of Canadian imports. The United States exported 1 283 units, or 27 per cent, followed by the United Kingdom with 1 013 units, or 22 per cent.

Of the total import market value, shipments from the United Kingdom accounted for \$2.2 million or 31 per cent followed by the United States with \$2 million, and Japan with just over \$1 million. The remaining countries in descending order of value were France, Federal Republic of Germany, Belgium and Denmark. Their values were aggregated to preserve confidentiality of Canadian importers.

Although AC generators from Japan totalled 1 741 units (or 37 per cent) of the total quantity they represented only 14 per cent of the total value. Imports from the United States were 27 per cent of the quantity and 28 per cent of the value. The average unit price of generators imported from Japan was much lower at \$589 from that of the United States of \$1 528. Appendix C provides further details on generators by country of origin.

IMPORTS OF AC INDUSTRIAL GENERATORS, ALL CAPACITIES,
BY PROVINCE OF CLEARANCE



100% = \$7.1 MILLION

*Nova Scotia, Manitoba & Saskatchewan

Ontario was the major province of clearance accounting for \$3.9 million, or 55 per cent of the total import value, followed by Québec with 31 per cent (see imports by province of clearance, Appendix D).

IMPORT MARKET CONCENTRATION - 1986

<u>Principal Importers</u> (No.)	<u>Cumulative Quantity</u> (No.)	<u>% of Total Quantity</u>	<u>Cumulative Value</u> (\$)	<u>% of Total Value</u>
3	2 946	63	4 141 655	58
6	3 816	81	4 762 335	67
10	4 087	87	5 287 470	74
15	4 133	88	5 830 757	82
All Importers (64)	4 691	100	7 109 819	100

There were at least 64 importers of AC industrial generators as described in this report during the calendar year 1986.

The top six importers accounted for \$4.8 million, or 67 per cent of the total analysed value. Fifteen importers of generators had imports of at least \$100 thousand during that period. Appendix E lists names and addresses of all importers.

IV. CANADIAN PRODUCTION

Statistics Canada reports shipments of AC generators (all types and sizes) by Canadian manufacturers as follows:

	<u>1983</u> (\$000)	<u>1984*</u> (\$000)
Electric AC generators and parts	52 747	59 859

These generators, however, are primarily for hydro projects, generators which are not covered in the remainder of this report. For the industrial generators covered in this report virtually no Canadian production exists. Industrial generators are imported and assembled in Canada into generator sets some of which are then exported.

* latest year available

V. MARKET SUMMARY

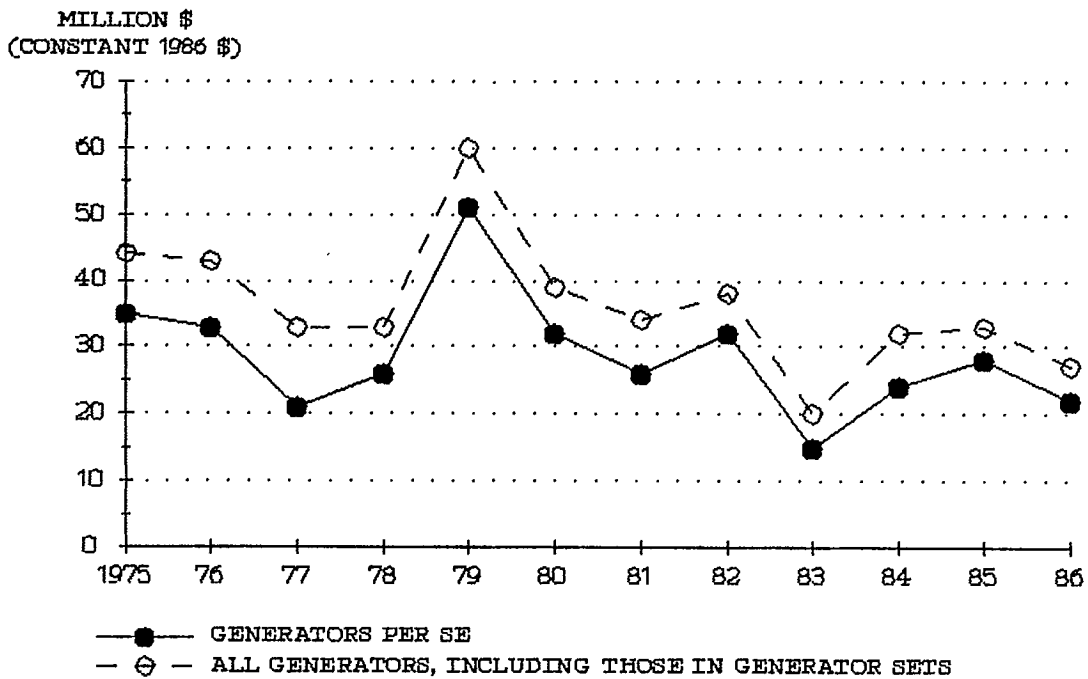
Definition

Industrial generators are machines that produce electricity. They are mounted on shafts driven by prime movers. A.C. generators driven by diesel or gas engines are able to produce up to approximately 2000 kW. Industry sources indicate that the economic life of an industrial generator is about six years. Industrial generators are themselves assembled into generator sets (consisting of an engine, a generator and a control panel on a common base) by companies which then sell the complete sets to end users. The A.C. generator sets are utilized to provide (1) a base load power for isolated locations, especially construction sites, and (2) standby power, where a disruption of normal utility power would cause inconvenience or serious equipment malfunctions in power stations, hospitals, computer installations and large buildings.

The Canadian Market

In addition to the imports of industrial generators per se, Canada also imports generator sets which include the generator as a component. Import documents, as analysed in Section II of this Import Analysis, were examined in detail only for imports of industrial generators per se for use other than railway and automotive, not for generator sets. This Market Summary pertains to all AC industrial generators whether for railway, automotive, generator sets or other uses. Only steam-driven and hydro generators are excluded from all sections of the report.

IMPORTS-INDUSTRIAL GENERATORS



V. MARKET SUMMARY (CONT'D)

Virtually all of the Canadian market for A.C. industrial generators is supplied by imports. The Canadian market for A.C. generators has been cyclical, reflecting generator life cycles and general economic conditions. The apparent domestic market for generators, including those in generator sets, reached a peak of about \$60 million in 1979 (in 1986 dollars). Then the market fell with the decline of the Canadian economy, bottoming out at about \$20 million in 1983. For the following two years, the market rose by over 25 per cent annually, due largely to renewed construction activity. In 1986, total imports of AC generators were estimated at about \$27 million (including generators for use in railway and automotive industries and those contained in generator sets).

Export Markets

In addition to supplying the total Canadian market, a new Canadian manufacturer of industrial generators would also have considerable export potential. In 1986, exports from Canada of A.C. or D.C. generators and self-contained generator sets were about \$22 million. Exports of all electrical products have been rising substantially, particularly to the United States. It should be noted that the Canada-US Trade Agreement calls for the total elimination of U.S. tariffs on generators, within five years.

North American Market

Sizes of the markets available in North America (Canada and U.S.), for all industrial generator product lines, are estimated to be approximately eleven times that for the Canadian market alone.

Constraints

A new Canadian producer of generators would face competition from those foreign manufacturers which have world-scale production plants and long production runs. This is particularly true in the lower size ranges. Viability of a new facility would depend upon obtaining a reasonable volume of sales so that output would be large enough to result in the largest possible production runs. Industry sources have indicated that for most product lines, eventual sales of \$6 million to \$8 million per year would probably be required to reach the break-even point.

Considerations

The possibility of new manufacturing in Canada for the North American market should be seriously studied and considered at this time by major manufacturers of generators for the following reasons:

- 1) The lack of Canadian production with virtually all the market needs supplied by imports;
- 2) The substantial and capable Canadian industry sector for the manufacture of generator sets, which is the primary market for the generators;
- 3) The high level and growth rate of the domestic and export markets, which would indicate that a new production plant could achieve a substantial volume of sales within a reasonable period of time;
- 4) The potential for high, growing exports to the U.S. market, considering the large growth of exports of electrical products and especially as U.S. tariffs are lowered;
- 5) The increasing values of European and Japanese currencies, making Canadian production an attractive alternative to production in Europe and Japan.

APPENDIX A

IMPORTS OF AC INDUSTRIAL GENERATORS, BY ELECTRICAL POWER OUTPUT - 1986

<u>Power</u> kw-kilowatt	<u>Quantity</u> (No.)	<u>Value</u> (\$)	<u>Average</u> <u>Unit Price</u> (\$)
Under 2	1 464	597 398	408
2 to Under 3	662	438 690	663
3 to Under 4	350	265 365	758
4 to Under 5	52	38 250	736
5 to Under 10	557	411 065	738
10 to Under 25	440	518 814	1 179
25 to Under 50	280	442 962	1 582
50 to Under 100	324	885 139	2 732
100 to Under 150	165	630 193	3 819
150 to Under 250	74	492 105	6 650
250 to Under 500	156	843 072	5 404
500 to Under 1000	67	639 816	9 549
1000 and Over	30	651 941	21 731
Kilowatt Not Reported	<u>70</u>	<u>255 009</u>	<u>3 643</u>
	4 691	7 109 819	1 516

APPENDIX B

IMPORTS OF AC INDUSTRIAL GENERATORS, BY PRICE RANGE - 1986

<u>Price Range</u> (\$)	<u>Quantity</u> (No.)	<u>Value</u> (\$)	<u>Average</u> <u>Unit Price</u> (\$)
Over 150 to 500	1 381	493 373	357
Over 500 to 1000	1 923	1 367 223	711
Over 1000 to 1500	431	522 380	1 212
Over 1500 to 2000	257	431 228	1 678
Over 2000 to 3000	271	658 281	2 429
Over 3000 to 4000	101	356 249	3 527
Over 4000 to 5000	60	270 385	4 506
Over 5000 to 10000	170	1 140 005	6 706
Over 10000 to 15000	55	685 655	12 466
Over 15000	<u>42</u>	<u>1 185 040</u>	<u>28 215</u>
	4 691	7 109 819	1 516

APPENDIX C

IMPORTS OF AC INDUSTRIAL GENERATORS, BY COUNTRY OF ORIGIN - 1986

	<u>Quantity</u> (No.)	<u>Value</u> (\$000)	<u>Average</u> <u>Unit Price</u> (\$)
United Kingdom	1 013	2 210	2 182
United States	1 283	1 961	1 528
France	*	*	*
Japan	1 741	1 026	589
Federal Republic of Germany	9	170	18 889
Belgium-Luxembourg	*	*	*
Denmark	*	*	*
	<u>4 691</u>	<u>7 110</u>	<u>1 516</u>

* Aggregated to protect confidentiality of Canadian importers. The total for those countries was 645 generators valued at \$1 742 210.

APPENDIX D

IMPORTS OF AC INDUSTRIAL GENERATORS BY PROVINCE OF CLEARANCE - 1986

	<u>Value</u> (\$000)	<u>% of Total</u> <u>Value</u>
Ontario	3 884	55
Québec	2 235	31
Alberta	409	6
British Columbia	358	5
Manitoba	95	1
Other (Saskatchewan, Nova Scotia)	<u>130</u>	<u>2</u>
	<u>7 110</u>	<u>100</u>

CANADIAN IMPORTERS

Importers of AC industrial generators during the period January to December 1986, as indicated in this report, are listed below in alphabetical order. Where the importer is not the same as the consignee, (i.e. the recipient of the goods shipped), the name of the consignee rather than that of the importer is listed. The importer or consignee is not necessarily the end-user of the product.

NOTE: This list includes all importers except individuals.

<u>Name</u>	<u>Address</u>
A.F. Mundy Associates Canada Ltd.	Rexdale, Ont.
AG-Tronic Mfg. Ltd.	Rexdale, Ont.
	Laval, Qué.
Aircraft Appliances & Equip. Ltd.	Bramalea, Ont.
Ajax Magnethermic Ltd.	Ajax, Ont.
Angus, R. Alberta Ltd.	Calgary, Alta.
Atomic Energy of Canada Ltd.	Pinawa, Man.
Aviquipo of Canada Ltd.	Dorval, Qué.
Battlefield Equip. Rentals Ltd.	Stoney Creek, Ont.
Bendix Avelex Inc.	Montréal, Qué.
Bennett & Emmott Ltd.	Edmonton, Alta.
Canadian Contract Miners Ltd.	Gogama, Ont.
Canadian Meteorological Centre	Dorval, Qué.
Canassean Ltd.	Huron Park, Ont.
Caterpillar of Canada Ltd.	Mississauga, Ont.
Chesters Industrial Tool Supply Ltd.	Calgary, Alta.
Crothers Ltd.	Concord, Ont.
Cullen Detroit Diesel Allison Ltd.	Burnaby, B.C.
De Havilland Aircraft of Canada Ltd.	Downsview, Ont.
Desourdy/Traylor, Joint Venture Inc.	St-Hubert, Qué.
Équipements De Ferme J.P. Bonneau	St-François, Qué.
Faguy J.A. & Fils Ltée	Montréal, Qué.
Finning Tractor Co. Ltd.	Vancouver, B.C.
Friesen Electric Ltd.	Clearbrook, B.C.
GEC Diesels Inc.	Etobicoke, Ont.
General Coach, Div. of Citair Inc.	Hensall, Ont.
Génératrice Drummond (1981) Inc.	Drummondville, Qué.
Hallmark Tools Ltd.	Windsor, Ont.
Hewitt Equipment Ltd.	Montréal, Qué.
Homelite Terry, Div. of Textron Canada Ltd.	Pointe-Claire, Qué.
Honda Canada Inc.	Scarborough, Ont.
John White Ltd.	Halifax, N.S.

CANADIAN IMPORTERS (CONT'D)

<u>Name</u>	<u>Address</u>
Keewatin Electric & Diesels Ltd.	Winnipeg, Man.
Kockums Can Car Inc.	Surrey, B.C.
Land-Sea Power Ltd.	Vancouver, B.C.
Leroy-Somer Canada Ltée	Granby, Qué.
Mandem Inc.	Toronto, Ont.
	Calgary, Alta.
Maplex Ontario Ltd.	Concord, Ont.
Marlin Detroit Diesels Inc.	Ste-Foy, Qué.
Mechron Energy Ltd.	Ottawa, Ont.
Newage Equip. Ltd.	Islington, Ont.
Midas Muffler Inc.	Edmonton, Alta.
Midwest Detroit Diesel Ltd.	Winnipeg, Man.
Moteurs Électriques Laval Ltée	Montréal, Qué.
Omark Canada Ltd.	Guelph, Ont.
Ontario Bus Industries Inc.	Mississauga, Ont.
Otis Canada Inc.	Oakville, Ont.
	Montréal, Qué.
	Winnipeg, Man.
Peacock Inc.	Edmonton, Alta.
Polyquip of Canada Ltd.	St-Laurent, Qué.
Pryme Power & Diesel Ltd.	Saskatoon, Sask.
	Winnipeg, Man.
Robert Mitchell Co.	St-Laurent, Qué.
Seawest Engines Ltd.	Vancouver, B.C.
Seedless Unlimited Inc.	Leamington, Ont.
Siemens Electric Ltd.	Mississauga, Ont.
Simpson Power Products Ltd.	Coquitlam, B.C.
Suzuki Canada Inc.	Downsview, Ont.
Tampoprint Canada Inc.	Brantford, Ont.
TNT Distribution Centre Inc.	Winnipeg, Man.
	Mississauga, Ont.
TNT Stand-By Power Inc.	Kirkton, Ont.
Unit Rig & Equipment Co.	Natal, B.C.
WE Enterprises Ltd.	Mississauga, Ont.
Westinghouse Canada Ltd.	Hamilton, Ont.

FOREIGN EXPORTERS TO CANADA

Major exporters to Canada of AC industrial generators during the period January to December 1986, as shown in this report, are listed below. These exporters accounted for 81 per cent of the total analysed import value. Exporters are shown in two ranges of kw capacity: Under 150 kw and 150 kw and over. The exporters' names are shown in descending order of value, although some values are grouped in order to preserve confidentiality.

<u>Name</u>	<u>Address</u>	<u>Value of Imports</u> <u>(\$000)</u>
<u>Capacity Under 150 kw</u>		
Newage Engineers Ltd.	Stamford Lincs, United Kingdom)	
Suzuki Motor Co. Ltd.	Hamanatsu, Japan)	2 360*
Leroy Somers	Bordeaux France)	
Ag-Tronic Inc.	Kearney, NE United States	404
Kohler Co.	Kohler, WI United States	306
Kato Engineering Int.	Mankato, MN United States	137
Customs Engineering	Peoria, IL United States)	
Honda Motors	Tokyo Japan)	266*
The Imperial Electric Co.	Akron, OH United States)	
Welduction Inc.	Canton, MI United States)	180*
<u>Capacity 150 kw and over</u>		
Newage Engineers Ltd.	Stamford Lincs United Kingdom)	
Leroy Somers	Bordeaux France)	1 347*
A.C.E.O.	Orleans Cedex France)	
Brush Electrical Machines Ltd.	Loughborough United Kingdom)	
Kato Engineering In'l	Mankato, MN United States)	787*
Lucas Aerospace	Hemel Hempstead United Kingdom)	

CANADIAN SUPPLIERS

The following lists are taken from two sources: a) the Business Opportunities Sourcing System (BOSS), a computerized data bank established by the federal Department of Regional Industrial Expansion (DRIE) and b) the Canadian Trade Index, published by the Canadian Manufacturers' Association (CMA). These lists may not include all suppliers of the products in question, as companies must themselves register in BOSS or the Canadian Trade Index. In both cases, information of Canadian products supplied is as given by the companies.

BOSS

Canadian companies are arranged in alphabetical order within the following Canadian International Trade Classification (C.I.T.C.) commodity codes.

<u>Name</u>	<u>Address</u>
<u>503-09-20 Generators, AC under 150 kw</u>	
* Abax Energy Services	Calgary, Alta.
* Advance Power (1984) Inc.	Bramalea, Ont.
* Advanced Automated Equip. Ltd.	London, Ont.
* Lincoln Electric Co. of Canada Ltd.	Toronto, Ont.
* Simson-Maxwell	Vancouver, B.C.
* Telcom Research	Burlington, Ont.
* Thermax Energy Corp. Ltd.	Vankleek Hill, Ont.
Thompson Technology Inc.	Surrey, B.C.
<u>503-09-30 Generators, AC over 150 kw</u>	
* Abax Energy Services Ltd.	Calgary, Alta.
Canadian General Electric Co. Ltd.	Toronto, Ont.
* Lincoln Electric Co. of Canada Ltd.	Toronto, Ont.
* Simson-Maxwell	Vancouver, B.C.
Thompson Technology Inc.	Surrey, B.C.
Les Ateliers. Dynamos Energétiques Ltée	Cap-de-la-Madeleine, Qué.
Les Rabatisseurs G.T. Ltée	St-Léonard, Qué.
Lincoln Electric Co. of Canada Ltd.	Toronto, Ont.
* Lucas Industries Canada Ltd.	Richmond Hill, Ont.
Marine Industries Ltée	Montréal, Qué.
Quinte Alternator & Starter Ltd.	Belleville, Ont.
* Reliance Electric Ltd.	Stratford, Ont.
Reliance Telecommunication Products Ltd.	St. Thomas, Ont.
Reusinage Knight	Granby, Qué.
Thermax Corporation	Vankleek Hill, Ont.
Wilson Auto Electric Ltd.	Winnipeg, Man.

* Company engaged in export trade

Any enquiries and/or comments regarding the BOSS list should be directed to:

Business Opportunities Sourcing System (ABOS)
Department of Regional Industrial Expansion
235 Queen Street
Ottawa, Ontario
K1A 0H5
Telephone: (613) 954-5031
Telex: 053-4123

CANADIAN TRADE INDEX

Canadian companies are arranged in alphabetical order.

Generators or Alternators, Electric

(not necessarily the products described in this report)

<u>Name</u>	<u>Address</u>
* Advance Power Inc.	Bramalea, Ont.
* BBC Brown Boveri Canada Inc.	Pointe-Claire, Qué.
Barton-Earle Industries Ltd.	Toronto, Ont.
Binette Roland Inc.	Sherbrooke, Qué.
Canadian General Electric Co. Ltd.	Toronto, Ont.
* E-Mark Electric Equipment Co. Ltd.	Malton, Ont.
Eastern Auto Electric	Hamilton, Ont.
Kramer Tractor Ltd.	Regina, Sask.
Leroy-Somer Canada Ltd.	Granby, Qué.

* Indicates firms engaged in export trade

Any enquiries and/or comments regarding the Canadian Trade Index list should be directed to:

The Canadian Manufacturers' Association
One Yonge Street
Toronto, Ontario
M5E 1J9
Telephone: (416) 363-7261
Telex: 065-24693

CANADIAN AND FOREIGN TARIFFS

AC generators included in this analysis were dutiable under the following most commonly applied tariff items.

Tariff Item	Description	Tariff Treatment				
		British Preferential Tariff %	Most Favoured Nation Tariff %	General Tariff %	General Preferential Tariff %	U.K. and Ireland %
44514-1	Electric dynamos or generators and transformers, and complete parts thereof, n.o.p. on and after January 1, 1987	9.9	9.9	37.5	6	9.9
		9.2	9.2	37.5	6	9.2
44514-2	Electric dynamos or generators 150 kw and over; electric transformers 500 KVA and over; electric distribution transformers; complete parts thereof, n.o.p.	15	15	37.5	10	15

N.o.p. - Not otherwise provided for

Tariff Arrangements and Foreign Countries of Export:

Exporting countries which qualify for the Most Favoured Nation tariff treatment: Belgium, Denmark, France, Japan, Federal Republic of Germany, and the United States

Exporting countries which qualify for the Most Favoured Nation tariff treatment or U.K. and Ireland tariff treatment: United Kingdom

Enquiries concerning tariffs should be directed to the nearest Customs and Excise office or to:

TARIFF PROGRAMS
REVENUE CANADA
CUSTOMS AND EXCISE
OTTAWA, ONTARIO
K1A 0L5
TEL: (613) 954-6993

Foreign Countries

Enquiries concerning tariffs and other government trade regulations in foreign countries should be directed to:

INFO EXPORT
EXTERNAL AFFAIRS
OTTAWA, ONTARIO
K1A 0G2
TEL: (613) 993-6435 OR 1-800-267-8376

RECONCILIATION

The value reported in this import analysis does not correspond to official Statistics Canada figures for various reasons. Imports of AC generators during the calendar year 1986, as reported on documents analysed in this report, amounted to \$7 109 819. Reconciliation of the two total figures is as follows:

<u>Values Accounted For</u>	<u>Value</u> <u>(\$000)</u>
Documents referring to products which should have been classified elsewhere	84
Value reported by Statistics Canada but not included in this report (e.g. documents not available for processing and Canadian goods returned)	162
Documents not included in this analysis:	
a) individual shipments valued at <u>less</u> than \$7 000	1 880
b) generators used as parts for the locomotive and automotive industries	12 000
Total values reported in this import analysis	<u>7 110</u>
Total values accounted for as above	21 236
Total values published by Statistics Canada	21 236

STATISTICS CANADA BREAKDOWN OF ELECTRIC GENERATORS

In publishing import figures Statistics Canada classified electric generators according to the following Canadian International Trade Classification commodity codes:

	1986 <u>Values</u> (\$000)
<u>* Included in the analysis</u>	
<u>Generators, Alternating Current</u>	
503-09-20 Generators, AC Under 150 KW	5 112
503-09-30 Generators, AC 150 KW and Over	16 124
 <u>Excluded from the analysis</u>	
<u>Turbo-Generator Sets</u>	
503-13-20 Generator Sets, Gas Turbine	4 712
503-13-30 Generator Sets, Steam Turbine	1 649
503-13-40 Generator Sets, Hydraulic Turbine	0
 <u>Self-Contained Generator Sets and Lighting Outfits NES</u>	
503-15-20 Generator Sets, Diesel Engine, DC	165
503-15-30 Generator Sets, Diesel Engine, AC Under 50 KW	3 594
503-15-31 Generator Sets, Diesel Engine, AC 50 to 250 KW	1 213
503-15-32 Generator Sets, Diesel Engine, AC 251-1000 KW	2 417
503-15-33 Generator Sets, Diesel Engine, AC Over 1000 KW	1 603
503-15-40 Generator Sets, Gas Engine, DC	3 274
503-15-50 Generator Sets, Gas Engine, AC 5 KW and Under	6 062
503-15-51 Generator Sets, Gas Engine, AC Over 5 KW	2 270
503-15-90 Generator Sets, NES	3 431
 <u>Parts and Accessories for Generators NES</u>	
503-19-31 Armatures & Rotors, AC Generator	1 834
503-19-34 Stators, AC Generator	6 635
503-19-39 Armatures, Electric Generator NES	9
503-19-40 Frames, AC Generator	16
503-19-43 Coils, Generators, Electrical	123
503-19-50 Generators, AC, Accessories for	9 358
503-19-70 Exciters, Integral Part AC Generator	22
503-19-80 Terminals, Generator, AC	17
503-19-89 Generators, Electrical, AC Parts of NES	6 148

* See Reconciliation Appendix I.

DRIE REGIONAL OFFICES

Newfoundland
P.O. Box 8950
Parsons Building
90 O'Leary Avenue
St. John's, Newfoundland
A1B 3R9
Tel: (709) 772-4884

Prince Edward Island
P.O. Box 1115
Confederation Court Mall
134 Kent Street, Suite 400
Charlottetown, Prince Edward Island
C1A 7M8
Tel: (902) 566-7400

Nova Scotia
P.O. Box 940, Station M
1496 Lower Water Street
Halifax, Nova Scotia
B3J 2V9
Tel: (902) 426-2018

New Brunswick
P.O. Box 1210
Assumption Place
770 Main Street
Moncton, New Brunswick
E1C 8P9
Tel: (506) 857-6400

Québec
P.O. Box 247
Tour de la Bourse
800, Place Victoria, Suite 3800
Montréal, Québec
H4Z 1E8
Tel: (514) 283-8185

Ontario
4th Floor
Dominion Public Building
1 Front Street West
Toronto, Ontario
M5J 1A4
Tel: (416) 973-5000

Manitoba
P.O. Box 981
330 Portage Avenue
Room 608
Winnipeg, Manitoba
R3C 2V2
Tel: (204) 983-4090

Saskatchewan
Canada Building
6th Floor, 105-21st Street East
Saskatoon, Saskatchewan
S7K 0B3
Tel: (306) 975-4400

Alberta
Cornerpoint Building
10179 - 105th Street, Suite 505
Edmonton, Alberta
T5J 3S3
Tel: (403) 420-2944

British Columbia
P.O. Box 49178
Bentall Postal Station
Bentall Tower IV
1101 - 1055 Dunsmuir Street
Vancouver, British Columbia
V7X 1K8
Tel: (604) 666-0434

Yukon
Suite 301
108 Lambert Street
Whitehorse, Yukon
Y1A 1Z2
Tel: (403) 668-4655

Northwest Territories
P.O. Bag 6100
Precambrian Building
Yellowknife, Northwest Territories
X1A 1C0
Tel: (403) 920-8571

