

CATALOGUE No.

45-205

ANNUAL

c-1

NOT FOR LOAN  
NE S'EMPRUNTE PAS



STATISTICS STATISTIQUE  
CANADA CANADA

SEP 13 2009

LIBRARY  
BIBLIOTHÈQUE

# PETROLEUM REFINERIES

## 1960

Formerly the Petroleum Products Industry. Certain statistics — formerly included in this report have been transferred to 26-213 — The Crude Petroleum and Natural Gas Industry. See text for details.

### ANNUAL CENSUS OF MANUFACTURES

*Published by Authority of*  
The Honourable George Hees, Minister of Trade and Commerce

DOMINION BUREAU OF STATISTICS  
Industry and Merchandising Division

July, 1962  
6523-562

DOES NOT CIRCULATE  
Price 50 cents  
NE PAS PRÊTER

NE BEAMPKUNTE PAS  
KAYLON LON

STATISTISKE BUREAU  
COPENHAGEN

SEP 13 1900

BIBLIOTEK  
LIBRARY

NE PAS PRÊTER  
BIBLIOTEK

### SYMBOLS

The interpretation of the symbols used in the tables throughout this publication is as follows:

- .. figures not available.
- ... figures not appropriate or not applicable.
- nil or zero.
- <sup>P</sup> preliminary figures.



## EXPLANATORY NOTES

This report is one in a series of about 140 publications which present the results of the 1960 Census of Manufactures. Most reports in this series refer to specific industries, but there are summary reports for Canada and the provinces and for major industry groups. Adoption of the revised Standard Industrial Classification for 1960 compilations has necessitated changes in titles of many reports in this annual series. The content of many industries has also been affected (see following note on Industrial Classification).

Industry statistics given in these reports refer to number of establishments, employees, salaries and wages, cost of materials, supplies, fuel and electricity, gross value of shipments, inventories and value added by manufacturing. Details of materials used and products shipped are also given. Descriptions of the principal industry statistics, with special reference to 1960 are as follows:

### Period Covered

Firms are asked to submit figures for the calendar year, if at all possible, and most reports are on this basis. Financial year reports for periods differing from the calendar year are accepted in instances where the firms find it impossible to supply calendar year data from accounting records. However the data on employees, salaries and wages are requested on a calendar year basis in all cases.

### Establishment

Data for the annual census is collected on an establishment basis. A firm with more than one plant is required to file a report for each plant. In most cases an establishment is a complete factory; sometimes, however, a plant is divided into two or more establishments when it carries out operations classifiable to different industries and when separate accounting records are available. Usually the statistics for an establishment relate only to the manufacturing activities. Other activities such as construction at the plant by its own employees, wholesale or retail activities carried on at the plant location, etc., are not included. Plants engaged solely in repair work (except in the case of furniture, shipbuilding, boat building, aircraft and railway rolling stock industries) are not included but plants occupied in assembling parts into complete units are included.

### Employees

Administrative and office employees include all executives and supervisory officials such as presidents, vice-presidents, secretaries, treasurers, etc., together with managers, professional and technical employees, superintendents and factory supervisors above the working foremen level, and clerical employees. Working owners and partners are also included in this category.

Production and related workers include all other factory workmen whether paid on a monthly, weekly, hourly or piece-work basis. Working foremen doing work similar to that of the employees they supervise are included, as are maintenance, ware-

housing and delivery staffs. Employees on new construction work, in retail or wholesale operations, on outside piece work etc. are not included.

Production workers are reported by months, an average for the year being obtained by summing the monthly figures and dividing by twelve. This procedure is followed even though the plant did not operate in all months. Figures on employment refer to calendar years whether or not some establishments reported other data on a financial year basis.

### Salaries and Wages

Salaries and wages refer to gross earnings of the employees described above, including salaries, wages, commissions, bonuses, the value of room and board where provided, deductions for income tax and social services such as sickness and unemployment insurance, pensions, etc., as well as any other allowances forming part of the employees' wages. Payments for overtime are included.

Salaries refer to amounts paid to administrative and office employees. Withdrawals by working owners or partners for normal living expenses for self and family are included but not their withdrawals for income tax. Wages refer to the amounts paid to production and related workers as defined above. Data on earnings refer to the calendar year whether or not some establishments reported other data on a financial year basis.

### Cost of Fuel and Electricity

Figures for fuel refer to amounts actually used, (including fuel used in cars and trucks), not to purchases unless the quantities are the same. Values refer to the laid-down cost at the works, including freight, duty, etc.

### Materials and Supplies Used

Figures represent quantities and laid-down cost values, at the works, of materials and supplies actually used during the year whether purchased from others or received as transfers from other plants of the reporting company. Amounts paid to other manufacturers for work done on materials owned by the reporting company are included. Returnable containers or any other items charged to capital account are not included. Fuels are not included. Goods bought from others or received as transfers from other plants or reporting companies for resale without further processing are not included. Maintenance and repair supplies not chargeable to capital account are included.

### Factory Shipments

Factory shipments refer to shipments of goods made from own materials either in the reporting plant or by other manufacturers on the basis of a charge to the reporting plant for work done. All products and by-products shipped from the establishment are included whether for domestic use, export, or for government departments. Transfer shipments to sales outlets, distributing warehouses or to other manufacturing units of the reporting firm are included. Goods bought or received as transfers



and waste without further processing are not included. Values are computed on f.o.b. plant or plant warehouse basis, and do not include sales tax or excise duties. Values of containers not returnable are included. Amounts received in payment for work done on materials owned by others are included.

In a few industries such as shipbuilding, aircraft, etc., where work on principal products extend over a relatively long period, the value of production is recorded rather than the value of shipments. For those industries production is computed from the value of deliveries of complete units during the year plus the value of work done during the year on unfinished units less the value of work done in previous years on finished units delivered in the year under review.

### **Inventories**

Values represent the book values of manufacturing inventories owned and held at the reporting plant. Figures include inventories held in warehouses or selling outlets which have been included with plant operations for purposes of reporting shipments.

### **Value added by Manufacturing**

Figures are computed from value of shipments plus or minus changes in inventories of finished goods and goods in process less cost of materials, fuel and electricity. This figure is sometimes referred to as net production.<sup>1</sup>

### **Standard Industrial Classification**

The revised Standard Industrial Classification which has been introduced with the 1960 Census of Manufactures provides for a breakdown of the universe into 140 industries arranged in 20 major groups compared with 135 industries in 17 major groups in the old classification which was used in the compilations for the years 1949 to 1959 inclusive. It incorporates changes considered desirable on the basis of experience in using the earlier classification as well as those which take account of changes in the structure of Canadian industries associated with the rapid developments of the past decade. Full details are contained in the Standard Industrial Classification Manual, Catalogue No. 12-501, which is available from either the Queen's Printer or the Dominion Bureau of Statistics. Reporting establishments are classified or allotted to specific industries on the basis of the value of principal products made or shipped.

Many industries remain unchanged in the new classification but in many instances there have been substantial changes in content because of the shifting of establishments from one industry to another or in re-grouping of establishments. Where

<sup>1</sup> To arrive at the National Accounts concept of "gross domestic product at factor cost", it would be necessary to subtract also the cost of office supplies used, advertising, insurance and other goods and services obtained from other businesses. Data on these inputs are not collected on the annual Census of Manufactures. Value added figures for "The primary industries and construction" are published in D.B.S. publication 61-202, *Survey of Production*.

changes have occurred the principal statistics for 1957, 1958 and 1959 have been re-compiled to provide data on a basis comparable with those for 1960.

### **Short Forms**

Between 1949 and 1957, in an effort to ease the reporting burden for smaller firms, a short form was used asking for the total value of shipments only or, in a few cases where losses of detail were significant, for quantities and values of principal products. For purposes of publication, missing data were estimated on the basis of appropriate ratios. In general the cut-off point for these short forms was set at \$50,000 value of shipments. About 40% of the total number of establishments reported on the short form and accounted for less than 3 per cent of the total value of shipments.

In 1958, in order to establish a new base year, the small firms were asked to report all items of principal statistics together with some detail on materials and products.

For the 1959 Census, the short form was used again, but further steps were taken to ease the respondents' burden. First, the general limit for short forms was raised to \$100,000 value of shipments. In addition, a new intermediate form was developed. This form is a shortened version of the long form in that most of the general questions were pared down and the detailed lists of materials and products were limited to the more important items. The general limits for firms in this category were set at between \$100,000-\$500,000 value of shipments, but in the case of both the short and intermediate forms there were lower cut-offs for a number of industries in which the smaller firms accounted for a larger share of total shipments. On the other hand, limits were raised where this could be done without a significant loss of coverage. On most of the short forms for 1959, in addition to total value of shipments, data on principal products were requested. In a few industries, where loss of employment and earnings data were considered too large because of higher cut-offs, a question on total payroll was placed on the short form. This practice was followed again in 1960.

The intermediate and long forms provide complete data for the compilation of all elements of principal industry statistics and the details of materials and products. The one-page short form, although containing data on principal products and total value of shipments, does not request information on other elements of principal statistics such as value of inventories, materials, fuel and electricity and, in most cases, employment and salaries and wages, nor does it contain detailed data on volume and value of materials used. For purposes of compiling aggregates of principal statistics by industry and by geographic location, the missing data for each establishment were estimated for 1959 by using, in general, ratios based on the change in the value of shipments between 1958 and 1959. The proportion of the estimated data was generally less than 5 per cent of the total in each category of principal statistics.





# PETROLEUM REFINERIES

1960

Data presented in this report under the heading of Petroleum Refineries reflect implementation of the revised Standard Industrial Classification (SIC) which is being used by the Dominion Bureau of Statistics in its compilation of 1960 industry statistics—see item "Standard Industrial Classification" in the Explanatory Notes section of this report. For statistical purposes the industry titled Petroleum Refineries in the revised Standard Industrial Classification covers establishments primarily engaged in refining crude petroleum and in producing gasoline, fuel oils, lubricating oils, illuminating oils and other petroleum products. The industry also includes establishments primarily engaged in blending lubricating oils and greases which they have purchased. It might be noted, that for purposes of presentation of statistics in this report recognition is being given to Petroleum Refining and to Manufacturers of Lubricating Oils and Greases as sub-classifications within this industry group.

In many instances, adoption of the new Standard Industrial Classification effected a radical shifting of manufacturing establishments as between industry groupings. A significant element in the shift in the case of the industry reviewed in this report was the transfer of the Absorption Gasoline Plants to the Natural Gas Processing Plants group. The effect of the transfer is reflected in the comparative series of statistics presented in Tables 1A, 1B and 2. Other than this, changes in compilation were minimal. However, the effect of the change of basis of valuation as indicated in footnote to Table 1B should be noted.

There were 60 establishments classified as Petroleum Refineries in 1960; of which 1 was in Nova Scotia, 2 in New Brunswick, 8 in Quebec, 17 in Ontario, 4 in Manitoba, 7 in Saskatchewan, 13 in Alberta, 7 in British Columbia and 1 in Northwest Territories. Employees in the industry numbered 13,786; salaries and wages totalled \$81,892,385; fuel and electricity cost \$49,396,192; materials used in manufacturing processes cost \$860,908,787; and factory shipments were valued at \$1,175,045,254. The principal statistics are tabulated in Tables 1 to 7 and the detailed figures are recorded separately in the succeeding pages of this report. The results of a special (annual) survey on sales of lubricating oils are given in Tables 26 and 27.

There were 44 establishments in the Petroleum Refining classification, that is, firms primarily engaged in refining crude petroleum. Shipments by these establishments were valued at \$1,148,943,021; including motor gasoline at \$520,956,228; kerosene, stove oil and tractor fuel at \$64,213,680; diesel fuel

at \$112,912,599; light fuel oils at \$197,692,418; heavy fuel oils at \$87,305,438. The number employed totalled 13,400 persons; salaries and wages paid amounted to \$80,051,281; expenditures for materials amounted to \$841,631,957; fuel and electricity at plants cost \$49,256,438.

Sixteen other establishments were occupied chiefly in compounding lubricating oils and greases. Factory shipments of all products made by these establishments were valued at \$26,102,233; which included lubricating oils at \$22,682,957, and lubricating greases at \$2,930,617. Employees numbered 386 and payments for salaries and wages totalled \$1,841,104. Materials used in manufacturing cost \$19,276,830, and fuel and electricity at plants cost \$139,754.

Note: Figures for value added by manufacture prior to 1952 were obtained by subtracting the cost of materials used, including fuel and electricity, from the value of production. In 1952 the gross value of production was replaced by value of factory shipments f.o.b. plant for the Lubricating Oils and Greases portion of this group. The Petroleum Refining firms continued to report value of production (until 1959).

For 1954 and 1955 the "value added" adjustment for the Lubricating Oils and Greases group incorporated the increase or decrease in shipments' values resulting from changes in the value of inventories over the period. For these two years, the adjustments made used only the change in finished product inventory owned by manufacturers. Beginning with 1956 the calculation of the "value added" figure was further adjusted to take into account "Goods in process" as well as "Finished goods" held at plant or plant warehouse.

The "value added" figures for Petroleum Refining continued, to the end of 1958, to be calculated on the basis used prior to 1952. Commencing with 1959 the "value added" figure is adjusted as a result of a change which was instituted in the basis of valuation used by the refining companies in reporting the value of products. In 1959 firms were asked to report the value of their products at a level which would approximate as closely as possible their manufacturing (refining) selling value. That is, products are reported at a valuation which represents value of factory shipments rather than value of production. The "value added" figure is modified further by an adjustment which takes into account the changes in "Finished goods" and "Goods in process" inventories.



**TABLE 1 A. Principal Statistics of the Petroleum Products Industry, Significant Years 1929-58 and by Provinces, 1958**

Basis: Standard Industrial Classification in use prior to 1960

Year and province	Estab- lish- ments	Em- ployees	Salaries and wages	Cost of fuel and electricity at plant	Cost at plant of materials used	Value added by manufacture <sup>1</sup>	Gross selling value of products <sup>1</sup>
	number		dollars				
1929 .....	25	4,978	8,153,625	3,754,655	76,861,939	18,791,720	99,408,314
1933 .....	47	4,628	6,141,945	3,137,719	49,187,757	17,942,789	70,268,265
1937 .....	57	5,137	8,246,843	4,450,005	80,401,880	13,602,129	98,454,014
1939 .....	53	4,766	7,890,247	4,578,699	74,465,600	25,534,218	104,578,517
1944 .....	48	6,809	14,317,939	9,002,567	153,558,664	47,986,185	210,547,416
1946 .....	43	7,145	14,849,141	10,159,025	155,818,744	57,447,611	223,425,380
1949 .....	47	9,413	26,142,276	16,852,060	336,973,056	82,971,097	436,796,213
1955 .....	61	13,340	57,892,387	32,593,790	642,872,134	373,368,531	1,048,834,455
1956 .....	61	13,925	66,341,638	43,127,224	766,375,257	444,427,813	1,253,798,979
1957 .....	64	14,308	73,887,074	52,398,424	827,470,815	497,029,225	1,376,558,762
1958 .....	71	14,490	76,643,818	51,052,196	829,920,509	487,678,382	1,368,649,087
<b>1958</b>							
Quebec .....	8	2,969	15,930,421	16,710,356	279,375,653	171,663,141	467,749,150
Ontario .....	14	5,337	29,374,546	16,904,326	255,695,530	120,861,674	393,461,530
Manitoba .....	4	703	2,910,954	2,124,043	34,189,442	20,749,388	57,062,873
Saskatchewan .....	11	1,183	5,872,466	2,911,856	50,255,873	29,241,309	82,409,038
Alberta .....	22	2,214	11,534,922	4,257,904	81,538,769	64,278,456	150,075,129
British Columbia .....	9	1,551	8,129,287	4,495,609	77,570,220	51,558,413	133,624,242
Nova Scotia .....	1	533	2,891,222	3,648,102	51,295,022	29,324,001	84,267,125
New Brunswick .....	1						
Northwest Territories ..	1						
Canada .....	71	14,490	76,643,818	51,052,196	829,920,509	487,676,382	1,368,649,087

<sup>1</sup> See note to text.

**TABLE 1 B. Principal Statistics: Petroleum Refineries, by Provinces, 1959 and 1960**

Basis: Standard Industrial Classification revised 1960

Year and province	Estab- lish- ments	Em- ployees	Salaries and wages	Cost of fuel and electricity at plant	Cost at plant of materials used	Value added by manufacture <sup>1</sup>	Gross selling value of products
	number		dollars				
<b>1959</b>							
Quebec .....	7	2,775	16,287,759	15,217,629	282,756,426		371,207,394
Ontario .....	15	5,500	33,166,260	18,691,005	283,851,066		360,249,922
Manitoba .....	4	674	3,101,435	2,235,974	33,857,528		49,613,455
Saskatchewan .....	7	1,048	5,628,438	3,109,436	53,383,494		78,232,006
Alberta .....	12	1,770	9,905,087	3,764,124	77,955,374		109,339,088
British Columbia .....	7	1,441	8,097,599	4,855,936	76,464,765		103,867,476
Nova Scotia .....	1	483	2,860,105	3,163,880	48,493,509		67,364,526
New Brunswick .....	1						
Northwest Territories ..	1						
Canada .....	55	13,691	79,046,683	51,037,984	856,762,162		1,139,873,867

See footnotes at end of table.



**TABLE 1 B. Principal Statistics: Petroleum Refineries, by Provinces, 1959 and 1960 — Concluded**  
Basis: Standard Industrial Classification revised 1960

Year and province	Estab-lish-ments	Em-ployees	Salaries and wages	Cost of fuel and electricity at plant	Cost at plant of materials used	Value added by manufacture <sup>1</sup>	Gross selling value of products
	number			dollars			
<b>1960</b>							
Quebec .....	8	2,859	17,032,051	15,009,701	278,546,597	85,799,884	374,098,269
Ontario .....	17	5,418	33,483,801	16,835,686	271,020,251	72,039,898	359,326,299
Manitoba .....	4	670	3,247,125	2,332,031	34,350,664	13,440,226	51,617,545
Saskatchewan .....	7	1,037	5,897,644	3,147,446	52,564,069	18,559,283	75,433,288
Alberta .....	13	1,702	9,913,323	4,164,414	74,576,053	31,321,789	109,856,987
British Columbia .....	7	1,379	8,440,519	4,560,161	78,556,066	22,617,965	106,688,286
Nova Scotia .....	1	721	3,877,922	3,346,753	71,295,087	26,874,164	98,024,580
New Brunswick .....	2						
Northwest Territories ..	1						
<b>Canada .....</b>	<b>60</b>	<b>13,786</b>	<b>81,892,385</b>	<b>49,396,192</b>	<b>860,908,787</b>	<b>270,653,209</b>	<b>1,175,045,254</b>

<sup>1</sup> See note to text.

<sup>2</sup> The changeover to the new classification has delayed the recompilation of "Value added" figures for this year and same will not be available until the next issue of this report.

Note: The apparent decline shown in "Value added" and "Gross selling value of products" by the Petroleum Refineries was due primarily to a change in the basis of valuation used by the refining companies in calculating the value of products made. Since 1954 most of the major refiners have reported value of products in the annual Census of Manufacturers at a valuation nearer the marketing (wholesale) level than the manufacturing (refining) selling value. In order to bring the level of valuation more in line with the manufacturing level as reported by other industries in the annual Census of Manufacturers all firms classified as Petroleum Refineries were asked in 1959 to report the value of their products at a level which would approximate as closely as possible a manufacturing (refining) selling value. For further data on comparison of "Factory shipments" and "Value added", "new" basis versus "old" basis, see 1959 report titled "The Petroleum Products Industry".

**TABLE 2. Principal Statistics: Petroleum Refineries, by Sub-groups, 1959 and 1960**

Group	Estab-lish-ments	Em-ployees	Salaries and wages	Cost of fuel and electricity at plant	Cost at plant of materials used	Value added by manufacture <sup>1</sup>	Gross selling value of products
	number			dollars			
<b>1959</b>							
Petroleum refining .....	41	13,404	77,754,671	50,898,934	844,391,819		1,121,398,486
Manufacturers of lubri-cating oils and greases	14	287	1,292,012	139,050	12,370,343	<sup>2</sup>	18,475,381
<b>Totals .....</b>	<b>55</b>	<b>13,691</b>	<b>79,046,683</b>	<b>51,037,984</b>	<b>856,762,162</b>		<b>1,139,873,867</b>
<b>1960</b>							
Petroleum refining .....	44	13,400	80,051,281	49,256,438	841,631,957	263,252,142	1,148,943,021
Manufacturers of lubri-cating oils and greases	16	386	1,841,104	139,754	19,276,830	7,401,067	26,102,233
<b>Totals .....</b>	<b>60</b>	<b>13,786</b>	<b>81,892,385</b>	<b>49,396,192</b>	<b>860,908,787</b>	<b>270,653,209</b>	<b>1,175,045,254</b>

<sup>1</sup> See note to text.

<sup>2</sup> The changeover to the new classification has delayed the recompilation of "Value added" figures for this year and same will not be available until the next issue of this report.

Note: See footnote to Table 1 B for explanation of change in the basis of valuation.



TABLE 3. Inventories:<sup>1</sup> Petroleum Refineries, 1960

	Raw materials and supplies	Goods in process	Finished goods of own manufacture	Total
dollars				
(a) By sub-groups				
Opening:				
Petroleum refining .....	36,400,862	16,091,434	107,192,339	159,684,635
Manufacturers of lubricating oils and greases.....	420,972	2,236,793	1,050,480	3,708,245
<b>Totals .....</b>	<b>36,821,834</b>	<b>18,328,227</b>	<b>108,242,819</b>	<b>163,392,880</b>
Closing:				
Petroleum refining .....	38,881,853	18,012,073	110,469,216	167,363,142
Manufacturers of lubricating oils and greases.....	510,351	2,741,547	1,261,144	4,513,042
<b>Totals .....</b>	<b>39,392,204</b>	<b>20,753,620</b>	<b>111,730,360</b>	<b>171,876,184</b>
(b) By provinces				
Opening:				
Quebec.....	12,922,845	3,705,737	31,955,680	48,584,262
Ontario.....	14,580,516	9,018,229	30,875,891	54,474,636
Manitoba .....	938,204	530,901	6,667,930	8,137,035
Saskatchewan .....	1,857,680	828,894	9,706,582	12,393,156
Alberta.....	2,458,575	1,692,166	12,940,804	17,091,545
British Columbia .....	2,493,481	1,834,468	11,538,103	15,866,052
Other provinces .....	1,570,533	717,832	4,557,829	6,846,194
<b>Canada.....</b>	<b>36,821,834</b>	<b>18,328,227</b>	<b>108,242,819</b>	<b>163,392,880</b>
Closing:				
Quebec.....	12,591,887	5,179,224	35,740,106	53,511,217
Ontario.....	14,293,238	8,531,290	31,932,366	54,756,894
Manitoba .....	940,686	311,390	5,392,817	6,644,893
Saskatchewan .....	1,760,873	983,503	8,389,483	11,133,859
Alberta.....	2,659,227	1,810,728	13,027,511	17,497,466
British Columbia .....	2,091,555	1,883,217	10,535,260	14,510,032
Other provinces .....	5,054,738	2,054,268	6,712,817	13,821,823
<b>Canada.....</b>	<b>39,392,204</b>	<b>20,753,620</b>	<b>111,730,360</b>	<b>171,876,184</b>

<sup>1</sup> Book value of all manufacturing inventories owned and held at plant and plant warehouses.

TABLE 4. Principal Statistics classified according to Type of Ownership, Petroleum Refineries, 1960

Type	Estab-lish-ments	Em-ployees	Salaries and wages	Cost of fuel and electricity	Cost at plant of materials used	Gross selling value of products
	number		dollars			
Co-operatives .....	1	} 13,786	81,892,385	49,396,192	860,908,787	1,175,045,254
Incorporated companies .....	59					
<b>Totals .....</b>	<b>60</b>	<b>13,786</b>	<b>81,892,385</b>	<b>49,396,192</b>	<b>860,908,787</b>	<b>1,175,045,254</b>





**TABLE 5. Principal Statistics grouped according to Selling Value of Factory Shipments, Petroleum Refineries, 1960**

Establishments reporting a value of products	Estab-lish-ments	Em-ployees	Salaries and wages	Cost of fuel and electricity	Cost at plant of materials used	Gross selling value of products
Under \$10,000 .....	1	8	21,664	2,012	22,943	64,377
\$ 10,000 to \$ 49,999 .....	2					
50,000 " 99,999 .....	3					
100,000 " 199,999 .....	1	21	78,100	8,500	203,000	416,091
200,000 " 499,999 .....	3					
500,000 " 999,999 .....	2	58	235,279	18,258	1,321,456	2,282,478
1,000,000 " 4,999,999 .....	14					
5,000,000 and over .....	34	9,991	58,390,812	47,642,681	836,809,308	1,136,998,595
Head offices .....	—	2,934	19,022,610	—	—	—
<b>Totals .....</b>	<b>60</b>	<b>13,786</b>	<b>81,892,385</b>	<b>49,396,192</b>	<b>860,908,787</b>	<b>1,175,045,254</b>

**TABLE 6. Capital and Repair Expenditures: Petroleum Refineries, 1956 - 60**

Year	Capital expenditures		Sub-total	Repair and maintenance expenditures		Sub-total	Total capital and repair expenditures
	Construction	Machinery and equipment		Construction	Machinery and equipment		
	thousands of dollars						
1956 .....	74,680	4,389	79,069	20,871	4,232	25,103	104,172
1957 .....	77,308	4,179	81,487	24,869	3,576	28,445	109,932
1958 .....	93,113	5,376	98,489	22,301	3,658	25,959	124,448
1959 .....	85,578	9,558	95,136	24,087	3,740	27,827	122,983
1960 <sup>P</sup> .....	69,000	7,160	76,160	21,561	2,960	24,521	100,681

**TABLE 7. Employees and their Earnings: Petroleum Refineries, 1959 and 1960**

Province	Employees					Earnings		
	Supervisory and office		Production workers		Total	Supervisory and office	Production workers	Total
	Male	Female	Male	Female				
	number					dollars		
<b>1959</b>								
Quebec .....	788	105	1,874	8	2,775	5,931,959	10,355,800	16,287,759
Ontario .....	2,410	859	2,202	29	5,500	21,002,197	12,164,063	33,166,260
Manitoba .....	187	162	325	—	674	1,485,407	1,616,028	3,101,435
Saskatchewan .....	276	58	712	2	1,048	2,047,464	3,580,974	5,628,438
Alberta .....	554	141	1,067	8	1,770	4,393,908	5,511,179	9,905,087
British Columbia .....	491	104	846	—	1,441	3,730,926	4,366,673	8,097,599
Other provinces .....	90	23	358	12	483	857,020	2,003,085	2,860,105
<b>Canada .....</b>	<b>4,796</b>	<b>1,452</b>	<b>7,384</b>	<b>59</b>	<b>13,691</b>	<b>39,448,881</b>	<b>39,597,802</b>	<b>79,046,683</b>
<b>1960</b>								
Quebec .....	825	127	1,900	7	2,859	6,094,811	10,937,240	17,032,051
Ontario .....	2,355	812	2,223	28	5,418	21,008,909	12,474,892	33,483,801
Manitoba .....	185	171	314	—	670	1,537,405	1,709,720	3,247,125
Saskatchewan .....	299	56	680	2	1,037	2,319,503	3,578,141	5,897,644
Alberta .....	535	132	1,029	6	1,702	4,393,783	5,519,540	9,913,323
British Columbia .....	465	99	815	—	1,379	3,817,263	4,623,256	8,440,519
Other provinces .....	143	35	532	11	721	1,098,515	2,779,407	3,877,922
<b>Canada .....</b>	<b>4,807</b>	<b>1,432</b>	<b>7,493</b>	<b>54</b>	<b>13,786</b>	<b>40,270,189</b>	<b>41,622,196</b>	<b>81,892,385</b>



TABLE 8. Production Workers, by Months: Petroleum Refineries, 1960

Month	Male	Female	Total
January .....	7,351	53	7,404
February .....	7,281	53	7,334
March .....	7,273	53	7,326
April .....	7,337	54	7,391
May .....	7,540	54	7,594
June .....	7,671	55	7,726
July .....	7,802	55	7,857
August .....	7,769	56	7,825
September .....	7,588	54	7,642
October .....	7,484	54	7,538
November .....	7,420	53	7,473
December .....	7,389	53	7,442
<b>Averages</b> .....	<b>7,493</b>	<b>54</b>	<b>7,547</b>

TABLE 9. Fuel and Electricity Used: Petroleum Refineries, 1960

Kind	Quantity	Cost at plant
		\$
Bituminous coal .....	ton 530	5,331
Coke <sup>1</sup> .....	" 380,480	3,431,602
Gasoline (including gasoline used in cars and trucks) .....	Imp. gal. 909,352	171,437
Fuel oil (including kerosene or coal oil) .....	" 333,332,602	19,605,191
Gas (a) Liquefied petroleum gases .....	" 11,761,727	632,991
(b) Other manufactured gas .....	M cu. ft. 41,198,717	16,399,385
(c) Natural gas .....	" 7,865,621	1,618,465
Other fuel .....	..	9,512
Electricity purchased .....	kwh. 1,099,367,995	7,463,938
Steam purchased .....	...	58,340
<b>Total</b> .....	...	<b>49,396,192</b>

<sup>1</sup> Includes catalytic carbon reported as petroleum coke under this heading.



TABLE 10. Imports of Petroleum and its Products, 1959 and 1960

Item	1959		1960		
	Quantity	Value \$	Quantity	Value \$	
Asphaltum or asphalt, solid or not .....	cwt.	708,715	946,802	554,246	691,969
Asphaltum oil, for paving purposes .....	gal.	922,602	104,429	1,315,494	138,831
Oil for the concentration of ores .....	"	220,570	310,570	245,105	355,945
Crude petroleum .....	bb.	115,288,643	277,495,191	125,559,631	283,172,198
Petroleum tops; blends of petroleum tops or petroleum products with crude petroleum; all the foregoing .7249 sp. gr. (63.7 A.P.I.) or heavier, at 60 degrees fahrenheit, for refining .....	gal.	-	-	-	-
Fuel oil, ex-warehoused for ship's stores .....	"	1,413,773	81,860	471,882	36,877
Aviation gasoline .....	"	98,913,474	17,538,376	60,979,190	10,295,822
Kerosene n.o.p., including illuminating oil, longtime burning oil and kerosene crystallite .....	"	20,597,125	2,346,309	29,935,380	2,928,834
Petroleum oil known as engine distillate .8017 sp. gr. (A.P.I.) or heavier at 60 degrees fahrenheit .....	"	13,139	2,984	19,620	3,220
Lubricating oils, petroleum, less than 25 cents per gallon .....	"	27,071,206	5,416,888	20,836,171	4,579,353
Lubricating oils, petroleum, 25 cents per gallon or more .....	"	13,868,615	6,440,438	20,184,714	8,246,313
Oils, all other, n.o.p. ....	"	719,003	929,746	762,915	1,084,983
Stove oil, No. 1 fuel oil, including range oil and stove distillate (A.P.I. 39 to 35) .....	"	191,280,769	19,164,851	128,472,935	12,678,957
Light fuel and furnace oils, Nos 2 and 3 (A.P.I. 34 to 26) .....	"	311,900,014	29,574,707	244,354,195	21,703,222
Heavy fuel oils, Nos. 4, 5 and 6, Bunker A, B, and C, and navy (A.P.I. 25 to 0) .....	"	435,213,625	23,588,643	470,375,390	24,149,468
Diesel fuel .....	"	56,891,796	5,492,970	94,324,633	8,284,042
Petroleum and lubricating greases n.o.p. ....	lb.	16,609,865	2,138,547	16,510,735	2,184,440
Petroleum jellies and oils for toilet, medicinal and similar purposes .....		-	834,965	-	816,957
Wax, paraffine .....	lb.	48,221,174	2,863,650	21,114,455	2,564,720
Candles, paraffine wax .....	"	438,829	136,772	596,009	179,772
Products of petroleum n.o.p. ....	gal.	23,826,168	4,366,512	32,348,966	5,501,546
Liquefied petroleum gases .....	"	3,181,934	625,479	5,293,419	1,067,915
Naphtha, including solvent naphtha .....	"	10,188,897	2,249,336	11,671,910	2,118,531
Gasoline, natural casinghead; compression or absorption gasoline; lighter than .6652 sp. gr. at 60 degrees fahrenheit, when imported by refiners of crude petroleum for blending with other gasoline wholly produced in Canada .....	"	-	-	-	-
Gasoline, lighter than .8236 sp. gr. at 60 degrees fahrenheit, n.o.p. ....	"	95,052,104	12,960,767	31,036,182	4,494,053

TABLE 11. Exports of Petroleum and its Products, 1959 and 1960

Item	1959		1960		
	Quantity	Value \$	Quantity	Value \$	
Coke, petroleum .....	ton	49,450	1,778,594	36,431	1,104,840
Petroleum, crude .....	gal.	1,167,678,190	74,541,292	1,478,222,795	94,450,014
Oil, coal and kerosene, refined .....	"	5,775	1,201	607,390	65,869
Gasoline and naphtha .....	"	18,923,118	2,518,571	47,613,156	5,959,053
Fuel oil .....	"	31,733,018	2,886,847	25,369,055	2,126,802
Lubricating oil .....	"	236,972	191,198	212,893	80,282
Oil, mineral, n.o.p. ....	"	49,155	9,555	97,793	16,891
Wax, mineral .....	cwt.	3,569	38,348	5,547	55,390



TABLE 12. Principal Statistics: Petroleum Refining, 1958 - 60

Year	Estab- lish- ments	Em- ployees	Salaries and wages	Cost of fuel and electricity at plant	Cost at plant of materials used	Value added by manufacture	Gross selling value of products <sup>1</sup>
	number		dollars				
1958 .....	42	13,799	73,366,863	50,194,192	809,113,787	180,740,465	1,040,048,444
1959 .....	41	13,404	77,754,671	50,898,934	844,391,819	230,095,196	1,121,398,486
1960 .....	44	13,400	80,051,281	49,256,438	841,631,957	263,252,142	1,148,943,021

<sup>1</sup> "New" basis of valuation. See footnote to Table 1 B for explanation of change in basis of valuation.

TABLE 13. Principal Statistics: Petroleum Refining by Provinces, 1959 and 1960

Province	Estab- lish- ments	Em- ployees	Salaries and wages	Cost of fuel and electricity at plant	Cost at plant of materials used	Value added by manufacture	Gross selling value of products
	number		dollars				
<b>1959</b>							
Quebec .....	5	2,716	16,031,218	15,181,918	279,284,624	69,845,642	364,984,206
Ontario .....	7	5,302	32,258,394	18,598,027	276,785,781	56,374,620	350,497,047
Manitoba .....	3	668	3,082,613	2,231,834	33,651,185	14,415,442	49,306,264
Saskatchewan .....	6	1,042	5,604,234	3,107,137	53,296,177	22,726,361	78,110,254
Alberta .....	10	1,752	9,820,508	3,760,202	76,415,778	30,006,376	107,268,713
British Columbia .....	7	1,441	8,097,599	4,855,936	76,464,765	23,443,412	103,867,476
Other provinces <sup>1</sup> .....	3	483	2,860,105	3,163,880	48,493,509	13,283,343	67,364,526
<b>Canada .....</b>	<b>41</b>	<b>13,404</b>	<b>77,754,671</b>	<b>50,898,934</b>	<b>844,391,819</b>	<b>230,095,196</b>	<b>1,121,398,486</b>
<b>1960</b>							
Quebec .....	6	2,799	16,760,398	14,975,362	275,069,147	82,835,193	367,956,705
Ontario .....	7	5,119	32,039,091	16,740,376	257,021,648	68,248,858	341,831,405
Manitoba .....	3	666	3,234,125	2,328,031	34,200,664	13,347,097	51,356,945
Saskatchewan .....	6	1,032	5,877,144	3,145,446	52,524,069	18,512,054	75,338,011
Alberta .....	11	1,684	9,822,082	4,160,309	72,965,276	30,816,811	107,747,089
British Columbia .....	7	1,379	8,440,519	4,560,161	78,556,066	22,617,965	106,688,286
Other provinces <sup>2</sup> .....	4	721	3,877,922	3,346,753	71,295,087	26,874,164	98,024,580
<b>Canada .....</b>	<b>44</b>	<b>13,400</b>	<b>80,051,281</b>	<b>49,256,438</b>	<b>841,631,957</b>	<b>263,252,142</b>	<b>1,148,943,021</b>

<sup>1</sup> Includes one refinery in each of Nova Scotia, New Brunswick and Northwest Territories.

<sup>2</sup> Includes one refinery in Nova Scotia and Northwest Territories and two in New Brunswick.

Note: See footnote to Table 1 B for explanation of change in the basis of valuation.

TABLE 14. Products Made: Petroleum Refining, 1959 and 1960

Product	1959		1960		
	Quantity	Gross selling value at plant	Quantity	Gross selling value at plant	
		\$		\$	
<b>Made for sale:</b>					
Gasoline (excluding imported casing head-blended)					
Aviation gasoline .....	barrel	677,959	5,994,493	1,280,422	10,651,116
Motor gasoline .....	"	95,499,076	498,706,016	101,381,604	520,956,228
Naphtha specialties .....	"	707,208	4,261,568	1,481,845	8,075,251
Aviation turbine fuel .....	"	4,277,429	17,028,245	4,879,032	18,810,583
Kerosene, stove oil (No. 1 fuel oil) and tractor fuel .....	"	13,904,661	60,668,246	14,611,463	64,213,680
Diesel fuel .....	"	27,482,962	111,697,948	28,192,990	112,912,599
Light fuel oils (Nos. 2 and 3) .....	"	48,318,017	200,095,285	48,621,017	197,692,418
Heavy fuel oils (Nos. 4, 5 and 6) .....	"	36,786,243	83,609,892	38,043,052	87,305,438
Lubricating oil and grease .....	"	2,024,847	26,213,332	1,754,909	21,438,593
Asphalt .....	"	9,098,825	29,687,350	9,557,842	30,484,369
Petroleum coke .....	ton	196,258	1,775,275	177,619	1,659,910
Petrochemical feed stocks .....	barrel	6,236,695	21,040,843	3,618,606	11,338,350
Liquefied petroleum gases .....	"	2,998,104	9,228,174	4,075,099	11,385,249
Other products <sup>1</sup> .....	"	—	9,605,762	—	10,934,407
<b>Totals, made for sale .....</b>		<b>—</b>	<b>1,079,612,429</b>	<b>—</b>	<b>1,107,858,191</b>

See footnote at end of table.





TABLE 14. Products Made: Petroleum Refining, 1959 and 1960 - Concluded

Product	1959		1960	
	Quantity	Gross selling value at plant	Quantity	Gross selling value at plant
		\$		\$
<b>Made for own use:</b>				
Gasoline .....	barrel 19,926	123,288	16,324	90,752
Naphtha specialties .....	" 2,204	16,329	3,191	19,132
Kerosene, stove oil (No. 1 fuel oil) and tractor fuel .....	" 2,630	11,504	338	1,890
Diesel fuel .....	" 150,443	503,364	5,419	23,108
Light fuel oils (Nos. 2 and 3) .....	" 15,298	77,899	6,360	27,578
Heavy fuel oils (Nos. 4, 5 and 6) .....	" 9,013,518	19,166,959	9,583,234	19,623,871
Lubricating oil and grease .....	" 3,545	44,713	4,745	56,434
Asphalt .....	" 5,228	17,753	5,173	15,742
Petroleum coke <sup>1</sup> .....	ton 333,322	3,235,851	357,360	3,231,592
Still gas .....	M cu. ft. 38,199,166	16,683,233	42,127,902	16,860,750
Other products .....	-	1,905,164	-	1,133,981
<b>Totals, made for own use .....</b>	<b>-</b>	<b>41,786,057</b>	<b>-</b>	<b>41,084,830</b>
<b>Grand totals .....</b>	<b>-</b>	<b>1,121,398,486</b>	<b>-</b>	<b>1,148,943,021</b>

<sup>1</sup> Includes candles, alkylate, naphthenic acid, etc. These items were reported by fewer than three companies, so in accordance with the provisions of the Statistics Act, the figures cannot be shown separately.

<sup>2</sup> The totals for 1959 and 1960 include some catalytic carbon which was included under "Other products" prior to 1958.

TABLE 15. Materials Used: Petroleum Refining, 1959 and 1960

Material	1959		1960	
	Quantity	Cost at plant	Quantity	Cost at plant
		\$		\$
Crude oil in its natural state, from Canadian wells .....	barrel 150,045,555	438,596,142	149,105,017	426,412,814
Absorption gasoline, etc., from Canadian wells (run to stills) .....	" 2,097,474	5,898,446	2,928,817	7,726,969
Crude oil, in its natural state, imported, (run to stills):				
From United States .....	barrel -	-	-	-
From South America .....	barrel 73,329,222	204,529,049	74,296,668	199,404,814
From other countries .....	" 41,645,750	115,123,260	50,675,361	135,615,337
Crude oil, not in its natural state (run to stills) .....	" 624,520	3,062,130	879,850	4,242,659
Benzol .....	" 113,415	1,423,573	155,077	2,476,128
Alkylate and cumene .....	" 194,539	1,373,371	293,114	2,136,169
Phenol .....	lb. 846,096	150,743	1,181,771	206,783
Sulphuric acid, 100% .....	" 37,740,292	645,969	33,864,433	562,099
Ammonia, anhydrous .....	" 834,698	88,478	761,030	101,844
Sulphur .....	" 438,770	20,235	396,026	17,850
Caustic soda .....	" 17,153,146	697,774	20,308,524	839,382
Soda ash .....	" 1,405,053	49,430	897,695	31,518
Litharge .....	" 228,495	35,383	340,909	52,336
Fuller's earth, bentonite and other clays .....	ton 1,176	70,299	1,893	123,421
Tetraethyl fluid .....	lb. 41,181,044	15,347,249	41,561,046	15,160,984
Dyes for gasoline .....	" ..	99,423	" ..	95,502
Inhibitor .....	" ..	694,187	" ..	824,494
Fluid catalytic cracking unit catalysts (Aerocat, Nalcat, Filtrol 100, FCCU catalysts, etc.) .....	" ..	4,839,338	" ..	4,565,741
Reforming or polymerization catalysts .....	" ..	1,386,478	" ..	1,459,815
Additives .....	" ..	4,465,637	" ..	2,150,770
Other materials .....	" ..	35,529,567	" ..	28,368,824
Shipping containers .....	" ..	10,265,658	" ..	9,055,704
<b>Totals .....</b>	<b>...</b>	<b>844,391,819</b>	<b>...</b>	<b>841,631,957</b>



TABLE 16. Employees and their Earnings: Petroleum Refining, 1959 and 1960

Province	Employees					Earnings		
	Supervisory and office		Production workers		Total	Supervisory and office	Production workers	Total
	Male	Female	Male	Female				
	number					dollars		
<b>1959</b>								
Quebec .....	780	99	1,830	7	2,716	5,873,151	10,158,067	16,031,218
Ontario .....	2,367	840	2,070	25	5,302	20,697,500	11,560,894	32,258,394
Manitoba .....	187	161	320	—	668	1,482,379	1,600,234	3,082,613
Saskatchewan .....	274	57	709	2	1,042	2,033,982	3,570,252	5,604,234
Alberta .....	550	140	1,054	8	1,752	4,366,659	5,453,849	9,820,508
British Columbia .....	491	104	846	—	1,441	3,730,926	4,366,673	8,097,599
Other provinces .....	90	23	358	12	483	857,020	2,003,085	2,860,105
<b>Canada .....</b>	<b>4,739</b>	<b>1,424</b>	<b>7,187</b>	<b>54</b>	<b>13,404</b>	<b>39,041,617</b>	<b>38,713,054</b>	<b>77,754,671</b>
<b>1960</b>								
Quebec .....	815	122	1,855	7	2,799	6,030,483	10,729,915	16,760,398
Ontario .....	2,286	790	2,015	28	5,119	20,488,807	11,550,284	32,039,091
Manitoba .....	185	170	311	—	666	1,534,405	1,699,720	3,234,125
Saskatchewan .....	297	55	678	2	1,022	2,306,003	3,571,141	5,877,144
Alberta .....	531	131	1,016	6	1,684	4,364,397	5,457,685	9,822,082
British Columbia .....	465	99	815	—	1,379	3,817,263	4,623,256	8,440,519
Other provinces .....	143	35	532	11	721	1,098,515	2,779,407	3,877,922
<b>Canada .....</b>	<b>4,722</b>	<b>1,402</b>	<b>7,222</b>	<b>54</b>	<b>13,400</b>	<b>39,639,873</b>	<b>40,411,408</b>	<b>80,051,281</b>

TABLE 17. Production Workers, by Months: Petroleum Refining, 1960

Month	Male	Female	Total
	number		
January .....	7,090	53	7,143
February .....	7,022	53	7,075
March .....	7,011	53	7,064
April .....	7,072	54	7,126
May .....	7,256	54	7,310
June .....	7,389	55	7,444
July .....	7,513	55	7,568
August .....	7,486	56	7,542
September .....	7,317	54	7,371
October .....	7,217	54	7,271
November .....	7,155	53	7,208
December .....	7,124	53	7,177
<b>Averages .....</b>	<b>7,222</b>	<b>54</b>	<b>7,276</b>

TABLE 18. Fuel and Electricity Used: Petroleum Refining, 1960

Kind	Quantity	Cost at plant
		\$
Coke <sup>1</sup> .....	ton 380,480	3,431,602
Gasoline (including gasoline used in cars and trucks) .....	Imp. gal. 898,641	167,638
Fuel oil (including kerosene or coal oil) .....	" 332,448,757	19,526,509
Gas (a) Liquefied petroleum gases .....	" 11,761,727	632,991
(b) Other manufactured gas .....	M cu. ft. 41,197,792	16,398,058
(c) Natural gas .....	" 7,865,565	1,618,359
Other fuel .....	" ..	12
Electricity purchased .....	kwh. 1,096,360,372	7,423,596
Steam purchased .....	" ..	57,673
<b>Total .....</b>	<b>...</b>	<b>49,256,438</b>

<sup>1</sup> Includes catalytic carbon reported as petroleum coke under this heading.



TABLE 19. Number and Total Capacity of Petroleum Refineries in Operation December 31, 1957-60

Province	1957		1958		1959		1960	
	Number	Capacity, in barrels of crude per day	Number	Capacity, in barrels of crude per day	Number	Capacity, in barrels of crude per day	Number	Capacity, in barrels of crude per day
Nova Scotia .....	1	44,500	1	45,000	1	45,000	1	45,000
New Brunswick .....	1	300	1	300	1	300	2	41,800
Quebec .....	5	255,800	5	265,800	5	268,800	6	292,000
Ontario .....	6	201,350	6	207,850	7	264,850	7	265,900
Manitoba .....	3	33,200	3	33,200	3	33,200	3	33,200
Saskatchewan .....	9	69,600	8	69,000	6	64,000	6	63,950
Alberta .....	10	84,450	10	80,550	10	90,200	11	92,200
British Columbia .....	5	76,000	7	100,000	7	100,600	7	99,500
Northwest Territories .....	1	1,300	1	1,350	1	1,350	1	1,350
<b>Canada .....</b>	<b>41</b>	<b>766,500</b>	<b>42</b>	<b>803,050</b>	<b>41</b>	<b>868,300</b>	<b>44</b>	<b>934,900</b>

Note: 1 barrel = 35 Imperial gallons.

TABLE 20. Consumption of Crude Oil in Petroleum Refineries, showing Canadian and Imported Separately, 1951-60

Year	Canadian <sup>1</sup>	Imported	Total
	barrels		
1951 .....	42,864,418	84,210,522	127,074,940
1952 .....	56,658,575	82,656,498	139,315,073
1953 .....	71,655,079	82,759,842	154,414,921
1954 .....	93,237,497	77,797,198	171,034,695
1955 .....	108,336,326	86,719,894	195,056,220
1956 .....	125,576,963	105,738,257	231,315,220
1957 .....	128,017,186	110,836,969	238,854,155
1958 .....	133,547,168	106,458,959	240,006,127
1959 .....	152,143,029	115,599,492	267,742,521
1960 .....	152,033,834	125,851,879	277,885,713

<sup>1</sup> Includes the crude naphtha and absorption gasoline from Canadian wells which were run to refinery stills.

TABLE 21. Stocks on Hand at the Refineries at the End of 1960

	Stocks on hand at refineries on December 31, 1960	Increase or decrease compared with December 31, 1959
	barrels	
Crude oil and naphtha, in its natural state, from Canadian wells .....	4,477,689	+ 633,591
Absorption gasoline, etc., from Canadian wells .....	107,062	+ 89,432
Crude oil, imported:		
In its natural state .....	4,615,265	+ 3,311,184
Not in its natural state .....	211,840	- 82,419
<b>Total crude .....</b>	<b>9,411,865</b>	<b>+ 3,951,788</b>
Naphtha specialties .....	274,039	+ 13,702
Aviation gasoline .....	493,308	+ 58,964
Motor gasoline .....	9,494,443	+ 169,688
Aviation turbine fuel .....	461,844	- 46,994
Kerosene, stove oil (No. 1 fuel oil) and tractor fuel .....	2,135,962	+ 485,209
Diesel fuel .....	3,210,101	+ 566,908
Light fuel oils (Nos. 2 and 3) .....	7,374,874	+ 825,364
Heavy fuel oils (Nos. 4, 5 and 6) .....	4,559,938	+ 552,407
Lubricating oils and greases .....	692,664	+ 151,094
Liquefied petroleum gases (propane, butane, etc.) .....	183,786	- 151,332
Petroleum coke .....	40,903	+ 30,448



TABLE 22. Refinery Production<sup>1</sup> of Gasoline, 1951-60

Year	Motor gasoline	Aviation gasoline	Total
1951	52,285,827	408,675	52,694,502
1952	57,901,710	470,560	58,372,270
1953	63,753,525	601,755	64,355,280
1954	68,535,671	493,790	69,029,461
1955	76,674,069	735,706	77,409,775
1956	85,846,938	758,826	86,605,764
1957	86,290,914	593,253	86,884,167
1958	89,329,101	675,870	90,004,971
1959	95,519,002	677,963	96,196,965
1960	101,397,928	1,280,440	102,678,368

<sup>1</sup> Includes production made for own use.

TABLE 23. Principal Statistics: Manufacturers of Lubricating Oils and Greases, 1957-60

Year	Estab-lish-ments	Em-ployees	Salaries and wages	Cost of fuel and electricity at plant	Cost at plant of materials used	Value added by manufacture <sup>1</sup>	Gross selling value of products <sup>1</sup>
1957	14	293	1,313,863	153,422	11,121,213		17,460,845
1958	16	299	1,278,232	130,400	11,589,631		18,282,569
1959	14	287	1,292,012	139,050	12,370,343		18,475,381
1960	16	386	1,841,104	139,754	19,276,830	7,401,067	26,102,233

<sup>1</sup> See note to text.

<sup>2</sup> The changeover to the new classification has delayed the recompilation of "value added" figures for these years and same will not be available until the next issue of this report.

TABLE 24. Principal Statistics; Manufacturers of Lubricating Oils and Greases, by Provinces, 1959 and 1960

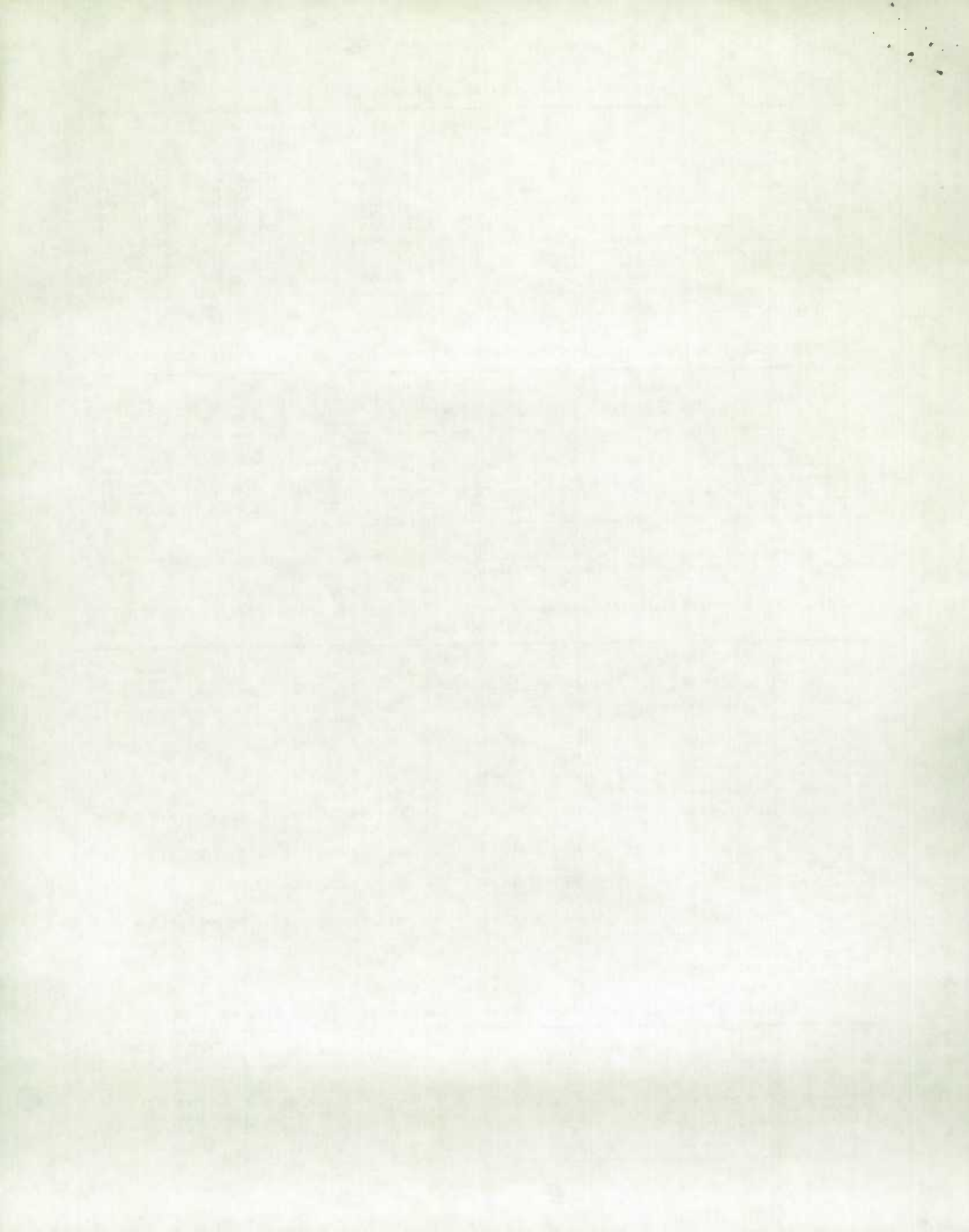
Province	Estab-lish-ments	Em-ployees	Salaries and wages	Cost of fuel and electricity at plant	Cost at plant of materials used	Value added by manufacture <sup>1</sup>	Value of factory shipments
1959							
Ontario	8	89	384,146	46,072	5,305,058		8,722,506
Quebec	2						
Manitoba	1						
Saskatchewan	1						
Alberta	2						
Canada	14	287	1,292,012	139,050	12,370,343		18,475,381
1960							
Ontario	10	87	396,394	44,444	5,278,227	3,610,027	8,607,339
Quebec	2						
Manitoba	1						
Saskatchewan	1						
Alberta	2						
Canada	16	386	1,841,104	139,754	19,276,830	7,401,067	26,102,233

<sup>1</sup> See note to text.

<sup>2</sup> See footnote 2, Table 23.

TABLE 25. Products Made: Manufacturers of Lubricating Oils and Greases, 1960

Product	Quantity	Value of factory shipments
Greases, lubricating	lb. 24,986,196	2,930,617
Oils, lubricating	gal. 36,454,913	22,682,957
All other products	..	488,659
Totals	...	26,102,233





**TABLE 26. Sales of Lubricating Oils, 1959 and 1960**  
(As reported by principal dealers)

	Crankcase oils for all internal combustion engines except aircraft	Aircraft crankcase oils	Other oils except auto gear oils	Auto gear oils excluding automotive transmission oils	Total sales
barrels of 35 Imperial gallons					
<b>1959</b>					
Atlantic Provinces <sup>1</sup> .....	138,066	12,162	84,014	8,987	243,229
Quebec .....	367,621	14,784	271,804	29,732	683,941
Ontario .....	559,229	8,339	555,531	77,114	1,200,213
Manitoba .....	126,605	5,900	36,535	10,145	179,185
Saskatchewan .....	160,303	966	25,583	12,858	199,710
Alberta <sup>2</sup> .....	207,466	5,729	84,985	20,081	318,261
British Columbia <sup>3</sup> .....	191,121	6,989	67,778	12,488	278,376
<b>Canada</b> .....	<b>1,750,411</b>	<b>54,869</b>	<b>1,126,230</b>	<b>171,405</b>	<b>3,102,915</b>
<b>1960</b>					
Atlantic Provinces <sup>1</sup> .....	151,142	7,297	82,894	9,424	250,757
Quebec .....	412,557	11,166	235,002	34,337	693,062
Ontario .....	583,416	8,235	546,871	88,400	1,226,922
Manitoba .....	111,692	4,982	44,945	10,607	172,226
Saskatchewan .....	166,920	1,058	22,552	13,943	204,473
Alberta <sup>2</sup> .....	228,228	4,515	79,710	20,228	332,681
British Columbia <sup>3</sup> .....	205,612	7,297	60,612	12,553	286,074
<b>Canada</b> .....	<b>1,859,567</b>	<b>44,550</b>	<b>1,072,586</b>	<b>189,492</b>	<b>3,166,195</b>

<sup>1</sup> Includes Newfoundland, Prince Edward Island, Nova Scotia and New Brunswick.

<sup>2</sup> Includes Northwest Territories.

<sup>3</sup> Includes Yukon Territory

**TABLE 27. Sales of Lubricating Oils and Greases by Class of Trade, 1960**

Product	Retail gasoline pump outlets	Other	Total sales
barrels of 35 Imperial gallons			
<b>Lubricating oil:</b>			
Atlantic Provinces <sup>1</sup> .....	90,209	151,124	241,333
Quebec .....	206,869	451,856	658,725
Ontario .....	323,048	815,474	1,138,522
Manitoba .....	35,819	125,800	161,619
Saskatchewan .....	56,151	134,379	190,530
Alberta <sup>2</sup> .....	81,834	230,619	312,453
British Columbia <sup>3</sup> .....	88,366	185,155	273,521
<b>Canada</b> .....	<b>882,296</b>	<b>2,094,407</b>	<b>2,976,703</b>
<b>Grease:<sup>4</sup></b>			
Atlantic Provinces <sup>1</sup> .....	4,777	6,469	11,246
Quebec .....	14,360	22,718	37,078
Ontario .....	11,222	38,130	49,352
Manitoba .....	1,667	7,522	9,189
Saskatchewan .....	2,928	14,438	17,366
Alberta <sup>2</sup> .....	3,332	14,119	17,451
British Columbia <sup>3</sup> .....	2,913	10,869	13,782
<b>Canada</b> .....	<b>41,199</b>	<b>114,265</b>	<b>155,464</b>
<b>Gear oil (including automatic transmission oils):</b>			
Atlantic Provinces <sup>1</sup> .....	4,112	5,312	9,424
Quebec .....	13,470	20,867	34,337
Ontario .....	21,813	66,587	88,400
Manitoba .....	3,794	6,813	10,607
Saskatchewan .....	4,330	9,613	13,943
Alberta <sup>2</sup> .....	6,120	14,108	20,228
British Columbia <sup>3</sup> .....	4,280	8,273	12,553
<b>Canada</b> .....	<b>57,919</b>	<b>131,573</b>	<b>189,492</b>

<sup>1</sup> Includes Newfoundland, Prince Edward Island, Nova Scotia and New Brunswick.

<sup>2</sup> Includes North West Territories.

<sup>3</sup> Includes Yukon Territory.

<sup>4</sup> Includes greases at 10 pounds to a gallon.

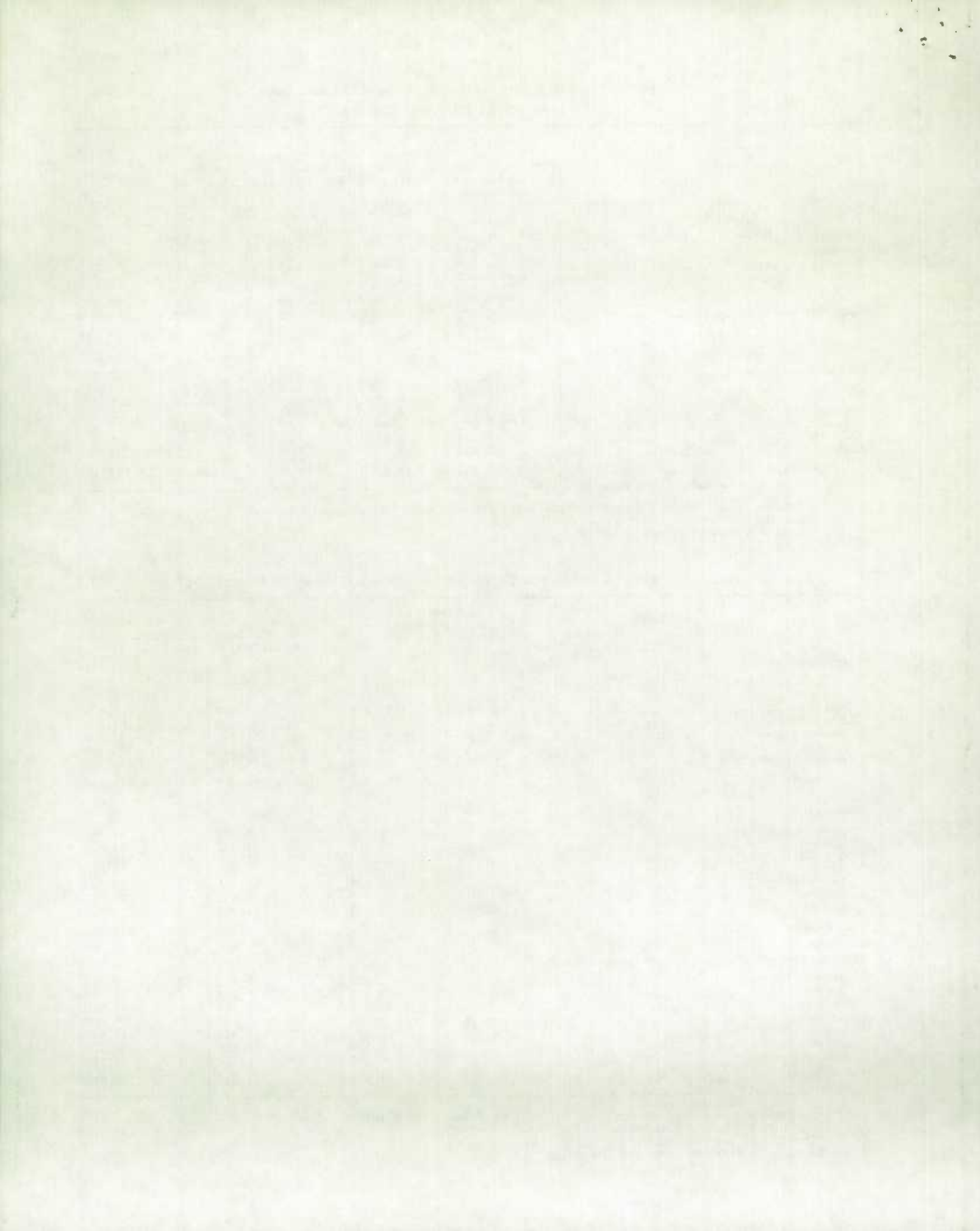


TABLE 28. Materials Used: Manufacturers of Lubricating Oils and Greases, 1960

Material	1960	
	Quantity	Cost at plant
		\$
Oils for blending—Canadian .....	Imp. gal. 23,536,103	4,638,794
Imported .....	"    " 13,321,733	4,044,964
Grease for blending—Imported .....	lb. 289,187	30,732
Additives for lube oils and greases .....	..	4,606,486
All other materials <sup>1</sup> .....	..	912,432
Shipping containers .....	...	5,043,422
<b>Total</b> .....	...	<b>19,276,830</b>

<sup>1</sup> No detailed information on materials used was collected from firms generally reporting value of shipments of less than \$500,000. The total value of materials used by these firms was \$360,500 and this amount is included in "All Other Materials".

TABLE 29. Employees and their Earnings: Manufacturers of Lubricating Oils and Greases, 1959 and 1960

Province	Employees				Total	Earnings		
	Supervisory and office		Production workers			Supervisory and office	Production workers	Total
	Male	Female	Male	Female				
	number					dollars		
<b>1959</b>								
Ontario .....	43	19	132	4	198	304,697	603,169	907,866
Other provinces .....	14	9	65	1	89	102,567	281,579	384,146
<b>Canada</b> .....	<b>57</b>	<b>28</b>	<b>197</b>	<b>5</b>	<b>287</b>	<b>407,264</b>	<b>884,748</b>	<b>1,292,012</b>
<b>1960</b>								
Ontario .....	69	22	208	—	299	520,102	924,608	1,444,710
Other provinces .....	16	8	63	—	87	110,214	286,180	396,394
<b>Canada</b> .....	<b>85</b>	<b>30</b>	<b>271</b>	<b>—</b>	<b>386</b>	<b>630,316</b>	<b>1,210,788</b>	<b>1,841,104</b>

TABLE 30. Production Workers, by Months: Manufacturers of Lubricating Oils and Greases, 1960

Month	Establishments reporting monthly detail <sup>1</sup>	
	Male	Female
January .....	243	—
February .....	241	—
March .....	244	—
April .....	247	—
May .....	266	—
June .....	264	—
July .....	271	—
August .....	265	—
September .....	253	—
October .....	249	—
November .....	247	—
December .....	247	—
Average for establishments reporting monthly detail .....	253	—
Average estimated for small establishments <sup>2</sup> .....	18	—
Average for all establishments .....	271	—

<sup>1</sup> The number of production workers, by months, was collected only for establishments generally reporting value of shipments of \$500,000 and over.

<sup>2</sup> For establishments generally reporting value of shipments of less than \$500,000 no data on number of workers were collected. Average was estimated by using change in value of shipments to arrive at value of payroll which was then used in conjunction with estimated average earnings to arrive at number of workers.

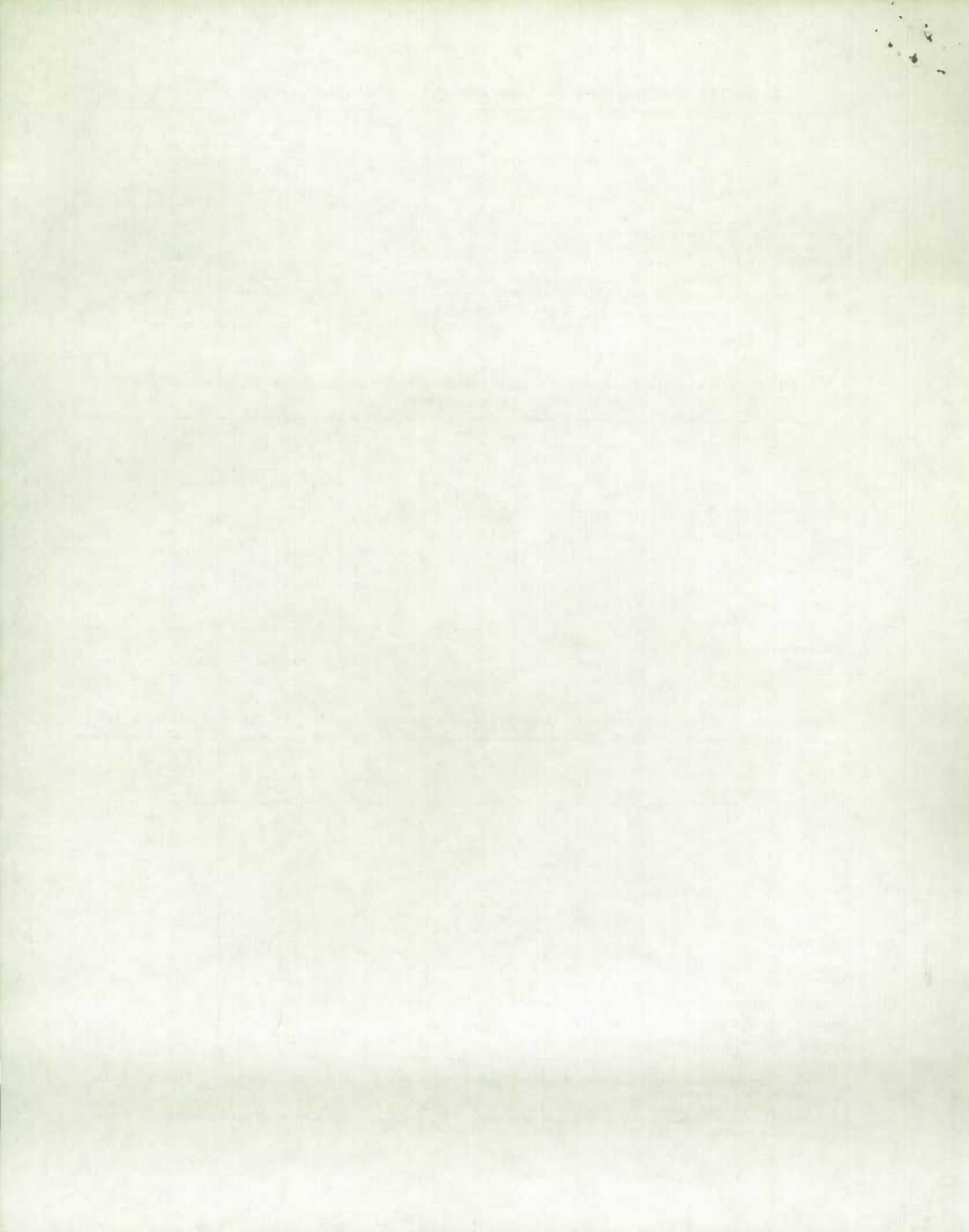


TABLE 31. Fuel and Electricity Used: Manufacturers of Lubricating Oils and Greases, 1960

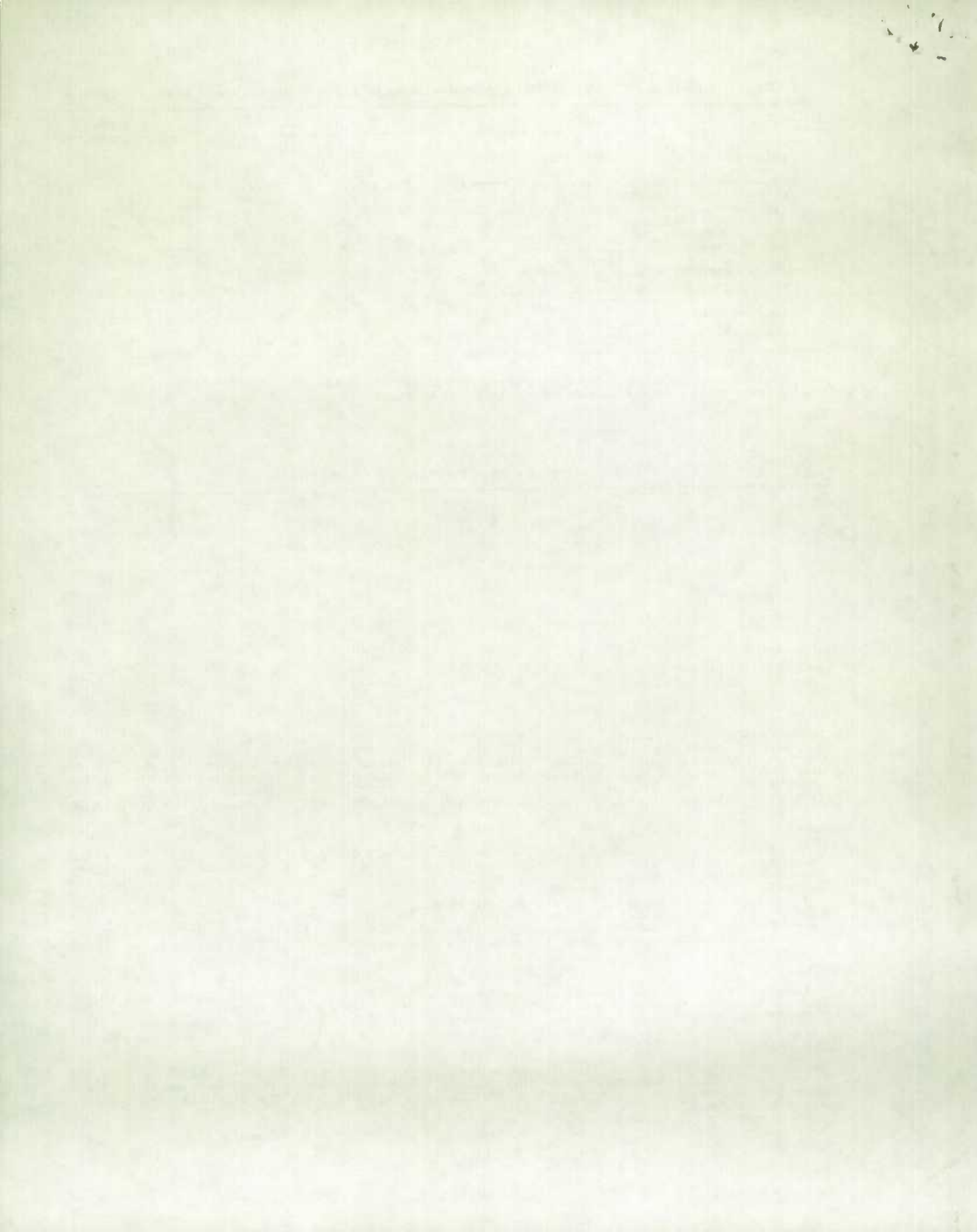
Kind	Quantity	Cost at plant
		\$
<b>1. Establishments reporting commodity detail:<sup>1</sup></b>		
Bituminous coal-imported .....	ton 530	5,331
Gasoline (including gasoline used in cars and trucks) .....	Imp. gal. 10,711	3,799
Fuel oil including kerosene or coal oil .....	883,845	78,682
Gas (a) Manufactured gas .....	M cu. ft. 925	1,327
(b) Natural gas .....	" 56	106
Electricity purchased .....	kwh. 2,592,623	36,542
Steam purchased .....	" ..	667
<b>2. Estimate for establishments for which no data were collected:<sup>2</sup></b>		
Cost of fuel and electricity .....	...	13,300
<b>3. All establishments:</b>		
Total cost of fuel and electricity .....	...	139,754

<sup>1</sup> Establishments generally reporting value of shipments of \$500,000 and over.

<sup>2</sup> Establishments generally reporting value of shipments of less than \$500,000.

Directory of Firms: Petroleum Refining, 1960

Name of Company	Location of refinery	Crude oil capacity	Type of refinery	Cracking plant	
				Type	Capacity
		bbl. per 24 hours			bbl. per 24 hours
<b>Nova Scotia:</b>					
Imperial Oil Limited .....	Imperoyal .....	45,000	S-C	Catalytic .....	15,000
<b>New Brunswick:</b>					
Irving Refining Limited .....	East St. John ...	41,500	C	Catalytic .....	9,500
New Brunswick Oilfields Ltd. ....	Weldon .....	300	S	-	-
<b>Quebec:</b>					
British American Oil Co. Limited .....	Montreal East ...	45,000	S-C	Catalytic .....	20,700
B.P. Refining Canada Ltd. ....	Ville d'Anjou ...	25,000	S-C	Catalytic .....	9,000
Canadian Petrofina Ltd. ....	Montreal East ...	30,000	S-C	Thermal and Catalytic	12,000
Imperial Oil Limited .....	Montreal East ...	71,000	S-C	Thermal and Catalytic	22,000
Shell Oil Co. of Canada Ltd. ....	Montreal East ...	62,000	S-C	Thermal and Catalytic	23,500
Texaco Canada Limited .....	Montreal East ...	59,000	S-C	Thermal and Catalytic	43,000
<b>Ontario:</b>					
British American Oil Co. Limited .....	Clarkson .....	55,400	S-C	Catalytic .....	17,000
Canadian Oil Companies Limited .....	Corunna .....	50,000	C	Thermal and Catalytic	16,000
Cities Services Refining (Canada) Limited ...	Bronte .....	20,000	C	Catalytic .....	7,000
Husky Oil & Refining Ltd. (Riverlake Oils Division) .....	Fort William .....	3,500	S	-	-
Imperial Oil Limited .....	Sarnia .....	95,000	C	Catalytic .....	24,000
Regent Refining (Canada) Limited .....	Port Credit .....	24,000	C	Thermal and Catalytic	10,000
Sun Oil Company Limited .....	Sarnia .....	18,000	C	Catalytic .....	12,000
<b>Manitoba:</b>					
Anglo-Canadian Oils Ltd. ....	Brandon .....	3,200	S	Thermal .....	1,375
Imperial Oil Limited .....	East St. Paul ...	18,000	S-C	Catalytic .....	6,000
North Star Oil Limited .....	St. Boniface ...	12,000	S-C	Catalytic .....	5,177
<b>Saskatchewan:</b>					
British American Oil Co. Limited .....	Moose Jaw .....	13,500	S-C	Thermal and Catalytic	5,710
Consumers' Co-operative Refineries Limited	Regina .....	16,000	S-C	Thermal and Catalytic	5,000
Imperial Oil Limited .....	Regina .....	22,500	S-C	Thermal and Catalytic	13,000
Husky Oil & Refining Ltd. ....	Moose Jaw .....	2,950	S	-	-
Northern Petroleum Corporation Ltd. ....	Kamsack .....	1,000	S	-	-
Royalite Hi-Way Ltd. ....	Saskatoon .....	8,000	S-C	Catalytic .....	2,600



## Directory of Firms: Petroleum Refining, 1960

Name of Company	Location of refinery	Crude oil capacity	Type of refinery	Cracking plant	
				Type	Capacity
		bbl. per 24 hours			bbl. per 24 hours
<b>Alberta:</b>					
Anglo American Exploration Ltd. ....	Hartell .....	1,500	S-C	Thermal .....	1,500
British American Oil Co. Limited .....	Calgary .....	9,000	S-C	Thermal .....	2,250
British American Oil Co. Limited .....	Edmonton .....	7,700	S-C	Thermal and Catalytic .....	3,150
Canadian Kodiak Refineries Ltd. ....	Lloydminster ...	2,400	S	Thermal and Catalytic .....	4,000
Canadian Oil Companies Ltd. ....	Innisfail .....	4,000	-	-	-
Husky Oil and Refining Ltd. ....	Lloydminster ...	5,100	S	-	-
Imperial Oil Limited .....	Calgary .....	15,500	S-C	Catalytic .....	7,000
Imperial Oil Limited .....	Edmonton .....	28,500	S-C	Thermal and Catalytic .....	8,500
North Star Oil Ltd. ....	Grande Prairie ..	2,500	C	Thermal .....	900
Texaco Canada Limited .....	Edmonton .....	12,000	S-C	Thermal and Catalytic .....	4,000
Wainwright Producers & Refiners Ltd. ....	Wainwright .....	4,000	S	-	-
<b>British Columbia:</b>					
British American Oil Co., Limited .....	Port Moody .....	18,000	S-C	Catalytic .....	8,480
Imperial Oil Limited .....	loco .....	32,500	S-C	Catalytic .....	8,100
Royalite Products Ltd. ....	Kamloops .....	5,000	S-C	Catalytic .....	1,420
Shell Oil Company of Canada Ltd. ....	North Burnaby ..	21,000	S-C	Thermal and Catalytic .....	10,500
Standard Oil Company of British Columbia Ltd. ....	North Burnaby ..	18,000	S-C	Catalytic .....	8,100
Phillips Petroleum Co. ....	Dawson Creek ..	3,000	S-C	Thermal .....	-
Phillips Petroleum Company .....	Taylor Flats .....	2,000	C	Thermal .....	2,100
<b>Northwest Territories:</b>					
Imperial Oil Limited .....	Norman Wells ...	1,350	S	-	-

Note: S - Skimming, C - Cracking.

## Directory of Firms: Manufacturers of Lubricating Oils and Greases, 1960

Name of company	Location of plant
<b>Quebec:</b>	
Canadian Oil Companies Ltd. ....	6010 Notre Dame East, Montreal
Tide Water Oil Company (Canada) Ltd. ....	9500 St. Lawrence Blvd., Montreal
<b>Ontario:</b>	
British American Oil Co. Limited .....	Clarkson
Campbell Lubricating Specialties, Ltd. ....	414 Eastern Ave., Toronto
Canadian, D.A. Stuart Oil Co. Ltd. ....	43 Upton Rd., Scarborough
Houghton, E.T. & Co. of Canada Ltd. ....	100 Syms Rd., Toronto
Kendall Refining Co. of Canada Ltd. ....	2 Bradpen Road, Toronto
Ontario Gasoline and Oil Co. Ltd. ....	45 Dickens Ave., Toronto
Ontario Lubricating Company Ltd. ....	120 Chatham St., Hamilton
Texaco Canada Limited .....	Toronto
Tide Water Oil Company (Canada) Ltd. ....	55 Wade Ave., Toronto
Wynn Oil Co. of Canada, Ltd. ....	23 Racine Road, Rexdale
<b>Manitoba:</b>	
Tide Water Associated Oil Company (Canada) Ltd. ....	St. James
<b>Saskatchewan:</b>	
Western Oil Company Limited, The .....	612 Main St. N., Moose Jaw
<b>Alberta:</b>	
Jet-Lube of Canada Ltd. ....	Edmonton
Texaco Canada Limited .....	Edmonton

STATISTICS CANADA LIBRARY  
BIBLIOTHÈQUE STATISTIQUE CANADA



1010693345