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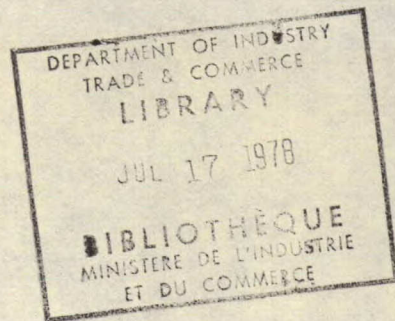
IT&C SURVEY OF BUSINESS CAPITAL INVESTMENT

CAPITAL EXPENDITURES BY PURPOSE

June, 1978

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Ottawa.

Canada.



PREFACE

The IT&C Survey of Business Capital Investment covers some 300 large corporations and accounts for over two thirds of Canada's non-agricultural business outlays on new plant and equipment as reported by the comprehensive Statistics Canada Survey of Public and Private Investment. The IT&C Survey is conducted twice each year, usually in the months of October and April. More details about IT&C Survey's coverage is contained in the Regional Report, which is available upon request.

During October 1977, the IT&C Survey Panel of companies were requested, for the first time, to allocate their capital investment in Canada by general purpose for the years 1977 and 1978. In the April 1978 Survey, companies were again asked to allocate investment by purpose for 1977 and 1978. In general, categories identifying the purposes of expenditures fell into two basic groups, namely those expenditures which add directly to production capacity, and those that do not. Within the latter group, the categories are research and development, pollution abatement and working environment. In the former group, the categories are expansion of facilities at existing sites, up-grading and replacement and new facilities at new sites. An "other" category was also provided for. As well, companies were asked to indicate the main reasons for allocating funds to these general purpose categories, namely with respect to reducing costs, output expansion for existing product/service lines, or output expansion for new product/service lines.

No benchmarks are available to which the results of this Survey can be related, and hence this creates limitations for analysis. In spite of this, however, the results do provide useful indications of the significance of various types of expenditures within various industries as well as likely shifts among these categories.

The main responsibility for this report was assigned to Mr. Al Skahen, Analyst, Capital Expenditures Group, Economic Analysis Branch.

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CAPITAL EXPENDITURES - BY PURPOSE

Of the total investment reported for 1978 (\$19.28 billion), about 81% or \$15.67 billion were allocated to the various expenditures categories while for 1977, the percentage was 83% or \$14.21 billion. The remaining investment, approximately 19%, was either not distributed by category, or was not included in the tabular results due to the matching of data for both 1977 and 1978. (See Appendix 1 on reconciliation and explanation of the term "matching".)

TABLE 1

TOTAL CAPITAL EXPENDITURES - BY PURPOSE

	<u>Number of Reporting Firms</u>	<u>1977 (\$ Millions)</u>	<u>1978</u>
Research & Development	64	114.2	141.6
Pollution Abatement	99	325.3	384.0
Working Environment	70	86.2	103.5
Expansion of Facilities - Existing Sites	169	3,835.6	4,222.8
Upgrading & Replacement of Existing Facilities	221	2,465.2	3,108.0
New Facilities - New Sites	124	6,667.8	6,851.6
Other	54	720.6	854.6
<u>TOTAL</u>	268	14,214.9	15,666.1

By far the greatest portion of capital investment for 1978, namely 44%, will be directed to the establishment of new facilities at new sites. This expenditure was motivated generally by a desire to expand the output of existing product and service lines. Companies also plan to invest 27% of their expenditures in new facilities at existing sites; 20% on upgrading and replacement. In total, therefore, approximately 91% of expenditures is directed toward production facilities and about 4% on research and development, pollution abatement and working environment. About 5% is accounted for by the "other" category, which in many cases was not specified.

Within the manufacturing sector, the larger and increasing proportion of investment will be concentrated mainly on the upgrading & replacement of existing facilities. For the non-manufacturing sector, the greater but decreasing proportion of total investment will be directed towards new facilities at new sites.

TABLE 2
TOTAL CAPITAL EXPENDITURES - BY PURPOSE

(Percent Distribution¹ of Total)

	<u>Manufacturing</u> ²		<u>Non-Manufacturing</u> ³		<u>Total</u>	
	<u>1977</u>	<u>1978</u>	<u>1977</u>	<u>1978</u>	<u>1977</u>	<u>1978</u>
Research & Development	1.3	1.5	.7	.8	.8	.9
Pollution Abatement	6.2	6.5	1.3	1.4	2.3	2.5
Working Environment	1.1	1.2	.5	.5	.6	.7
Expansion of Facilities - Existing Sites	35.7	29.4	24.8	26.3	27.0	27.0
Upgrading & Replacement of Existing Facilities	27.6	32.5	14.8	16.4	17.3	19.8
New Facilities - New Sites	19.7	21.0	53.7	49.9	46.9	43.7
Other	8.5	7.9	4.2	4.8	5.1	5.5
<u>TOTAL</u>	100.0	100.0	100.0	100.0	100.0	100.0

¹ Percentages may not add to 100% due to rounding.

² For a breakdown by industry within manufacturing, see Appendix 2.

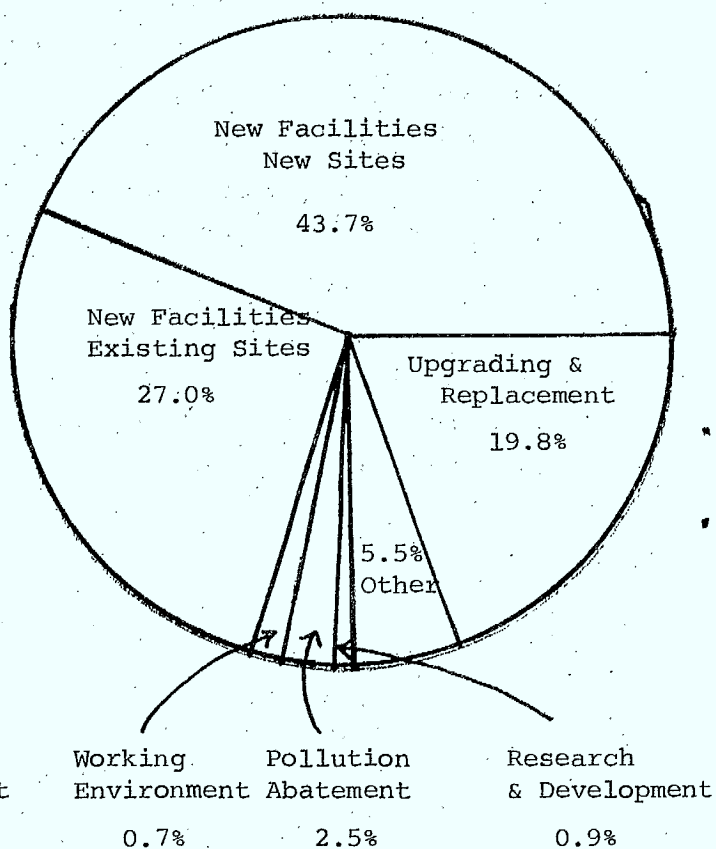
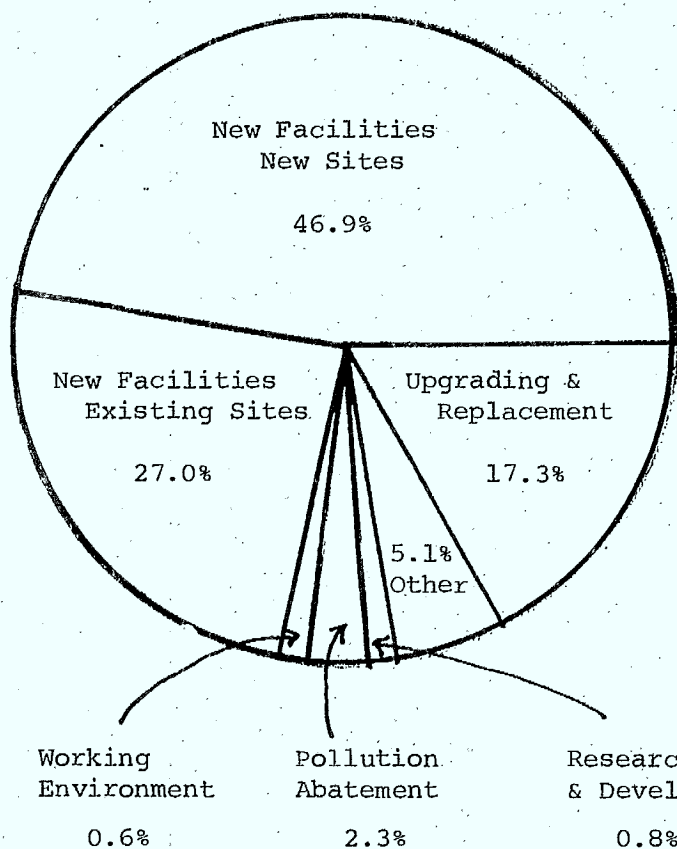
³ For a breakdown by industry within non-manufacturing, see Appendix 3.

TOTAL CAPITAL EXPENDITURES -- BY PURPOSE

(Percent Distribution of Total)

1977

1978



Within various expenditure categories, the proportion of spending accounted for by manufacturing and non-manufacturing firms in the Survey Panel is as follows:

TABLE 3

	<u>New Facilities New Sites</u>		<u>New Facilities Existing Sites</u>		<u>Upgrading & Replacement</u>		<u>Other¹</u>		<u>Total</u>	
	<u>1977</u>	<u>1978</u>	<u>1977</u>	<u>1978</u>	<u>1977</u>	<u>1978</u>	<u>1977</u>	<u>1978</u>	<u>1977</u>	<u>1978</u>
Mfg.	8.4	10.2	26.5	23.2	31.9	34.9	38.8	38.3	20.0	21.3
Non-Mfg.	91.6	89.8	73.5	76.8	68.1	65.1	61.2	61.7	80.0	78.7
<u>TOTAL</u>	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

¹ Includes research and development, pollution abatement, working environment and other allocations.

Increases in the planned level of total spending for 1978 are in evidence in all expenditure categories. A year-to-year decline in investment activity related to the expansion of facilities at existing sites is indicated by manufacturing firms.

TABLE 4

CAPITAL EXPENDITURES BY PURPOSE

(Year-to-year Percent Change in Level of Spending)

	<u>1978/77</u>		
	<u>Manufacturing</u>	<u>Non-Manufacturing</u>	<u>Total</u>
Research & Development	34.3	19.1	23.9
Pollution Abatement	23.3	11.8	18.0
Working Environment	31.5	13.9	20.0
Expansion of Facilities - Existing Sites	-3.4	14.9	10.0
Upgrading & Replacement of Existing Facilities	38.0	20.4	26.0
New Facilities - New Sites	25.1	.7	2.7
Other	8.8	23.4	18.5
<u>TOTAL*</u>	17.2	8.4	10.2

* The year-to-year changes in total investment here are different from those reported in the April 26, 1978 press release. This is due to differences in coverage referred to in paragraph 1, page 1.

NEW FACILITIES AT NEW SITES

For 1978, 90% (\$6,152.3 million) of the investment directed to new facilities at new sites is centered in non-manufacturing, (down from 92% - \$6,108.9 million in 1977) for the primary purpose of expanding the output of existing product and service lines. There has been a proportionate reduction of about 3% in the amount of investment directed to new facilities at new sites from the percentage for 1977 (see Table 2). However, there is an expected increase of 3% in total spending on new facilities at new sites for 1978.

For 1978, electric utilities and oil & gas companies account for by far the major portion of expenditures on new facilities at new sites, namely 53% and 19% respectively. The year-to-year increases in spending by electric utilities (28%) and oil & gas pipelines (27%) more than offset decreases in mining (-58%) and oil & gas companies (-34%).

Other manufacturing and primary metal companies account for the largest portion of spending by manufacturing companies on new facilities at new sites. The "other manufacturing" companies provide the major influence to the 25% expected increase in manufacturing for 1978, more than offsetting expected declines in forest products and chemicals.

TABLE 5

CAPITAL EXPENDITURES
New Facilities at New Sites

	<u>Percent Distribution*</u>		<u>Year-to-Year</u> <u>Percent Changes</u> <u>in Level of Spending</u>
	<u>1977</u>	<u>1978</u>	<u>1978/77</u>
Food & Beverages	.6	.6	4.5
Forest Products	1.8	1.5	-12.9
Primary Metals	2.7	2.8	7.1
Chemicals	1.7	1.5	-13.0
Transportation Equipment	.3	.4	41.7
Other Manufacturing	1.3	3.5	166.8
<u>Total Manufacturing</u>	8.4	10.2	25.1
Mining	5.4	2.2	-57.8
Oil & Gas Companies	29.3	19.0	-33.6
Oil & Gas Pipelines	4.3	5.3	27.1
Transp. & Storage	1.9	1.3	-26.5
Communications	1.7	2.1	25.4
Electric Utilities	42.5	52.8	27.8
Trade, Finance & Other Commercial	6.5	7.0	10.7
<u>Total Non-Manufacturing</u>	91.6	89.8	.7
<u>TOTAL</u>	100.0	100.0	2.7

* Percentages may not add to 100% due to rounding.

NEW FACILITIES AT EXISTING SITES

Non-manufacturing companies are expected to account for about 77% (\$3,241.5 million) of the 1978 investment directed to the establishment of new facilities at existing sites compared with 74% (\$2,820.4 million) in 1977. These expenditures are motivated by a desire to expand the output of existing product and service lines and, in the case of manufacturing firms, as well as a desire to reduce costs. Proportionately, there has been no change in the investment (27%) directed to the expansion of facilities at existing sites between 1978 and 1977 (see Table 2). However, a year-to-year increase in total spending of about 10% is expected in 1978.

For 1978, electric utilities, communications and oil & gas companies are expected to account for the major portion of expenditures on new facilities at existing sites, i.e., 35%, 14% and 12% respectively. It is the electric utilities which will provide the major impetus to the 10% year-to-year expected advance in total spending on new facilities at existing sites.

Chemicals, primary metals and forest products account for the larger but decreasing portion of manufacturing spending on new facilities at existing sites. The year-to-year increases in spending by the "other manufacturing" companies (49%) were more than offset by declines by forest products (-26%) and transportation equipment companies (-26%).

TABLE 6

CAPITAL EXPENDITURES
New Facilities at Existing Sites

	<u>Percent Distribution*</u>		<u>Year-to-Year</u> <u>Percent Changes</u> <u>in Level of Spending</u>
	<u>1977</u>	<u>1978</u>	<u>1978/77</u>
Food & Beverages	1.1	1.4	43.2
Forest Products	6.1	4.1	-25.5
Primary Metals	4.7	4.4	3.7
Chemicals	8.9	7.8	-3.6
Transportation Equipment	3.3	2.2	-25.8
Other Manufacturing	2.4	3.3	48.9
<u>Total Manufacturing</u>	26.5	23.2	-3.4
Mining	5.9	4.9	-8.5
Oil & Gas Companies	11.4	12.4	20.3
Oil & Gas Pipelines	4.2	4.1	-7.5
Transp. & Storage	4.5	3.7	-8.6
Communications	14.8	14.4	6.5
Electric Utilities	30.7	35.0	25.5
Trade, Finance & Other Commercial	2.0	2.2	20.5
<u>Total Non-Manufacturing</u>	73.5	76.8	14.9
<u>TOTAL</u>	100.0	100.0	10.0

* Percentages may not add to 100% due to rounding.

UPGRADING & REPLACEMENT OF EXISTING FACILITIES

For 1978, 65% (\$2,023.4 million) of the investment directed to upgrading and replacement of existing facilities will be centered in non-manufacturing as was 68% (\$1,679.6 million) in 1977. For the non-manufacturing sector, expenditures are motivated mainly by a desire to expand the output of existing, as well as new, product and service lines. In the case of manufacturing companies which account for about 35% (\$1,084.6 million) of 1978 spending on upgrading and replacement and 32% of 1977 spending (\$785.6 million), expenditures are associated first with a desire to reduce costs and second, with a desire to expand the output of existing product and service lines.

There has been an increase in the proportion of investment directed to the upgrading and replacement of existing facilities from 17% in 1977 to 20% in 1978 (see Table 2), and, also, there is an expected increase in total spending of about 26%.

Within manufacturing, for 1978, forest products and "other manufacturing" companies are expected to account for a major share of the expenditures on upgrading and replacement of facilities, namely 13% and 6% respectively. Forest products, primary metals and transportation equipment provide the major impetus to the 38% expected increase by the manufacturing sector.

Oil & gas companies, transportation & storage, and mining companies account for the largest portion of non-manufacturing spending on upgrading and replacement of existing facilities, however, of these three groups only oil & gas companies show an increasing proportion of investment being spent on upgrading and replacement. Electric utilities at 60% and oil & gas companies at 32% provide the major impetus to the 20% advance in non-manufacturing spending in this category for 1978.

TABLE 7

CAPITAL EXPENDITURES
Upgrading & Replacement of Existing Facilities

	<u>Percent Distribution*</u>		<u>Year-to-Year Percent Changes in Level of Spending</u>
	<u>1977</u>	<u>1978</u>	<u>1978/77</u>
Food & Beverages	3.7	3.6	21.2
Forest Products	13.5	13.5	26.5
Primary Metals	3.0	5.0	107.2
Chemicals	2.7	2.6	24.9
Transportation Equipment	3.0	4.3	79.8
Other Manufacturing	5.9	5.8	24.0
<u>Total Manufacturing</u>	<u>31.9</u>	<u>34.9</u>	<u>38.0</u>
Mining	12.2	10.3	6.2
Oil & Gas Companies	16.6	17.4	32.1
Oil & Gas Pipelines	5.5	4.2	-3.3
Transp. & Storage	11.2	10.5	17.8
Communications	8.3	5.6	-14.7
Electric Utilities	7.4	9.4	60.0
Trade, Finance & Other Commercial	6.9	7.7	40.2
<u>Total Non-Manufacturing</u>	<u>68.1</u>	<u>65.1</u>	<u>20.4</u>
<u>TOTAL</u>	<u>100.0</u>	<u>100.0</u>	<u>26.0</u>

* Percentages may not add to 100% due to rounding.

POLLUTION ABATEMENT

For 1978, 56% (\$216.0 million) of the total investment directed to pollution abatement is centered in manufacturing, up from the 54% (\$175.1 million) in 1977. Non-manufacturing spending on pollution abatement in 1978 is expected to be \$168.0 million, up from the \$150.2 million in 1977. The primary purpose of these manufacturing and non-manufacturing expenditures is to expand the output of existing product and service lines.

There has been a proportionate increase of 0.2% in the amount of total investment directed to pollution abatement from the percentage for 1977 (see Table 2) and, there is an expected increase in total spending for 1978 of about 18%.

Forest products and primary metal companies account for a major portion of pollution abatement expenditures for 1978, i.e., 31% and 16% respectively. They also are the main contributors to the expected 23% year-to-year advance in manufacturing spending on pollution abatement, more than offsetting declines in transportation equipment and "other manufacturing".

For 1978, within non-manufacturing, oil and gas companies spend the largest proportion on pollution abatement. Mining companies also expect to spend a significant but decreasing proportion on pollution abatement in 1978. Increases in spending by electric utility and oil & gas companies more than offset declines by mining companies.

TABLE 8
CAPITAL EXPENDITURES
Pollution Abatement

	<u>Percent Distribution*</u>		<u>Year-to-Year Percent Changes in Level of Spending</u>
	<u>1977</u>	<u>1978</u>	<u>1978/77</u>
Food & Beverages	.8	.7	12.0
Forest Products	29.5	31.3	25.0
Primary Metals	13.8	15.6	33.6
Chemicals	3.9	5.1	53.5
Transportation Equipment	2.9	1.5	-39.0
Other Manufacturing	2.9	2.0	-18.1
<u>Total Manufacturing</u>	53.8	56.3	23.3
Mining	24.9	15.3	-27.4
Oil & Gas Companies	14.0	17.9	50.5
Oil & Gas Pipelines	.3	.3	n.c.
Transp. & Storage	2.0	1.7	1.5
Communications	-	-	-
Electric Utilities	2.7	5.8	154.5
Trade, Finance & Other Commercial	2.2	2.7	44.4
<u>Total Non-Manufacturing</u>	46.2	43.8	11.8
<u>TOTAL</u>	100.0	100.0	18.0

* Percentages may not add to 100% due to rounding.
n.c. = no change

RESEARCH & DEVELOPMENT

For 1978, 66% (\$92.7 million) of the total investment directed to research and development is centered in non-manufacturing, which compares with 68% (\$77.8 million) for 1977. The ultimate purpose of these expenditures is to reduce costs. There has been a proportionate increase of 0.1% directed to research and development between 1978 and 1977 (see Table 2). However, a year-to-year increase in total spending of about 24% is expected in 1978.

Within non-manufacturing, oil & gas companies account for the major share of spending on research and development and as such provide the main impetus to the 19% advance expected for the non-manufacturing sector.

Within manufacturing, which is expected to spend \$48.9 million in 1978 on research and development after spending \$36.4 million in 1977, the "other manufacturing" and primary metals companies account for the larger shares of the spending. As well, they account for about two-thirds of the 34% expected advance in 1978 manufacturing spending on research and development.

TABLE 9

CAPITAL EXPENDITURES
Research & Development

	<u>Percent Distribution*</u>		<u>Year-to-Year</u> <u>Percent Changes</u> <u>in Level of Spending</u>
	<u>1977</u>	<u>1978</u>	<u>1978/77</u>
Food & Beverages	1.8	1.3	-14.3
Forest Products	2.5	3.2	64.2
Primary Metals	9.4	9.4	24.2
Chemicals	2.6	3.4	60.0
Transportation Equipment	.9	1.4	100.0
Other Manufacturing	14.7	15.8	33.3
<u>Total Manufacturing</u>	31.9	34.5	34.3
Mining	6.2	5.6	11.2
Oil & Gas Companies	50.7	50.2	22.7
Oil & Gas Pipelines	.9	.7	n.c.
Transp. & Storage	.4	.1	-50.0
Communications	-	-	-
Electric Utilities	9.5	8.3	8.2
Trade, Finance & Other Commercial	.4	.5	40.0
<u>Total Non-Manufacturing</u>	68.1	65.5	19.1
<u>TOTAL</u>	100.0	100.0	23.9

* Percentages may not add to 100% due to rounding.
n.c. = no change

WORKING ENVIRONMENT

For 1978, 62% (\$63.9 million) of the investment directed to working environment is centered in non-manufacturing, of which mining and oil & gas companies account for over two thirds. Manufacturing companies are expected to spend \$39.6 million in 1978 on working environment - "other manufacturing" and primary metal companies account for the major share. Within non-manufacturing, increases in mining and oil & gas companies more than offset the decline in transportation and storage - the only industry to register a year-to-year decrease in spending. The expected increase by the manufacturing companies of about 31% is mainly due to advances in excess of 50% registered by transportation equipment and "other manufacturing" companies.

TABLE 10

CAPITAL EXPENDITURES
Working Environment

	<u>Percent Distribution*</u>		<u>Year-to-Year</u> <u>Percent Changes</u> <u>in Level of Spending</u>
	<u>1977</u>	<u>1978</u>	<u>1978/77</u>
Food & Beverages	2.4	2.6	28.5
Forest Products	6.7	6.8	20.6
Primary Metals	8.0	7.2	8.6
Chemicals	6.0	6.9	36.5
Transportation Equipment	4.8	6.0	51.2
Other Manufacturing	7.0	8.8	51.6
<u>Total Manufacturing</u>	34.9	38.3	31.5
Mining	24.7	24.3	17.8
Oil & Gas Companies	14.8	18.0	45.3
Oil & Gas Pipelines	-	-	-
Transp. & Storage	15.9	9.4	-29.2
Communications	.9	1.2	50.0
Electric Utilities	1.7	1.9	33.3
Trade, Finance & Other Commercial	7.0	7.1	21.6
<u>Total Non-Manufacturing</u>	65.1	61.7	13.9
<u>TOTAL</u>	100.0	100.0	20.0

* Percentages may not add to 100% due to rounding.

OTHER

For 1978, capital expenditures classified to "other" are centered in non-manufacturing as was the case in 1977. Oil & gas companies (in non-manufacturing) and transportation equipment (within manufacturing) account for major shares of this spending for 1978. Increases by chemical, transportation equipment and oil & gas companies provide the main impetus to the expected 18% increase in spending for 1978.

For the more significant industry groups, the "other" category consists of exploration expenditures in the case of oil & gas and mining companies; re-tooling for model changes for transportation equipment companies; and expansion on roads and bridges for forest product companies.

TABLE 11

CAPITAL EXPENDITURES
Other

	<u>Percent Distribution*</u>		<u>Year-to-Year</u>
	<u>1977</u>	<u>1978</u>	<u>Percent Changes</u> <u>in Level of Spending</u>
			<u>1978/77</u>
Food & Beverages	-	-	-
Forest Products	5.0	4.5	6.3
Primary Metals	1.6	1.5	12.2
Chemicals	4.2	4.6	28.8
Transportation Equipment	16.9	15.1	5.5
Other Manufacturing	5.8	5.2	5.4
<u>Total Manufacturing</u>	33.5	30.8	8.8
Mining	4.7	4.6	16.4
Oil & Gas Companies	55.4	59.3	26.8
Oil & Gas Pipelines	-	-	-
Transp. & Storage	-	-	-
Communications	6.3	5.3	-5
Electric Utilities	-	-	-
Trade, Finance & Other Commercial	-	-	-
<u>Total Non-Manufacturing</u>	66.5	69.2	23.4
<u>TOTAL</u>	100.0	100.0	18.5

* Percentages may not add to 100% due to rounding.

APPENDIX 1

All the tables incorporate "matched" company data because of the variation in the number of firms reporting each year, i.e., only data of those companies which have reported for both the year 1977 and 1978 are used. Matching, therefore, provides for a consistent composition of firms in making comparisons since firms that do not report for both years are excluded.

During the April 1978 Survey, companies were requested to allocate their capital investments by general purpose categories. As this portion of the Survey is relatively new, some companies were unable to provide a break-down. It is hoped that in future Surveys, or as companies gain experience with this portion of the questionnaire, the non-response will reduce.

The following table presents a reconciliation between the total dollar amounts reported in our Press Release of April 26, 1978 and with the totals distributed by purpose in this report.

	<u>1977</u>	<u>1978</u>
	(\$ Billions)	
Press Release Totals (in reported dollars)*	17.21	19.28
Amounts Reported by Purpose	<u>14.21</u>	<u>15.67</u>
Difference	3.00	3.61
Portion of Difference Explained by Matching	.42	.55
Portion of Difference Explained by Non-Response	2.58	3.06

* This report has not converted the investments reported by companies into a current, or, 1977 constant dollar series. This explains the modest \$0.2 billion difference in the 1978 total used here from the current dollar value used in the press release.

APPENDIX 2

TOTAL CAPITAL EXPENDITURES -- BY PURPOSE -- MANUFACTURING

(Percent Distribution¹ of Total)

	<u>Food & Beverages</u>		<u>Forest Products</u>		<u>Primary Metals</u>		<u>Chemicals</u>		<u>Transportation Equipment</u>		<u>Other Manufacturing</u>		<u>Total Manufacturing</u>	
	<u>1977</u>	<u>1978</u>	<u>1977</u>	<u>1978</u>	<u>1977</u>	<u>1978</u>	<u>1977</u>	<u>1978</u>	<u>1977</u>	<u>1978</u>	<u>1977</u>	<u>1978</u>	<u>1977</u>	<u>1978</u>
Research & Development	1.1	.8	.3	.5	2.1	2.1	.5	.8	.3	.5	4.2	3.5	1.3	1.5
Pollution Abatement	1.4	1.3	11.7	13.9	8.9	9.6	2.2	3.4	2.7	1.5	2.3	1.2	6.2	6.5
Working Environment	1.1	1.2	.7	.8	1.4	1.2	.9	1.2	1.2	1.6	1.5	1.4	1.1	1.2
Expansion of Facilities - Existing Sites	23.0	27.0	28.4	20.1	35.6	29.9	59.4	56.4	35.7	23.8	23.1	21.6	35.7	29.4
Upgrading & Replacement of Existing Facilities	50.4	50.1	40.3	48.5	14.8	24.7	11.4	14.1	21.0	33.9	36.3	28.3	27.6	32.5
New Facilities - New Sites	22.9	19.6	14.2	11.8	35.1	30.4	20.3	17.4	4.8	6.1	22.2	37.1	19.7	21.0
Other	-	-	4.4	4.4	2.2	2.0	5.3	6.7	34.4	32.6	10.4	6.9	8.5	7.9
<u>TOTAL</u>	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

¹ Percentages may not add to 100% due to rounding.

APPENDIX 3

TOTAL CAPITAL EXPENDITURES -- BY PURPOSE -- NON-MANUFACTURING

(Percent Distribution¹ of Total)

	<u>Mining</u>		<u>Oil & Gas Companies</u>		<u>Oil & Gas Pipelines</u>		<u>Transport. & Storage</u>		<u>Communications</u>		<u>Electric Utilities</u>		<u>Trade, Fin. & Oth. Comm.</u>		<u>Total Non-Manufacturing</u>	
	<u>1977</u>	<u>1978</u>	<u>1977</u>	<u>1978</u>	<u>1977</u>	<u>1978</u>	<u>1977</u>	<u>1978</u>	<u>1977</u>	<u>1978</u>	<u>1977</u>	<u>1978</u>	<u>1977</u>	<u>1978</u>	<u>1977</u>	<u>1978</u>
Research & Development	.7	1.0	1.7	2.3	.2	.1	.1	*	-	-	.3	.2	.1	.1	.7	.8
Pollution Abatement	7.9	7.3	1.4	2.3	.2	.1	1.1	1.1	-	-	.2	.4	1.0	1.3	1.3	1.4
Working Environment	2.1	3.1	.4	.6	-	-	2.3	1.6	.1	.1	*	*	.9	.9	.5	.5
Expansion of Facilities - Existing Sites	21.9	25.5	13.2	17.3	27.7	26.0	29.0	26.7	61.0	62.5	28.0	27.2	11.0	11.1	24.8	26.3
Upgrading & Replacement of Existing Facilities	29.1	39.4	12.4	17.9	23.3	19.7	46.5	55.0	21.8	17.9	4.3	5.4	24.6	28.9	14.8	16.4
New Facilities - New Sites	35.1	18.9	58.9	42.9	48.7	54.0	21.0	15.6	12.2	14.8	67.2	66.7	62.4	57.8	53.7	49.9
Other	3.3	4.9	12.0	16.7	-	-	-	-	4.9	4.7	-	-	-	-	4.2	4.8
<u>TOTAL</u>	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

¹ Percentages may not add to 100% due to rounding.

* Less than .05%



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