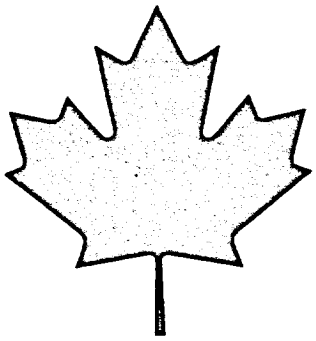


Canada's Export Development Plan for AUSTRALIA

Government of Canada
Gouvernement du Canada

Industry, Trade and Commerce
Industrie et Commerce

CANADA'S

EXPORT DEVELOPMENT PLAN

FOR AUSTRALIA

Government of Canada
Department of Industry, Trade and Commerce

October, 1981

FOREWORD

Canada's Market Development Plan for Australia has been prepared to assist those in the public and private sectors interested in expanding business in Australia. The assessments and proposals it contains are the basis for the Department of Industry, Trade and Commerce marketing activities in Australia over the next two-to-three years. The provincial governments, which play an integral role in the trade process, as well as federal departments with an international focus, have been consulted in preparation of the plan. The plan does not attempt to exhaustively cover Canadian interests or Australian opportunities. Rather, it highlights significant sector opportunities that are consistent with Canadian supply capabilities. As the document is updated, additional sectors may be analyzed and included as warranted in the revised editions.

The material presented is divided into specific sections that may interest different audiences. The Executive Summary is provided as an overview of Canadian/Australian trade relations and summarizes the separate sector strategies in a detailed action plan. Sections of a general nature concerning bilateral Canada-Australia relationships and socio-economic and political conditions in Australia may be particularly useful to the reader seeking a broad introduction to the Canada-Australia trade environment. The detailed analysis of the priority sectors will be of particular interest to the private sector.

EXPORT DEVELOPMENT PLAN - AUSTRALIA

TABLE OF CONTENTS

EXECUTIVE SUMMARY AND ACTION PLAN

EXPORT DEVELOPMENT PLAN

I. EXECUTIVE SUMMARY

1. Purpose

The major theme of a Canadian Export Strategy for the 1980s is selectivity of market concentration coupled with a greater focus and co-ordination of Canada's export marketing efforts. This paper, one of several to be produced, sets out an export development plan for Australia and includes a detailed plan of federal government action. In so doing the government recognizes the key role of the provinces and private sector and invites their participation in pursuing those activities that will contribute to the objective of expanding Canada's share of the Australian import market.

2. Introduction

Canada and Australia show a growing and significant commonality, sharing interests that will result in closer ties in the future and will contribute greatly to trade flows between the two countries. Australia is emerging as a major factor in the Pacific as a result of its mineral, energy and agricultural wealth. Following the mining boom of the 1960s and 1970s, the country is now entering a decade of energy and mining development. New capital investment already committed or in final feasibility stages in major projects as of December 1980 will total at least $46 billion, according to official Australian government projections, and could reach $70 billion by 1985. The sharp growth in demand for equipment and services will place a significant burden on domestic sources and create numerous opportunities, particularly with regard to Canadian expertise in equipment and services for energy, agriculture, forestry and mining. Significant scope also exists for increasing Canada's normal exports as a result of the boost to the Australian economy which can be expected from its expanding resource sector. The high percentage of fully finished exports makes this market a particularly attractive one for Canadian suppliers.

To be successful, Canadian marketing activities will need to be concentrated, focused and co-ordinated. To that end, this paper reviews and analyses past Canadian export market development performance, identifies the opportunities and constraints that future export effort must address, and sets out an export development plan taking those factors into account. This document and the action program that flows from it are intended:

i) to guide the action and resource allocation of the federal government in providing an effective program of assistance to exporters and in fostering an environment that will favor Canadian export development in Australia;

ii) to set out a marketing plan designed to take advantage of the market potential and overcome the constraints facing Canadian exports to Australia;

iii) to identify opportunities for export concentration and stimulate and assist the private sector in pursuing them; and,

iv) to provide a focal point for co-ordinating the marketing efforts of the federal and provincial governments and the private sector.

3. Characteristics of the Australian Market and Canadian Trade Opportunities

As a leading world producer of minerals and one of few developed countries with a positive energy balance, Australia is entering a resource boom that will spur development of major energy and energy intensive mineral processing projects. The bulk of import demand will be in those sectors that are suppliers to resource projects and to infrastructure development. Local production is unlikely to satisfy the industrial and consumer needs projected for the Australian economy over the next 10 years. Therefore, the outlook for further growth and diversification of Canadian exports to Australia is particularly bright.

Australia is Canada's 12th largest market. Canadian exports to Australia represent about 2.7 per cent of the total Australian market, while there are few markets for which Canada supplies more than one per cent of the total import requirement. With a 19 per cent increase in exports to Australia in 1980, Canada can look to increasing that growth even further during the next few years.

Following are the priority sectors that appear to offer significant trade prospects and high payoff for Canadian efforts:

- Oil and Gas Equipment, Including Pipeline
- Heavy Electrical Equipment
- Telecommunications
- Forest Industries Equipment
- Auto Parts
- Instrumentation and Industrial Process Controls
- Agricultural Equipment

Notwithstanding the priority emphasis being proposed for those sectors, the government will continue to give support through its regular programs to activities in any sector that will contribute to the prescribed objectives.

While Australia offers promising long-term market potential, the competition is increasing rapidly. The EEC and the U.S., Japan, the ASEAN countries and New Zealand are all actively pursuing market shares and will continue to compete vigorously with Canadian exporters. Marketing plans flowing from an analysis of the opportunities, impediments and competition in each of the sectors above are to be found in Section H.

4. Canadian-Australian Trade and the Canadian Trade Development Effort

A threefold increase of ITC-sponsored promotional activities since 1978-79 reflects the expansion of Canadian trade interests in Australia. The Program for Export Market Development (PEMD) has played an important role in facilitating private sector contacts. The Minister of State for Trade led a businessmen's delegation in May 1980 to emphasize the importance Canada attaches to trade relations with Australia. The Pacific Rim Opportunities Conference held in November, 1980, and chaired by Minister Lumley heightened Canadian awareness of opportunities in the Pacific region generally and in Australia in particular. Many Canadian companies and banks have opened offices or appointed representatives in Australia and several business associations are also represented there. The Canadian government has commercial offices in Canberra, Melbourne and Sydney. Consideration is now being given to opening a Canadian Consulate in Perth to capitalize on the rapid development of Western Australia.

5. The Overall Strategy

The overall strategy for the Australian market has been developed to strengthen the Canadian presence in Australia, to improve the market share for goods and services and to actively pursue opportunities for investment and joint ventures.

The market development plan for Australia consists of an inventory of new and existing instruments that will be used by the federal government to assist Canadian exporters increase their penetration of the Australian import market. The framework that emerges from the assessment of needs in export development is intended to capitalize on opportunities and overcome constraints deemed to exist in that market from the Canadian perspective, and is set out as an action plan following this executive summary.

Continued heavy use of the Trade Fairs and Missions program is planned, with emphasis on the sectors identified above. Considerable importance will be attached to appropriate ministerial and other high-level government-to-government visits. The PEMD program will be promoted more intensively, particularly with regard to Section F, so as to help companies sustain the ongoing analyses and market development activities necessary to succeed in the Australian market.

To capitalize fully on opportunities and overcome constraints to trade new instruments must be developed within the context of the Australian market. Because the Australian market has been overlooked by Canadian exporters, especially small and medium businesses, a Market Awareness Program (MAP) will be developed to inform potential exporters of trade possibilities in Australia. Efforts will also be made to ensure that Australian buyers are more aware of Canadian expertise and products through use of general and technical seminars, speeches by government ministers, trade commissioner tours, publicity and press releases, pamphlets and other promotional materials. Meetings and exchanges of public servants - Canadian and Australian - will play an important role in the marketing plan. Interaction at the businessmen's level is critical and must be emphasized. To meet information needs sector studies of Canada's competitive position in the Australian market will be undertaken. Investment, capital projects and joint ventures will receive detailed attention.

The degree of success in meeting the plan's objectives will depend largely on the co-ordination and co-operation of all federal departments and provincial governments as well as active involvement by the business community. Consultation in the formulation of the strategy with the provinces, and with other federal government departments, has therefore taken place. Ongoing consultations by ITC officials with businessmen will ensure that private-sector views are incorporated into the plan. A formal review by the Export Trade Development Board will also be sought. Given that concentration of effort and dedication of purpose, there is every reason to expect that Canada's share of the Australian market can be significantly expanded.

ACTION PLAN FOR AUSTRALIA

Categories of Instruments	List of Activities and Events	Prime Responsibility Centre	Timing
I. MISSIONS			
A. High-Level Visits	1. W.A.B. McKinnon, Minister of Industry and Commerce for Western Australia, to visit Canada to follow-up on numerous initiatives, including Minister Lumley's visit to Australia.	Bureau/Post	1982
	2. Premier Peckford to visit Australia.	Prov/Bureau/Post	Proposed for 1981
	3. Possible ITC Ministerial Trade Development Mission.	Bureau/Post	November 1981
	4. Canada-Australia officials meeting in Ottawa on Trade Agreement.	ROC/EA/Post	Proposed for September 1981
	5. Premier Davis to lead a mission to Australia.	Prov/Bureau/Post	September 1981
	6. Jean Folk, Chairman, Australian Business Development Corporation, to visit Ottawa to attend 8th International Symposium on Small Business.	Bureau/Post	October 1981
	7. Hon. Judy Erola, Minister of State for Mines, to visit Australia.	EMR/Bureau/Post	August 1981

Categories of Instruments		List of Activities and Events	Prime Responsibility Centre	Timing
B. Trade Missions	8.	Ocean Industries (Petroleum) Technical Trade Mission to Australia	TPI/Bureau/Post	April 1982
	9.	Heavy Electrical and Power Transmission Mission to Australia	ELE/Bureau/Post	October 1981
	10.	Incoming Mission of Senior Engineers from State Utilities	ELE/Bureau/Post	March 1982
	11.	Telidon: Incoming Buyers Mission	ELE/DOC/EXT/ Bureau/Post	1981-82
	12.	Incoming Pulp and Paper Equipment Mission	MCH/Bureau/Post	1982-83
	13.	Automotive Parts and Accessories Mission to Australia	TPI/Bureau/Post	February 1982
	14.	Incoming Buyers Mission to coincide with the Canadian International Automotive Show, Toronto	TPI/Bureau/Post	April 1982
	15.	Industrial Process Control and Instrumentation Mission to Australia International Engineering Exhibition, Melbourne	ELE/Bureau/Post	July-August 1981
	16.	Process Control and Instrumentation Incoming Buyers Program	ELE/Bureau/Post	1982

Categories of Instruments		List of Activities and Events	Prime Responsibility Centre	Timing
	17.	Fish Products Mission to Australia	FPB/Bureau/Post	October 1981
	18.	Québec Trade Mission to Australia	Prov/RO/Bureau/ Post	October 1981
	19.	Nova Scotia Trade Mission to Australia	Prov/RO/Bureau/ Post	November 1981
	20.	Incoming Australian Chambers of Commerce Delegation	CCC/Bureau/Post	1981/82
II. FAIRS AND EXHIBITIONS	21.	Petroleum Technology Australia Exhibition, Perth	MCH/ELE/TPI/ Bureau/Post	November 1981
	22.	Participation in Forestry Industry Machinery Exposition (F.I.M.E.) Myrtleford, Victoria	MCH/Bureau/Post	April 1985
	23.	Agricultural Equipment Fairs including Ag-Quip, Gunnedah, New South Wales, Dourin, Western Australia, Toowowba, Queensland and Horsham Victoria Shows	MCH/Post	1981/82
	24.	Australian International Mining Exhibition (Aimex '83) Sydney	MCH/Bureau/Post	February 1983
	25.	Royal Easter Show, Sydney	FDB/Bureau/Post	April 1982
	26.	Fish Expo, Sydney	FDB/Bureau/Post	September 1982
	27.	Possible Establishment of Canadian Trade Centre in Australia	Post/Bureau	1982

Categories of Instruments	List of Activities and Events	Prime Responsibility Centre	Timing
III. TECHNICAL SEMINARS	28. Agricultural Equipment (including Stubble Mulch) Seminars in Australia	MACH/Bureau/Post	1981/82
	29. Power Equipment Technical Seminar	ELE/Bureau/Post	1982
	30. Exporting to Australia Seminars in Selected Canadian Cities	Assocs/Bureau	1981-82
	31. Sawmill-Forest Harvesting Technical Seminar to coincide with Australia Timber Congress Meeting, Adelaide	MCH/Post	April 1982
IV. MEETINGS, EXCHANGES, VISITS	32. Consultative Committee under Canada/Australia Trade Agreement.	ROC/GPO/Post	As appropriate
	33. Agricultural engineers and scientists exchanges and visiting professorships at agriculture, engineering and pastoral colleges in Australia.	EXT/AGR/Post	As appropriate
	34. Secondment of Canadian electrical engineers to Australian Electrical Utilities.	ELE/Bureau/Post	As appropriate
V. STUDIES	35. Australian editors and journalists to visit Canada.	EXT/Bureau/Post	Ongoing
	36. Further analysis of opportunities in Australian sectors in light of Canadian production capabilities.	ISB/Bureau/Post	1981

Categories of Instruments		List of Activities and Events	Prime Responsibility Centre	Timing
	37.	Phase II Study: Power Substation Componentry	ELE/Bureau/Post	1982
	38.	Study of involvement of Canadian firms in Australia, including joint ventures and representation, etc.	Post	1981
	39.	Shipping Rate Study.	TPA/Post	1981
	40.	Defence-Production Sharing Agreement Feasibility Study.	DPB/DND/Post	1981
	41.	Survey of Australian import statistics to determine opportunities for Canada auto parts suppliers as a result of the elimination of British preferences in July 1981.	TPI/Bureau/Post	1981
	42.	Survey of Australian truck industry to determine opportunities for Canadian suppliers of specialized equipment.	TPI/Bureau/Post	1981
VI. MARKET GUIDES AND AIDES TO BUSINESS	43.	Preparation of directory of Canadian companies for each of priority sectors.	ISB/Post	1981-82
	44.	How To Do Business in Australia	Post/Bureau	1981-82
	45.	How to arrange Joint Ventures in Australia.	Post/Bureau/ Assocs.	1981

Categories of Instruments		List of Activities and Events	Prime Responsibility Centre	Timing
VII. PROMOTION AND PUBLICITY	46.	Major supplement on Canada in Australian newspapers.	EXT/Bureau/Post	Ongoing and in conjunction with major events
	47.	Selected publicity on Canada for use in Australian trade journals and business publications.	Post/IFS	Ongoing and in conjunction with major events
	48.	Stories on new developments in Canada to be submitted to Australian newspapers.	Post/IFS	Ongoing and in conjunction with major events
	49.	Press release for use in Canadian newspapers re: Canadian success in Australia.	Bureau/ISB/IFS	Ongoing and in conjunction with major events
	50.	Australian opportunity articles in Canadian newspapers and business publications.	Bureau/IFS	Ongoing and in conjunction with major events
	51.	Canada Commerce articles on Australian opportunites.	Bureau/IFS	Ongoing and in conjunction with major events
VIII. ENCOURAGEMENT AND INTERACTION WITH BUSINESS COMMUNITY	52.	Formation of ties between Australian and Canadian industry associations in priority sectors.	ISB/Bureau/Post	1981

Categories of Instruments		List of Activities and Events	Prime Responsibility Centre	Timing
	53.	Conduct Canada tours by Canadian trade officers from Posts re opportunities in Australia.	Bureau/Post	Annually
IX. FINANCING	54.	Capital Project Identification: Offshore Procurement, including repair and maintenance, with a view to maximizing Canadian content.	Bureau/EDC/Post	Ongoing
	55.	Explore, with EDC, possibilities for individual company lines of credit to assist the export of Canadian goods and services to Australia.	Bureau/EDC	Ongoing
X. INTERACTION WITH PROVINCES	56.	Establish Federal-Provincial Committee on Export Development	IMPG/Bureau	September 1981
	57.	Promotion of joint advertising, fairs and mission co-operation, and participation in export seminars.	Bureau/IFS/ Provinces	Ongoing
	58.	Improvements in market intelligence dissemination.	Bureau/RO/ Provinces/IMPG	Ongoing
	59.	Consultations on market development in Australia.	Bureau/Post/RO	Annually
XI. INTERNAL FEDERAL GOVERNMENT ACTION AND REVIEWS	60.	Consideration of additional personnel and related budgets for Posts and International Bureau to assist with implementation of strategy.	IMPG/Post/TCS	1981

Categories of Instruments	List of Activities and Events	Prime Responsibility Centre	Timing
	61. Proposed new Canadian Consulate in Perth.	TCS/Bureau	1981
	62. Second to Australia an officer knowledgeable in the petroleum industry.	TCS/MCH/Bureau/ Post	1982

GLOSSARY OF ABBREVIATIONS

AGR	-	Department of Agriculture
Assocs.	-	Industry Sector Associations
Bureau	-	International Bureau, Department of Industry, Trade and Commerce
CCC	-	Canadian Chamber of Commerce
DOC	-	Department of Communications
DND	-	Department of National Defence
DPB	-	Defence Products Branch, Department of Industry, Trade and Commerce
EA	-	Department of External Affairs
EDC	-	Export Development Corporation
ELE	-	Electrical and Electronics Branch, Department of Industry, Trade and Commerce
EMR	-	Department of Energy, Mines and Resources
FPB	-	Agriculture, Fisheries and Food Products Branch, Department of Industry, Trade and Commerce
GPO	-	North Asia and Pacific Division, Department of External Affairs
IFS	-	Public Information Directorate, Department of Industry, Trade and Commerce
IMPG	-	International Marketing Policy Group, Department of Industry, Trade and Commerce
ISB	-	Industry Sector Branches, Department of Industry, Trade and Commerce
MCH	-	Machinery Branch, Department of Industry, Trade and Commerce
Prov	-	Provincial Government
RO	-	Regional Offices, Department of Industry, Trade and Commerce
ROC	-	Office of Relations with OECD Countries, Department of Industry, Trade and Commerce
TCS	-	Trade Commissioner Service, Department of Industry, Trade and Commerce
TPA	-	Aerospace and Ocean Industries Branch, Department of Industry, Trade and Commerce
TPI	-	Surface Transportation Branch, Department of Industry, Trade and Commerce

EXPORT DEVELOPMENT PLAN

EXPORT DEVELOPMENT PLAN

II. A. PURPOSE

The introduction of greater focus and co-ordination to Canada's marketing efforts is the major theme of a "Canadian Export Strategy for the 1980s" approved by the Cabinet Committee on Economic Development. The elaboration of two-to-three-year marketing plans for Canada's priority markets is a central element of the strategy. This paper sets out an export development plan for Australia through:

i) creating a strategy framework to guide the actions and resources of the federal government in providing an effective program of assistance to, and an environment for, Canadian export development in Australia;

ii) elaborating a marketing plan to take advantage of the opportunities and to overcome the constraints facing Canadian exports to Australia;

iii) providing a working document to use as the basis for discussions aimed at co-ordinating the marketing efforts of the federal government in co-operation with provincial governments and the private sector.

The following plan for Australia includes:

i) an identification of the opportunities and constraints for Canadian export market development in Australia;

ii) a review of past efforts of the federal government to promote Canadian exports to Australia and the bilateral framework within which these exports occur;

iii) an identification of the marketing segments where the Canadian share of Australian imports may be improved or expanded;

iv) marketing plans for key priority sectors of the Australian market, based on an analysis of the specific opportunities and constraints in these sectors;

v) an overall market development plan for Australia outlining methods of capitalizing on opportunities and overcoming constraints found to affect Canadian exports to that market, and recommending both appropriate changes to current promotional techniques and possible new techniques to facilitate export growth.

B. THE CANADIAN/AUSTRALIAN ENVIRONMENT

Canada's bilateral relations with Australia are particularly close. They are founded on a sense of mutual trust, confidence and cordial familiarity arising from a series of unique parallels or common experiences in historical development. Both countries share similar broad objectives and a pragmatic approach in areas as widely disparate and comprehensive as cultural values, systems of goverment, economic development, social policies, foreign affairs, and certain aspects of domestic policies. Both are, of course, part of the Commonwealth. The wide-ranging co-operation that has developed from that basic compatibility has been of considerable advantage to each country.

Extensive interaction between both public and private sectors of Canada and Australia has involved co-operation at the ministeral level of government, useful exchanges at the official level, and frequent contact between the private sectors and also among academics and the professions. The sharing of approaches, goals and interests in many significant areas continues to be a desirable and effective element in formulating respective responses to a wide spectrum of important international issues. They include such subjects as stability and economic development in the Pacific Rim area and within ASEAN, the Law of the Sea, refugee policy, outer space communication, economic development in the Third World, the North-South Dialogue, and political issues in South Africa, Indochina and Afghanistan.

The Australian government has taken every opportunity to emphasize the value it attaches to its association with Canada and to urge that the association be strengthened. Canada also supports such goals. Federal and state ministers from Australia, including the deputy prime minister, have visited Canada recently. Mr. Ellicott, the Minister for Home Affairs, was in Canada in May 1979 and again in March 1980. The Australian Minister for National Development and Energy, Senator J.L. Carrick, also visited Ottawa in March 1980 and the Australian Attorney-General, Senator Peter Durack, was in Ottawa in April 1980. Prime Minister Fraser visited Canada in June 1981. Foreign Minister Street visited Canada twice in 1981. Several Australian state premiers and other senior state representatives are also expected in 1981 and 1982. Minister Lumley led a highly successful mission in May 1980 to demonstrate Canada's desire to strengthen relations with Australia. Senator Graham, representing Minister Lapointe, led a Canadian delegation to the Seventh International Symposium in Melbourne in November 1980. In the past year the premiers of Manitoba and Saskatchewan have traveled to Australia, and Ontario and Québec have sent successful trade missions, the former led by the Ontario minister of trade. Premier Davis is planning a visit to Australia in the near future. Prime Minister Trudeau will

attend the Commonwealth Heads of Government meeting in Melbourne in September. The number of repeated high-level visits between the two countries illustrates the importance each places on the relationship.

In private sector relations, distance has proved a serious impediment to full appreciation of the market. Many Canadian exporters have found it difficult to think of Australia as the profitable and sophisticated market that it is. Australian importers have found it hard to accept Canada as being in the same category as the United States as a supplier of manufactured goods. While there is significant Canadian investment in Australia's resource development, exploration of other market areas has thus far tended to be limited to the larger, more sophisticated or more adventurous Canadian companies. Canadian businessmen looking for export opportunities are beginning to realize, however, that Australia is a market worth considering.

C. CHARACTERISTICS OF THE AUSTRALIAN MARKET

1. Environmental

Australia is the sixth largest country in area, and enjoys one of the highest living standards in the world. Its 14.6 million people are concentrated in the southeast corner of the country. 85 per cent of Australians live in urban areas, 41 per cent in Sydney and Melbourne. Population growth, averaging two per cent a year in the post-war period, has currently settled at a rate of 1.5 per cent per year.

Australia has historic ties with Britain and English is the only language readily understood in the business community. Probably Australia's strongest selling point as an investment site, besides the per capita income and natural resources wealth, is its political stability. Because of the long distances, hostile terrain and a dependence on foreign trade, the Australian transportation system is well developed, with good air services and a steadily improving road network linking major cities. There are more than 70 commercially significant harbours. Telecommunications are the preserve of a federal commission (Telecom Australia) and, while the quality of service is not considered to be as high as in North America, the network is superior to those in most countries.

2. Socio-economic

With per captia GDP of $10,374 (1980), Australia ranks as an affluent developed country. The socio-economic factors contributing to that prosperity and the general economic trends witnessed in the post-war period are similar to those of other developed countries. While agriculture was the key sector in the initial stages of Australia's economic development, over the past 20 years there has been a decline in the size of the rural sector relative to GDP, a marked growth in both the service sector and the share of mining in GDP, and a modest reduction in the aggregate share of manufacturing (Table 1). Likewise, there has been a shift in industrial employment patterns. The number of workers in manufacturing has declined or leveled off in the past decade from a peak of 1.42 million in the mid 1970s to 1.27 million at the end of the decade. In the two years to February 1980, employment growth has been concentrated in the service industries (wholesale and retail trade, business services, community services, and the public service), and in the resource-based industries (mining, basic metals and metal fabricating). In construction and other manufacturing, employment declined over

the same period. Those trends in sectoral contribution to GDP and industrial employment patterns are forecast to continue well into the 1980s (Table 2).

The early 1970s witnessed rapidly accelerating import and export prices, a significant increase in domestic wages and prices, expansionary fiscal and monetary policy, and a slow-down of mineral developments and exports. Economic policy since 1975 has been aimed at correcting the imbalances that developed, namely the wage-productivity gap, inflation and a decline in the profit share of total prices and wages. Moderate success has been achieved, and there has been a substantial and continuous reduction in the rate of increase of both prices and wages up to 1979. Unit labor costs were reduced in the 1975-1979 period, but not enough to compensate for the large gains made earlier in the 1970s. Company profits recovered in the 1975-1977 period but have not matched the growth of wages and salaries per employee. The share of profits in total non-farm income has risen only slightly since the mid 1970s and remains four per cent below its long-term average.

The same period was accompanied by slow growth, rising unemployment, weak investment, and persistent - but not pressing - balance of payments deficits. Non-farm GDP grew at an average rate of two per cent between 1973-74 and 1978-79, compared to five per cent annually in the five years previous to 1973. As a percentage of total private sector expenditure, business fixed investment fell from 15 per cent, in the decade up to 1975-76, to 13 per cent in the subsequent four years. Over the past few years, however, considerable progress has been made in the lengthy adjustment process, and Australia's short term economic outlook is encouraging. In 1979-80, GDP real growth was 2.2 per cent, with non-farm sector growth up 3.1 per cent.

The federal budget for 1980-81 forecasts real GNP growth of three per cent overall, with non-farm growth being 3.5 per cent. Private consumption, which increased on average 2.25 per cent annually from 1978-1980, is expected to rise by three per cent in real terms in 1980-1981, while business fixed-investment is expected to show strong growth of about 10 per cent in 1980- 1981. A key aspect of the expected pick-up and long-term growth of investment is the development of energy, mining and resource-based metal industries. Investment in those industries increased by 35 per cent in value in 1979 and is expected to grow at an even faster rate in the 1980s. Employment grew 2.4 per cent in 1979-80 and, for the first time since 1973-74, the unemployment rate declined marginally on an annual basis to an average of six per cent. 1979-80 inflation, measured by the CPI, reached a high level of nine per cent, while wages increased by 13 per cent. The budget deficit of $2.6 billion (a modest two per cent of GDP) in

1979-80 is expected to be reduced in 1980-81. Revenue accruing from general taxation on domestic oil production may produce a slight budgetary surplus.

All things considered, the Australian economy appears to have suffered less from the current recession than other Western economies. The medium-term economic prospects, given the impending resource boom, are even more promising, and should record a moderate three-to-3.5 per cent growth in real GDP until mid-1982. As a growing number of mineral and energy projects come onstream, growth rates will increase. The country's resources, a relatively low inflation rate, and the potential of higher disposable incomes could accelerate the current low rate of consumer spending. Manufacturing should increase, too, as demand for capital goods increases in response to the resource boom. Demand for housing, transport, and consumer goods will increase. Assuming a continuing strong balance of payments position and a high level of capital inflow, economic growth should soon begin to accelerate.

3. Resource Development Macroeconomic Trends and Planning

Following five years of slow growth, Australia is currently poised on the edge of a resource boom. Investment in agriculture is buoyant and the outlook is promising due to generally strong world prices. Adjustments are being made to improve the competitiveness of the manufacturing sector (textiles, for example). Prime Minister Fraser has stated that Australia's objective in the 1980s will be to combine an internationally competitive economy with the wealth of natural resources and the availability of low-cost energy to secure long-term economic growth.

As a leading world producer of minerals and one of the few developed countries with a positive energy balance, Australia is entering a growth phase that will see the development of major energy and energy intensive mineral processing projects. Coal provides two-thirds of Australia's total domestic output of energy. Crude oil contributes one-quarter, the balance being supplied mainly by natural and other renewable resources. According to the National Energy Advisory Committee, current estimated reserves of coal (40 billion tons of black coal and 80 billion tons of brown coal) could support a coal industry expansion to 400,000,000 tons of raw coal a year by the turn of the century. With regard to natural gas, some seven per cent of the Western world's total proven reserves lie off the Northwest Shelf of Australia alone, and further discoveries are expected. The outlook for crude oil is not so certain. Currently, domestic supplies account for 70 per cent of refinery feedstocks. Finally, Australia has 20 per cent of the world's proven uranium reserves.

Abundant supply of low-cost energy has given Australia a significant comparative advantage in energy intensive mineral processing activity. For example, Australia is a preferred location for aluminum smelters because it is the world's largest producer of bauxite and alumina and currently enjoys a cost advantage of 20 per cent, relative to the OECD average, in electric power generated from coal-burning thermal plants.

Total investment in resource development projects, either undertaken or in the advanced stage of planning, was estimated in December 1980 to exceed $46 billion. Over the next five years the total value of investment could amount to $70 billion. It is estimated that 40 per cent of that investment will be in coal mining, oil and gas, iron ore and uranium projects; 20 per cent in power generation projects, primarily coal-based electricity projects; and more than 22 per cent in manufacturing projects, primarily in the basic metals products sector and, within that sector, aluminum processing operations.

In addition to the mineral processing sector, where local content regulations are in effect to guarantee a high measure of Australian participation, a broad range of industries stand to benefit from the abundance of low-cost energy and the spin-off effects of the resource boom. That factor, combined with new policy initiatives on industrial adjustment, will help the present, somewhat inefficient, Australian manufacturing sector become more internationally competitive. On the basis of two recent reports (the 1977 White Paper on Manufacturing and the Crawford Report) the Australian government has reversed its traditional support of import substitution behind high protective walls. It has stated its intention to pursue instead policies that will encourage development of the more export-oriented manufacturing industries, involve specialization, use advanced technology, draw on wider markets to take advantage of economies of scale, have innovative management and pursue increased productivity.

Industry groups with the largest employment concentration and contribution to GDP are food, beverages and tobacco, basic and fabricated metal products, transport equipment and other machinery and equipment (Table 3). Although the manufacturing sector as a whole is not expected to grow rapidly in the next few years, the sectors supplying equipment and services to the mining industry will experience continued growth. There will undoubtedly be - throughout the course of the resource boom and barring an effort by the government to maintain or increase protection of less efficient industries - a redistribution of resources toward high-productivity industrial sectors.

Current developments in mining and energy tend to overshadow the importance and buoyancy of the agriculture sector, which has traditionally been the pillar of the Australian economy and remains Australia's main source of export income. With good prices and generally good crops, the Australian rural sector has been operating at a high level. Gross farm product in 1978-79 equaled $8.6 billion, or 6.5 per cent of GDP. Rural exports accounted for 41 per cent of the total value of merchandise exports. Beef, wool and grains showed record returns, a trend that continued into 1980. Farm incomes rose by 20 per cent in 1978 and 11.5 per cent in 1979, and are expected to be high in 1980-81. Longer-term prospects in agriculture are difficult to measure in view of its vulnerability to fluctations in climate and external demand. They look at the least favourable, however. Other sectors whose development may have significant implications for Canadian exporters are forestry and fisheries.

Given the strength of developments in all the above sectors, Australia's medium-term economic outlook is highly encouraging. The extent to which those real opportunities are translated into economic growth, however, will depend largely on government policy and management. First, projects necessitate large inflows of debt and equity capital requiring a certain flexibility on the part of the government in administering existing foreign investment guidelines. At the development stage, those guidelines seek 50 per cent Australian equity in resource projects. Also, projects may be approved with a lesser degree of Australian participation if it cannot be achieved on reasonable terms and the foreign investor undertakes a commitment to reach 51 per cent local equity. In most other sectors, on the other hand, there are no equity limitations on foreign investment. Indeed, investment is welcomed. There is a second issue, however: the effect on inflation of increased demand arising from mining and energy projects. Project investment will increase the demand for labor, particularly skilled labor, giving rise to the risk of wage inflation and domestically generated cost-price distortions. Those pressures may be eased by immigration and an increase in the number of people being trained, but it is expected that the government will have no alternative other than maintaining its tight fiscal and monetary policies. Third, the government's intention to reduce protection of domestic production, and its trade and external policies in general, will bear directly on the ability of the economy to constrain inflation and enjoy continued growth.

4. Trade and Investment Policy

The characteristics of the Australian economy have to a large extent dictated the main features of trade policy. On one hand, Australia's objective in the post-war period was to encourage the growth of domestic industry, accelerate economic development and provide employment for an expanding urban population. Australia has supported high levels of protection and it was only within the last decade that tariff levels were reduced in recognition of the fact that protection was contributing to an inefficient and fragmented industrial structure and that exposure to international competition was necessary to remedy the problem. On the other hand, as Australia's export income has been traditionally generated by primary products, a general trade policy on exports comes rather close to being commodity policy, its main objectives being access to overseas markets and price stability. As a consequence of these objectives, Australia has been active in international organizations and multilateral forums concerned with general trade and commodity issues. Australia is a signatory to GATT, a member of the OECD, and either a party to, or an important participant in, commodity agreements concerning wheat, sugar, tin, cocoa, rubber, and bauxite.

As a primary producer, Australia has experienced a certain frustration with multilateral trade talks and is increasingly focusing on bilateral negotiations. There is a general disillusionment with GATT's inability to implement and enforce tariff reductions in the agricultural sphere and from its rather less stringent rules on agricultural quantitative restrictions and export subsidies. Indeed, the Crawford Report on industrial adjustment raises the possibility that Australia might eventually forsake the Most Favored Nation principle in favor of special bilateral arrangements. Australia's interest in bilateral arrangements is reflected in the number of trade agreements it has signed with individual countries. Among industrialized countries, Australia has signed a free trade agreement with New Zealand, a preferential agreement with Canada, and a commercial agreement with Japan. Eight other agreements are with the U.S.S.R. and the centrally planned economies of Eastern Europe, and 10 are with developing countries. With the exception of the free trade agreement with New Zealand, the Australian Trade and Commerce Relations Agreement with Papua New Guinea and the arrangements with Canada and Malaysia, the bilateral agreements provide for reciprocal MFN treatment and consultative procedures. They also express support for commodity agreements and improved conditions of trade in primary products.

The main instruments of Australia's trade policy are tariffs, quantitative import restrictions, non-tariff barriers, export controls, export incentives and, to a limited extent, foreign

investment regulations. Tariffs are of two kinds: preferential and general. The preferential rate, which was applied to certain imports from the U.K. until July 1, 1981, is still in effect on imports from Papua New Guinea, most but not all goods from Canada and New Zealand, and a long list of articles from Hong Kong and former British colonies and protectorates. Preferential treatment is granted also to selected imports from LDC's. The general rate of duty applies to all other countries. Under section 10, schedule two of the customs tariff, Customs authorities may waive the normal duty if local manufacturers cannot satisfy full demand or supply equivalent goods. Most such admissions are in machinery and the ruling will no doubt be widely applied to suppliers for project development.

Most tariff rates were cut 25 per cent in July 1973, and another cut of six-to-10 per cent was made on one-third of protected items in February 1977. The present government is committed to further tariff reductions over the next 15 years in line with its policy of reducing inflation and promoting structural adjustment. In January 1980, tariff levels ranged from 0 to 95 per cent, most rates being concentrated in the 15-40 per cent range. Between 1968-69 and 1976-77, the average nominal rate of tariff for manufacturing fell from 24 per cent to 15 per cent and the average effective rate of protection declined from 35 per cent to 27 per cent.

Selected commodities are now subject to a system of quotas. They include clothing, appliances, textiles, steel, electronics and automobiles. Used earthmoving, excavating and material-handling equipment; footwear and footwear materials; assembled passenger motor vehicles less than five years old; fixed resistors; certain domestic freezers; and used four-wheel-drive vehicles are subject to import licensing controls. Other non-tariff barriers include "support" values for chemicals, dumping duties, quarantine regulations, commerce regulations (trademarks, copyright, marks of origin and packaging and industrial standards) as well as voluntary restraints. In the recent Multilateral Trade Negotiations, Australia did not accede to the International Agreement on Technical Barriers to Trade or to the International Agreement on Government Procurement.

There are generally few controls on Australian exports. Limitations on the sale of uranium, oil and minerals do exist and the government can prohibit export of those products, although that power is rarely exercised. Export incentives include the Export Market Development Grants scheme, which encourages exporters and potential exporters to seek out and develop new markets; and the Exports Expansion Grants scheme, which seeks improved export performance. Other facilities, such as export insurance and export credit, are granted by the government's Export Finance and Insurance Corporation.

Just as trade policy instruments were used to promote the establishment of a domestic industrial base, the foreign investment guidelines detailed in Appendix (I) are being used to ensure that the industrial base remains under the control of Australian nationals. The principal aim of Australian foreign investment policy is to encourage overseas capital inflows on a basis that recognizes Australian needs and operations. Apart from certain limited areas of the economy where investment is restricted (banking, insurance, broadcasting, television, newspapers, civil aviation and real estate) proposals, whether takeovers or new projects, are considered against broad criteria that take into account economic, social and other national interest considerations. It is believed that, wherever practical, Australians should have an opportunity to participate with foreign investors in major projects. Such participation is, therefore, sought to the extent appropriate to the particular circumstances of each proposal. Specific guidelines have been laid down for Australian involvement in new natural resource projects.

Foreign investment remains strong in spite of those restrictions. In 1979-80 the net inflow of foreign investment, exclusive of undistributed income, was $1 billion, of which $758 million was in direct investment and loans. In the nine months up to March 1980, the Foreign Investment Review Board approved proposals involving $5.7 billion. Those short-term figures compare with a total net inflow of foreign investment of $22.9 billion from 1947 to 1978. $9.4 billion, or 41 per cent, of that amount was new direct investment and loans. Foreign direct investment has been concentrated in the manufacturing sector (35.5 per cent of 1964-1977 direct investment), mining and quarrying (18.2 per cent), and banking and finance (11.8 per cent). In 1978-79, 38 per cent of total foreign investment came from the U.S., 42 per cent from Britain, and 20 per cent from other countries (Table 4). Canadian investment in Australia amounts to about three per cent of the total.

5. Trade Characteristics and Balance of Payments

Australia's balance of payments position is strong and the outlook encouraging. Over the 12 months ending June 1980, performance improved remarkably. Total imports amounted to $20.9 billion, an increase of 17 per cent over the previous year. Total exports were $24.3 billion, up 32.6 per cent over 1978/79. The increased export revenue was the principal factor in the diminished current account deficit of $1.2 billion, well down from the $2.2 billion deficit of the previous year. During 1981-82, however, the deficit will probably be $5 billion in the current account due to the increasingly strong demand for imports. Export growth for

1980-81 will not likely match 1979-80 growth. A softening demand caused by slower growth in the economies of Australia's trading partners will mean lower export earnings. Export growth should increase, however, once world trade begins to gain momentum.

The leading categories of imports are machinery, petroleum, manufactures, transport equipment and chemicals (Table 5). The leading sources of imports are the EEC (24 per cent), the U.S. (22 per cent), Japan (15 per cent), ASEAN (six per cent), Saudi Arabia (four per cent), New Zealand (three per cent) and Canada (2.7 per cent) (Table 5). Growth in imports is expected to continue at 15 per cent per annum in the next few years with the import market expanding by $3.5 billion annually. It seems that the bulk of import demand will be in sectors supplying resource projects and infrastructure developments as well as consumer goods. Australia has a strong appetite for imports, particularly manufactured goods, and has one of the highest per capita import levels of any country. Australia's exports are dominated by agricultural and mineral products; the major export commodities being wheat, sugar, coal, aluminum, meat (beef, veal, mutton), dairy products, wool and iron ore (Table 5). Japan, the EEC, the U.S., ASEAN countries, New Zealand, the U.S.S.R. and China are major customers (Table 5). ASEAN customers are expected to become increasingly more important in the coming years. Table 6 shows the direction of Australian trade, while Tables 7 and 8 review the composition of Australian exports and imports.

The Australian dollar, which was sharply devalued in 1974 and 1976 and experienced gradual downward adjustments in 1977 and 1978, has appreciated slightly since then and is expected to stabilize at A$1 = US$1.18 through 1981. The currency will probably face some upward pressure over the next few years in view of expected capital inflows. The government will no doubt seek a slightly undervalued dollar vis-à-vis the U.S. dollar so as to maintain the levels of investment required to finance planned resource projects.

D. CANADIAN TRADE WITH AUSTRALIA

1. Trends in Canada-Australia Trade

Commercial exchanges with Australia date from 1895, when the first trade commissioner was appointed by the Canadian Government to Sydney. In 1980, Canada-Australia trade totaled $1.2 billion, an increase of 14 per cent ($145 million) over the previous year. The 1980 level represented a fourfold increase over two-way trade in 1970 ($344 million).

Canadian exports to Australia in 1980 amounted to a record $663 million, an increase of 19 per cent ($107 million) over the same period in 1979 (Table 9). Leading individual exports include newsprint ($66 million), lumber ($63 million) and sulphur ($53 million). The bulk of Canada's exports to Australia consist of fabricated materials and finished goods (manufactures), sales of which totaled $529 million in 1980 - an increase of 10 per cent over the corresponding period in 1979. Sales of manufactures have traditionally represented a large segment of our total exports to Australia: more than one-third in 1980. While automotive parts and accessories remain the largest individual item in that category ($45 million last year), the relative share of automotive goods as a portion of total Canadian sales to Australia declined to seven per cent in 1980 (14 per cent in 1979). Other major manufactured goods exports include carpets ($27 million), combines ($12 million) and tractors ($9 million). (See Table 10.)

Australia usually stands only behind the U.S., Britain and Venezuela as a market for Canadian finished goods although, on the basis of preliminary 1980 figures, Australia ranked sixth as a market for manufactures. At present, Canada supplies about 2.7 per cent of the total Australian import market - a relative decline from four per cent in 1970.

In 1980, Canadian imports from Australia were valued at $507 million, up nine per cent over the same period in 1979, representing the highest level on record (Table 11). Shipments consisting primarily of agricultural products and minerals account for some three-quarters of total Australian sales to Canada. Leading individual import items are sugar ($189 million), alumina ($77 million) and beef ($63 million). Australia ranks as Canada's 11th largest supplier and has less than one per cent of the total Canadian import market. Table 12 traces Canadian trade with Australia from 1970 to 1980.

2. Trade Policy Considerations

Trade between Canada and Australia is governed by both the General Agreement on Tariffs and Trade (GATT) and a separate bilateral Canada-Australia Trade Agreement (CATA) of 1960.

CATA provides for the exchange of tariff preferences on a broad range of products and places Canadian trade with Australia on a more favorable basis than virtually any other trading partner. An Exchange of Letters was signed in 1973 to supplement CATA and to provide for continuation of preferences that had been derived from each country's bilateral agreement with Britain prior its joining the European Community.

Those preferences have played an important role in the development of Canadian exports to Australia, and have enhanced the competitiveness of Canadian manufactured goods there. The preferences have also encouraged companies without previous export experience to look first at Australia since market demand is similar and the novice exporter has an advantage over non-preferential suppliers.

Both governments have accepted that trade and economic relationships should be re-examined now that the Multilateral Trade Negotiations have been concluded. The review is under way. Canadian businessmen and provincial governments were invited last fall to present their views concerning future trade and economic relations with Australia. The general view expressed was that, although certain problems had arisen in the operation of the agreement, and some of the preferences had been eroded over the years, the existing bilateral preferential arrangement still provides important benefits to Canadian exporters and should be maintained or improved to the extent possible. In spite of the long distances involved, it provides Canadian exporters with both a cost and psychological advantage over much of their competition. The main conclusion to be drawn from these representations is that it would be in Canada's interest to maintain and, where practical, to improve the existing preferential trade relationships.

Should the agreement be renegotiated, both governments will also need to consider whether it would be useful to include in any new agreement provisions designed to foster investment and joint ventures. Canada does not have a joint trade and economic committee with Australia, as it does with a number of other countries, although both the 1960 Trade Agreement and the 1973 Exchange of Letters provide for consultation on a broad range of matters. Given the rapid changes that are expected to take place in the trade and economic environment in the next decade, an effective consultative mechanism may be beneficial to both sides. It is expected that the two governments will meet late in 1981 to determine the shape of future bilateral arrangements.

Issues now affecting Canadian export interests in Australia include: the establishment some years ago of import controls on aluminum; a support value for duty system on industrial

chemicals; and Australia's decision as a member of the New Zealand-Australia Free Trade Agreement (NAFTA) to allocate 89 per cent of its newsprint market and 75 per cent of its pulp market to domestic and New Zealand suppliers. More recently, a number of unilateral actions have affected preferential tariffs. Since early 1974, various recommendations put forward by the Industries Assistance Commission have had the effect of either increasing rates of duty on certain Canadian goods, or reducing margins of preference. A wide range of Canadian products has been affected. In a number of cases Canadian imports were not the immediate cause of the market disruption but were nonetheless caught up in the protective measures imposed. The situation is of particular concern because of the large number of investigations and the uncertainty caused by the long periods that can elapse between the initial complaint by a domestic producer and the ultimate decision by government. Importers are reluctant to make purchase commitments once an investigation has been initiated. Similar problems have resulted from the two per cent revenue Customs duty imposed in late 1979. There have been problems as well with Australian health and sanitary regulations. Some success has recently been achieved making the movement of Canadian cattle, swine, horses and bovine semen possible, but quarantine regulations still prevent the entry of poultry.

Australia has expressed concern, among other things, over Canada's import restrictions on beef and dairy products, increased tariffs on certain fruit and vegetable products, the effect of changes in the general preferential tariff on competing Australian products, and a number of general issues relating to access for Australian wines (such as bilingual labeling, appellations of origin, and the practices of provincial liquor commissions).

3. Investment and Joint Ventures

Canadian direct investment in Australia totaled $457 million in 1978 (the latest year for which published figures are available), accounting for less than three per cent of total foreign investment in Australia and about four per cent of the total investment by Canadian interests in all countries. An outline of Canadian investment in Australia is attached as Appendix III. Australian direct investment in Canada is estimated to be $76 million.

A number of Canadian mining and oil companies are already active in the resource development sector. In manufacturing as well, there are many areas where the combining of Canadian and Australian resources and expertise has already proved beneficial to both sides in such disparate enterprises as food processing and production of prefabricated buildings. In

general, while such arrangements have not been to date a significant factor in Canadian-Australian trade, the potential and scope for this type of co-operation is considerable.

Australians often point out that there are benefits to be derived from joint ventures in the domestic market and also in markets in Southeast Asia and other areas where advantage could be taken of established Australian connections, Australian sales techniques and, in some cases, Australian export incentives. There are many cases where either country, relying only on its own technology and resources, would find it difficult to meet Japanese and European competition, but where a joint operation would strengthen their chances of success. Canadian companies might benefit from such arrangements.

4. Double Taxation Agreement

A new bilateral double taxation agreement was signed on May 21, 1980. The agreement covers all forms of income flowing between the two countries and limits the tax that may be levied by the source country to 15 per cent on dividends and interest and 10 per cent on royalties. As is customary, however, those limits will not apply to income effectively derived from a permanent establishment or fixed base held in one country by a resident in the other.

Apart from other changes to bring the arrangements with Canada into line with Australia's recent agreements, the new agreement provides for limited taxation rights for the country of source in respect of pensions paid to residents of the other country, and for some relaxation of the rules under which residents of one country working for short periods in the other are freed from taxation in the country being visited. Measures for the relief of double taxation of income that remains taxable in both countries correspond with those that apply in the context of other Australian agreements. Australia will continue to give credit for Canadian tax on dividends received by Australian individuals. As is customary the legislation giving force of law to the agreement in Australia will provide for credit relief to apply to interest and royalties derived by Australian residents where the Canadian tax on that income is subject to the agreement limit of 15 or 10 per cent respectively. Other non-dividend income that Australian residents derive from Canada will continue to be exempt from Australian tax if taxed in Canada.

E. CANADIAN TRADE DEVELOPMENT ACTIVITIES AND TOOLS

1. General

Since there are no formal bilateral consultative mechanisms between Canada and Australia, issues are discussed informally and directly through contacts with ministers and other officials. Whether that approach will remain effective depends largely on how the Canada-Australia relationship evolves in the years ahead. Certainly, in the past year there has been a remarkable increase in high level visits at both the federal and provincial levels between Canadian ministers and provincial premiers and their Australian counterparts. Indications are that such exchanges will become more frequent. During 1981, a minimum of eight senior Australian officials, including Prime Minister Fraser, will have visited Canada. A similar number of senior Canadian federal and provincial representatives will visit Australia. Prime Minister Trudeau will attend the Commonwealth Heads of Government Meeting in September 1981. The number of repeated high-level visits reflects the importance of this market.

Contact between Canadian and Australian businessmen is growing but remains largely unstructured. Both Canada and Australia are represented on the Pacific Basin Economic Council. Also, several Canadian business associations (such as the B.C. Council of Forest Industries) are represented in Australia, and a rapidly growing number of Canadian companies and financial institutions have offices in Australia. In recent years, there has been a significant increase in the number of ITC-sponsored pomotional activities related to Australia. (The 1981-82 missions and trade fair participation are outlined in Table 13). Also, the provinces have recently increased their market development activities and, collectively, are sponsoring approximately six horizontal and vertical missions this year. British Columbia, Alberta, Ontario and Québec are particularly active in Australia. PEMD (Program for Export Market Development) has played a role in facilitating private-level contacts. (PEMD approvals, by section and by sector, are outlined in Tables 14 and 15. A list of selected Canadian companies successful in the Australian market under PEMD follows Table 15.)

2. Ministerial Trade Visit to Australia

The Minister of State for Trade led a businessmen's delegation to Australia in May, 1980 -- the first ministerial-led trade development mission in eleven years. The primary obective was to confirm at the political level the importance Canada

attaches to its trade relations with Australia and to underline interest in developing closer bilateral commercial ties by means of enhanced two-way trade and technology transfers and investment flows. The mission also served to better acquaint the Australian business community with Canadian industrial capabilities. The double taxation agreement described earlier was signed and the establishment of an EDC line of credit to the Australian Industry Development Corporation was announced. Contracts totaling some $25 million were concluded and companies estimated that sales approaching $120 million might be realized over the next few years as a result of the mission.

Minister Lumley discussed with Australian officials the need for an inventory of Australian and Canadian capabilities. The purpose of the inventory would be to determine gaps in respective capabilities that may offer scope for industrial participation and to outline potential areas for co-operation. (For instance, Canadian firms could complement, rather than compete with, Australian production in meeting project requirements locally and possibly in third markets as well.) In that context, studies have been undertaken on the following Australian sectors: mining equipment including materials handling; oil and gas field equipment; and power generation and transmission equipment. Information contained in the studies is being made available to provincial governments and Canadian industrialists.

3. Pacific Rim Opportunities Conference

Some 250 business, labor and academic leaders and representatives of the federal and provincial governments took part in the Pacific Rim Opportunities Conference in Vancouver from November 19 to 21, 1980. The conference, chaired by the Minister of State for Trade, heightened Canadian awareness of opportunities in the Pacific region focussing on financing; the Pacific community; new institutions for the 1980s; investments; joint ventures; technology transfer and two-way trade. The major theme to emerge was that Canada's trade and other business links with the Pacific Rim were assuming increasing importance for Canada's own economic performance. Canada's trade across the Pacific now exeeds that with Europe. Intensification of economic contacts with the Pacific would both flow from, and contribute to, the westward shift of economic activity within Canada itself. Notwithstanding the rapid rise in trade with the Pacific Rim, few doubted that Canadian businessmen should be more active in pursuing the opportunities that exist in the region. Business and government leaders throughout the region are not sufficiently aware of Canada's supply capabilities, particularly in the high technology sector.

With specific reference to Australia, it was agreed that the country is a good market for Canada, particularly for manufactured items. The conference concluded that the anticipated resources boom will transform Australia into an important economic power and a strong market for Canadian goods and that Australia could become Canada's second largest foreign market for manufacturers. Canadians are welcome partners in resource development, particularly through joint ventures. Other themes to emerge included the importance of high technology sales. Canada could meet Australian requirements for satellite systems, videotex and computer equipment. The anticipated resource boom would also provide opportunities for equipment for the mining and processing of aluminum, coal and oil. The view was that there are prospects for sales of agricultural equipment, including small items, automotive products and consumer goods.

4. Financing

The Export Development Corporation (EDC) exposure in Australia as of June 30, 1981 is as follows:

	Offers	Commitments
	($ millions)	
Section 24 (Corporate Insurance)	$40.5	$46.7
Section 27 (Government Insurance)	-	-
Section 29 (Corporate Loans and Guarantees)	36.7	28.7
Section 31 (Government Loans and Guarantees)	-	-
Section 34 (Foreign Investments Insurance)	-	-
	$77.2	$75.4

NOTE: At July 31, 1981, the total amount of potential lending business in EDC's pipeline of transactions under negotiation, but not yet concluded, consisted of five transactions totaling $64.3 million.

Loan agreements signed to date include:

1971 - Railway hopper cars from National Steel Car Corporation
$10.3 million - to Hammersley Iron Pty.
1977 - 15 GM Terrex haulers, from GM Motors, Diesel Division
$7.2 million - to Hammersley Iron Pty.
1980 - Line of Credit
$10 million - to Australian Industry Development Corporation.

1981 - Three Twin Otter aircraft from the de Havilland Aircraft of Canada
$3.9 million to Aero Pelican Intercity Commuter Air Services Pty.
1981 - Oilfield drilling equipment from Dreco Ltd.
$6.04 million - to Petroleum Drilling Services (Australia) Pty. Ltd.

In September 1980, EDC signed a one-year, renewable U.S. $10 million line of credit with the Australian Industry Development Corporation (AIDC) to finance up to 85 per cent of the sale price of Canadian goods and services. The line of credit is intended to help Canadian exporters competing for sales in Australia by providing the Australian buyer with an accessible credit facility through the AIDC. The corporation is wholly owned by the Australian government. It was set up to serve as a source of funding for the development of domestic industry and to provide Australian ownership and control of industrial and resource projects. The availability of project financing from international financing institutions such as the Asian Development Bank and the World Bank has not yet been a factor in Canadian trade development with Australia.

F. OVERALL TRADE PROSPECTS IN THE AUSTRALIAN MARKET

In view of the significant changes envisaged for the Australian economy, a greater awareness on the part of the Canadian business community of the potential offered by the Australian market and favourable environmental factors such as: lines of credit; double taxation agreement; and direct air links, there would appear to be greater scope for Canadian participation in Australian economic development than ever before. With anticipated expenditure on resource-based development over the next five years estimated to be in the order of $60 to $70 billion and a per capita income already more than four-fifths the Canadian level, the outlook for further growth and diversification of Canadian exports to Australia is particularly bright. The preferential tariff rates that are applied to Canadian imports provide a relative price advantage to Canadian firms against products from other exporting countries. Now that the preferential rates once enjoyed by British companies have been revoked, Canada's competitive position is further enhanced.

While steady progress has been made in the postwar period in the development of an industrial base in Australia, it is considered unlikely that local production will be sufficient to supply all the industrial and consumer needs projected over the next 10 years. Even though there are high Australian-content requirements in the various capital projects in particular, supply bottlenecks in Australian industries are likely to occur, so that imports may account for between 20 per cent and 30 per cent of the inputs required for each resource project or power station. For the Canadian exporter, therefore, those mineral and energy-related projects open up opportunities to export capital equipment goods and services needed to supply the various projects and the infrastructure developments that they will entail.

The development of the North West Shelf Natural Gas reserves in Western Australia will likely be the target project undertaken over the next decade. That initiative, valued at some $7.3 billion, involves development of an offshore gas field, an underwater pipeline, gas plant, liquid nitrogen gas (LNG) storage and marine loading facilities, construction of LNG carriers and a 1,500 km (932 mile) pipeline. Other growth sectors include ferrous metals (iron ore), non-ferrous metals (aluminium, copper, nickel, uranium, coal), petrochemicals, forestry and infrastructure upgrading, energy (thermal power, including transmission), commu- nications and port development. It is estimated that, in areas where Canada has an established supply capability (i.e. power generation, forestry and non-ferrous metals), the project potential for such expertise is in the order of $1 billion. (A list of selected Australian projects is attached as Appendix II.)

ITC is particularly interested in assisting with the formation of consortia, including the provision of financing packages, where needed, to meet Australian requirements. Because considerable Australian industrial capability exists in sectors that service resource development projects, Canadian project proposals and initiatives will best be served by working either through, or in consultation with, Australian firms.

Projects are not usually contracted on a turnkey basis, and participation in their execution is undertaken on a joint-venture basis. Increasing demands for capital may lead to more aggressive moves by Australian firms to seek foreign venture partners. Because Canadian partners in such joint-venture operations are familiar with Canadian products and capabilities in other related areas, such arrangements can lead to increased exports of ancillary Canadian equipment, machinery and other sophisticated goods. Therefore, it would be highly advantageous for Canadian firms to consider complementing Australian capabilities where there are requirements for state-of-the-art technology, equipment and experience.

Capital goods in general, involving manufactured products and including machinery, transportation equipment and a wide range of consumer durables, currently account for more than two-thirds of total Australian imports, and that trend is expected to continue. Moreover, most Australian import requirements are in sectors where Canada has a demonstrated export capability. The Australian market offers particular promise for small and medium-sized firms. Of the 590 commodity categories exported to Australia in 1980, total sales in 429 (or 73 per cent) were valued at less than $500,000. Few other countries will be able to offer the same range of opportunities for Canadian exporters during this decade.

Potential opportunities, including those which will be discussed later in detail, include:

Agriculture products	-	breeding stock, livestock semen, cherries, blueberries, asparagus, canned fruits and vegetables, specialty cheeses, canned meat preparations
Fish and fish products	-	canned and smoked salmon, sardines, herring, kippered snacks, block-frozen fish, scallops and crabs
Forest products	-	softwood timber, pulp, newsprint, paperboard, wallpaper, computer paper, kitchen cabinets, outdoor wooden furniture, doors, panels, moldings, and specialty and photocopy papers

Industrial products	- asbestos, specialty steels, (larger diameter steel pipe and pressure vessels for liquified petroleum gas), potash and sulphur
Chemicals	- pesticides, plastic materials, pharmaceuticals, chemical elements and compounds, and ore treatment chemicals
Machinery	- agricultural equipment, forestry equipment, newsprint machines, oil and gas equipment (onshore and offshore) and pipeline supplies, mining and concentrate (drills, drill jumbos, load-haul-dump units, low profile underground dump trucks, rock breakers, stopewagons, diamond core drills, coal washing and separation equipment, specialized drill bits, mine hoists, and airleg drills), labeling and packaging machinery, hotel equipment, construction equipment, food preparation handling processing, steel building, hand tools and hardware
Electrical and electronic products	- power generation and long distance transmission equipment, minicomputers and software, satellite communication and earth station equipment, information systems, geophysical seismic and process control equipment, instrumentation for navigation and surveillance, marine electronics and medical equipment
Transportation equipment	- automotive parts, mining trucks and off-highway vehicles, guided transit systems, specialized freight rolling stock, surveillance, passenger and utility (STOL), firefighting and corporate aircraft, offshore rigs, dredges, trawlers, submersibles and pleasure craft
Textile and consumer products	- carpets, rugs, upholstery, soft furnishings and drapery and decorative fabrics, skates, tree-climbing and other work boots, household goods, jewellery, toys and sports equipment

Consulting services	- resource development (ferrous and non-ferrous metals, oil and gas, forestry) infrastructure, public works, civil construction including project engineering and management in association with local firms.

G. AN OVERALL STRATEGY FOR AUSTRALIA

The major Canadian trade objectives in Australia are:

i) to ensure an environment that will encourage the strengthening of the Canadian presence in Australia's growing economy;

ii) to increase the sale of Canadian goods and services at a rate sufficient to improve the market share; and,

iii) to pursue opportunities for investment and joint ventures.

From the federal government's perspective, a strategy vis-à-vis Australia requires efforts on three fronts:

i) supporting marketing efforts of Canadian firms in pursuing opportunities, particularly in the sectors identified;

ii) overcoming obstacles to expanded Canadian exports and investment in Australia;

iii) helping exporters to take advantage of the bilateral relationship that has developed during the past few years between Australia and Canada.

The overall strategy or framework to guide the actions and resource allocation of the federal government and to form the basis for coordinating marketing efforts in Australia, in co-operation with provincial governments and the private sector, is set out as an action plan to the Executive Summary of this paper. The three-year framework for Australia is intended to capitalize on opportunities and to overcome constraints on Canadian exports. As such, it incorporates recommendations arising from the priority sector action plans, particularly where common instruments are proposed. Sector-specific initiatives are dealt with in the individual priority sector strategies that follow (Section H). The strategy applies specifically to four areas: trade relations, market identification, market awareness, and market development.

Each activity or event is proposed as a response to an identified need and will be evaluated during the two-to-three-year period. Undoubtedly additions and deletions will be made as needed, arising from ongoing interdepartmental discussions as well as consultations with the provinces and the private sector.

H. PRIORITY SECTOR IDENTIFICATION & SECTOR MARKETING PLANS

An analysis of the characteristics of the Australian market and Canadian trade patterns has identified a number of sectors in which significant growth can be expected over the next few years. That information, combined with inputs by the commercial divisions of Canada's three posts in Australia, the Industry Sector Branches and the International Trade Bureaux, has identified sectors in which the potential for growth of Canadian exports is significant. Together, those inputs allow determination of a group of sectors for which the trade prospects are great and the payoff to Canada could be high.

Functionally, the sectors are:

- oil and gas equipment, including pipeline
- heavy electrical equipment
- telecommunications
- forest industries equipment
- auto parts
- instrumentation and industrial process controls
- agricultural equipment
- ocean industries

These sectors by no means represent the only areas of opportunity for Canadian exporters to Australia. Many of Canada's traditional exports to that country will continue to grow without government involvement. As well, some promising sectors are not priority sectors per se, either because of an existing strong Australian capability or a relative weakness in Canadian expertise. Promotional or exploratory initiatives are being considered by government in such sectors nonetheless, because there is potential for lucrative exports in specialized areas. For example, it has been estimated that more than 70 per cent of the machinery and equipment requirements of Australia's rapidly expanding mineral industries is available locally. However, there are certain areas not well covered by the Australian industry which could be sourced from Canada.

An analysis of the priority sectors follows.

1. Oil and Gas Equipment, Including Pipeline

a) The Opportunity

Activity in the Australian oilpatch has accelerated at an exceptional rate in recent years. Government policies to bring local crude prices progressively towards parity with world prices, coupled with accelerated depreciation allowances, have resulted in new exploration and development activity involving many new players. Expenditures on exploration in 1981 are projected to reach $532 million, up from only $66 million five years earlier. Some 117 wells are planned for onshore exploration (against 68 in 1980), while offshore exploration, which will comprise 35 per cent of total exploration investment in 1981, will involve 20 wells (up from 14 a year earlier). Total development investment will amount to $1,330 million for 1981, of which $1,104 million will occur offshore. Those development expenditures will pertain to 12 offshore development wells, against five in 1980 and 74 onshore wells (against 22 in 1980). As a result of that level of oil and gas activity, the total apparent market for field equipment for 1980-81 will reach $186 million (up 33 per cent over 1979-80). About 72 per cent of that amount is expected to come from abroad. By 1985-86, the market is projected to expand to $435 million per year, of which 71 per cent, or approximately $310 million, will be imported.

The following description of planned activity in Australia's oil and gas sector is based on conditions as they existed in the spring of 1981.

i) Oil and Gas Development:

The major investment category, offshore oil and gas development, will be composed mainly of work on platforms in the Bass Strait, off Victoria; and in the North Rankin gas field, on the North West Shelf. The Bass Strait, located in the Gippsland basin, contains nine proven commercial petroleum fields. Production of stabilized crude oil in 1980 was 130 million barrels, which represents almost 90 per cent of current Australian crude output. In addition, gas production, at 143,000 million cubic feet in 1980, constitutes about 50 per cent of total natural gas production in the country. Operations are conducted through a joint venture involving Esso Exploration and Production Inc., of Exxon and Broken Hill Pty., Ltd. In light of recent discoveries,

estimated oil reserves have been raised to 450 million kilolitres (9,900 million gallons), enough to ensure Australia 65 per cent self-sufficiency throughout this decade.

Production in Bass Strait is currently based on seven platforms. Four produce oil, two produce oil and gas, and one produces gas. A subsea completion production well is operating in the Cobia field and pipes crude oil from the wellhead on the sea floor and along the bed to the Mackerel platform. Five new platforms are in various stages of development. One (Snapper), has the jacket installed and development drilling has commenced. The West Kingfish jacket has been fabricated and will be laid in mid-1981. The cost of West Kingfish has been estimated at $230 million. The Cobia platform is expected to cost $250 million and will be completed in 1983. Two other platforms (Flounder and Fortescue) are planned for completion in 1984. They will cost about $300 million each.

The North West Shelf gas development project in Western Australia will encompass the development of three gas fields. The North Rankin (estimated reserves 8.6 trillion cu. ft.), Goodwyn (2.6 trillion cu. ft.), and Angel (1.4 trillion cu. ft.). Initially, however, development will be confined to North Rankin. Two drilling-production platforms, capable of producing a daily average of 720 million cu. ft. of wet natural gas, will be constructed and sited. The gas and condensate will be piped ashore through a 40-inch diameter submarine pipeline to onshore facilities that will be built at Withnell Bay.

The timetable for the overall project calls for delivery of natural gas to local users by 1984 and LNG sales to Japan by 1986. Total cost has been estimated at $7.3 billion and it will require a construction force of about 5,000 people. To meet delivery deadlines the operator, Woodside Petroleum Development, has called many tenders for components with longer lead times. Indeed, the first of the two platform jackets was recently awarded to the Japanese firm, Nippon Kokan. While a number of Canadian equipment and service companies have registered their interest with Woodside Petroleum to bid on downstream development work, in general the

response from Canadian industry has been indifferent thus far, even though the project, and the Western Australian market as a whole, offer substantial opportunities for companies willing to invest time and effort.

The second largest oil producing field in Australia is Barrow Island, located off the West Australia coast southwest of Dampier. Production of stabilized crude oil peaked in 1971 and has steadily declined, with production in 1980 of 10 million barrels. A program of continuing exploration and development should, however, offer a sustained market for oil and gas-field equipment.

Currently the most important gas producing area in Australia is the Cooper Basin, lying mainly in South Australia and consisting of 67 known separate structures that have yielded 31 fields: 12 gas condensates fields (three of which are already producing); five combined oil and gas fields, and 14 other fields that have not as yet been sufficiently evaluated. Reserves of natural gas liquids (ethane, propane, butane and condensate) in the Cooper Basin are estimated at 287 million barrels. The Basin's ultimate hydrocarbon potential has been estimated at approximately two billion barrels of oil and condensate, and 190 billion cubic meters (6,709 billion cubic feet) of natural gas. In Western Australia the Dongara gas fields, controlled by the West Australian Petroleum Pty. (Wapet), produce some 2.2 million cubic meters (78 billion cubic feet) a day, but current expectations are that recoverable reserves will be depleted by about 1987.

ii) Oil and Gas Exploration:

Initially, the main offshore exploration activity in Australia was centered on the Bass Strait and the North West Shelf-Exmouth Plateau areas of Western Australia. The Bass Strait is now relatively well developed, however, and future expenditures in existing fields will, over the medium term, be directed toward developing and improving the recovery of existing reserves, so as to extend the life of these fields, rather than their production rate.

The North West Shelf and the Exmouth Plateau both remain tremendously exciting areas. The discoveries of commercial quantities of gas in the North West

Shelf have demonstrated the offshore hydrocarbon potential of Western Australia's continental shelf. Unfortunately, however, recent exploratory results at the Exmouth Plateau have not been encouraging. To date four consortia - Esso Australia, Phillips Australia Oil, Woodside Petroleum Development and Hudbay Oil (Australian) - have drilled 10 wells and found only limited gas shows. Under terms of the permits covering the Exmouth Plateau and the North West Shelf, minimum offshore exploration work commitments require, over the five-year period ending in 1984-85, the drilling of 118 wells and an expenditure of at least $500 million. Other areas that have attracted new exploration consortia include the Otway Basin in Victoria; the Perth Basin and Great Australian Bight, off Western Australia; the Gulf of Carpentaria (Queensland), and the Arafura Sea in the Northern Territory.

Many Canadian exploration companies are already active in Australia. Their ongoing activities should provide good opportunities for Canadian suppliers. Some of the equipment for which demand is expected includes:

Communications equipment and services; compressors; connectors; corrosion control equipment; diving equipment and services; drilling equipment and tools; drilling services; engineering and technical services; geophysical equipment and services; instrumentation systems - electrical and hydraulic; measurement instruments; navigational instruments; noise control equipment; oceanographic equipment; oil spill and pollution control equipment; oilwell completion, drilling, production and instrumentation equipment; pipeline equipment; pressure-valve pumps; pressure vessels; repair, maintenance and inspection services; ships, boats and vessels; and subsea equipment.

iii) Pipeline:

There are currently five major gas and three major crude oil pipelines in Australia. In addition, many small-diameter petroleum product lines are in use, some dating back to before 1955. With present projects and plans for numerous small-diameter, relatively short-distance pipelines, the capacity of the local construction industry will be strained during the next several years. Two major larger-

diameter pipelines, one gas and one liquid, will also require support from abroad. Australian industry currently supplies only limited ranges of pipe and associated equipment. The Japanese have tended to dominate the pipe market with packages of attractive financing and shipping. While there is some potential for engineering services that would necessarily complement local capabilities, greater opportunities for Canadian firms would appear to lie with pipe, ancillary pipeline equipment and pipeline construction equipment.

Existing gas lines include: 1300 km of 34-inch main trunk pipe and 20-to-22-inch main laterals; 173 km of 30-inch pipe; 778 km of 22-inch pipe; 432 km of 14-inch pipe; 456 km of 12-3/4-inch pipe; and 435 km of 10-3/4-inch pipe. Two of the three major crude lines are owned by major producers (ESSO/Broken Hill Pty. and Shell-Mobil-ESSO), both located in Victoria. The third is a 186 km, 10-3/4-inch line from Moonie to Brisbane, Queensland.

Among the major pipeline projects that are being planned is an $841 million gas line to take gas 1560 kilometers (967 miles) south from the North West Shell Project (Dampier), to Perth and Wagerup in Western Australia. The State Energy Commission of Western Australia (SECWA) will own and operate the line. Based on studies conducted by Fluor-Maunsell, suppliers have been asked to preregister interest for: 660 mm (26") line pipe (API 5LX) DSAW; 508 mm (20") line pipe (API 5LX) DSAW; ancillary pipe (compressor stations) API 5L (Grade B Seamless); line-pipe coating material and application (external); mainline valves and ancillary valves, including operators (to API specifications); pipe fittings; scrapers, scraper traps and closures; gas compression equipment; auxiliary power supply; and construction of pipeline, bases and compressor stations.

A second pipeline project for Moomba-Stoney Point, South Australia, calls for a $160-$213 million, 659 km (409 miles) liquids line to be built by the Pipelines Authority of South Australia for Cooper Basin producers. Bechtel Pacific, together with Kinnaird Hill de Rohan and Young, are project managers. Completion is set for December 1982.

Australian pipe manufacturers include Steelmains, Tubemakers and Humes. Their capabilities are limited, however, to welded pipes less than 30 inches in diameter. No Australian firm is able at present to produce seamless pipe in any size. For the past five years virtually all pipe requirements that could not be met within Australia have been supplied from Japan.

Valves may be purchased from distributors of pipeline supplies, or directly on contract from the manufacturer, depending on sizes required. Reduced-bore, metal-to-metal seated valves are the most readily available valves from Australian sources. As well, there is one Australian firm that manufactures full-bore mainline, soft-seated valves. It is estimated nonetheless that 60 to 70 per cent of Australia's total valve market is currently supplied from imports.

Currently, Australian firms can supply only small (12-18") pipeline fittings. Those that must be imported include large-inch tee's, forged bends, cups and dome ends, reducers, reducing tees, pig trap closures, and pigs. Most are now coming from the U.S. Except in the unusually large projects, firms requiring those fittings seldom procure directly from overseas. Domestically produced hot-pooled bends or formed pipe provide a substitute for some imported fittings.

b) The Canadian Industry

The Canadian oil and gas equipment sector produces a wide range of machinery and equipment for oil and gas exploration and development and also performs related service activities such as geophysical evaluation, seismic studies and contract drilling. Specific areas where Canada is acknowledged as a strong equipment supplier include exploration, drilling, leasehold facilities, dehydration, secondary recovery, gas turbines, compressors, sour-gas gathering and treatment, tarsands technology, and pipelines and related compression and pumping equipment. In the specialized offshore oil and gas equipment market, Canada has developed a recognized capability in keeping with its own maritime exploration and development activity. Equipment used in offshore applications such as drillships, subsea production systems, subsea surveying systems, and manned and remotely controlled submersibles, are currently marketed internationally.

The oil and gas equipment sector, composed of some 200 companies predominantly located in Alberta, provides employment for about 8,000 persons. About 50 of the 200 companies depend on ocean industries for most of their revenue, while the remainder direct most of their attention toward traditional land-based activity. Although those companies can offer a broad range of equipment and services (so much so that imports by Canada have been reduced substantially in recent years), their volume of business is relatively small in world terms, their financial base is weak, and their profitability fluctuates widely. Annual shipments exceed $500 million, of which about $50 million are exported.

A second group of Canadian companies is believed to have the capability of supplying equipment to the oil and gas sector, particularly in marine applications. They are expected to involve themselves in such areas as metal fabrication, helicopter operations, catering and warehouse services, and drilling materials supplies only when the Canadian domestic market reaches the late exploration or the production phase. A large number of the companies are located in Atlantic Canada.

In the Canadian sector as a whole, there is at present a limited but growing group of companies with an ongoing export business and representation in Australia. Of the multinational subsidiaries operating in Canada, some have export mandates and could therefore be encouraged to investigate the Australian market. Many smaller Canadian firms could, with sustained and co-ordinated export marketing assistance, also maintain an ongoing marketing program aimed at that market.

c) Recent Canadian Marketing Activity

More than 25 Canadian oil and gas exploration firms are active or actively interested in Australia. As well, Canadian equipment manufacturers have carried on independent marketing activities directed to the Australian oil and gas and pipeline industries. Within the last 12 months in particular, a substantial number of Canadian oil and gas producers-exporters have successfully established themselves in the Australian market. There is every indication that this trend will continue since there has also been a marked increase in the level of interest shown by Canadian firms not previously active in Australia. Although further market development activities will be needed, it is evident that the Australians are becoming more familiar with Canadian equipment and services.

Government involvement in Canadian marketing activity has also been substantial. In the recent past, several Australian oil company officials have visited Canada as guests of the Department of Industry, Trade and Commerce and the Alberta government. The Western Australian delegation to the Offshore Technology Conference in Houston, headed by the Australian minister of Industrial Development and Commerce, subsequently visited Canada as the guests of Industry, Trade and Commerce and the government of Alberta.

In March 1980, the Canadian Government sponsored CANOTEC, an oil and gas symposium, in Melbourne, Perth and Surfers Paradise. The purpose of the seminars was to make the Australians more aware of the breadth of Canadian expertise and, through ensuing discussions, to identify more clearly the opportunities for Canadian involvement in the large oil and gas projects. Ten Canadian companies, representing various facets of the industry (from exploration through to processing and financing), presented technical papers to officials of the Australian petroleum industry and representatives of financial, government and educational organizations. Ontario and Alberta provincial missions later attended the AIEE/AIPEX Shows and Conferences in Sydney.

In September 1980, the Honorable Horst Schmid, Alberta Minister of Economic Development, visited Australia to stress areas where Alberta firms could be more active in offering oil and gas equipment and services to Australia. The visit created the impetus for an Alberta government oil and gas pipeline equipment and services mission to Perth and Adelaide in March 1981. Also in March, a group of five Canadian companies visited Melbourne and Perth as part of an ocean industries technical trade mission. They were particularly interested in development plans for offshore oil and gas reserves. In April 1981, more than 80 Canadians or Australians representing Canadian firms attended the 21st conference of the Australian Petroleum Exploration Association (APEA), an important annual event in the Australian oil and gas industry.

d) Canadian Success Stories

Among Canadian companies that are engaged in exploration in Australia, Hudbay Oil and Gas and Canada North West Land are both operating in the areas of the North West Shelf and the Exmouth Plateau. Hudbay Oil is acting as operator for a partnership with the Victorian Gas and Fuel

Corporation and Beach Petroleum in the Otway Basin. Argus Resources, through its Australian subsidiary Sion Resources, is exploring in the Arafura Sea.

Tri-Ocean Engineering, of Calgary, well known for its marine capabilities, was selected for the design of the North Rankin "A" production modules on a subcontract to Worley Engineering. Also, Guildline Instruments, of Smiths Falls, Ontario, working through a local agent, has been supplying the Australian market for several years. The volume attained is the result of perseverance and dedication to the market, the firm having made regular visits to Australia in support of its agent. With continued effort, it is likely that Guildline's success will increase. Other companies, such as Stream-flo and Porta-test, are also successfully penetrating the Australian market with the assistance of local representatives.

e) Market Considerations

Because Western Australia, where most of the country's oil and gas projects are located, is geographically isolated from the country's industrialized centres, many of the competitive advantages normally accruing to domestic producers because of market proximity are weaker in this sector. Relative distance still puts Canadian suppliers at a disadvantage, however, since the proximity to Australia of such competitors as Japan, Singapore, and Korea constitutes a significant cost advantage, particularly for the larger and more expensive pieces of equipment used in marine activities which are normally built by shipbuilding companies. In addition to this distance factor, the Japanese are also able to reduce shipping costs by placing freight on otherwise empty bulk ore carriers for the back-haul routes between Japan and Australia.

A significant barrier to entry for new Canadian exporters is posed by the sourcing behavior of buyers in Australia. Australians tend to be inward-looking and prefer to buy from local companies whenever they can. International operators and the subsidiaries of multinational corporations, when they are not encouraged to secure their supplies domestically to meet local-content targets, usually rely on their established supply networks overseas. Those problems are compounded for the prospective Canadian supplier by the general lack of awareness in Australia of Canadian capabilities. To some extent, however, the relative lack of exposure given to Canadian

companies and products is offset by local knowledge of Canadian equipment in use elsewhere in the world. As well, the many Canadians employed in Australia's oil and gas sector would be expected to know Canadian capabilities and competitive strengths.

Clearly, Canadian companies will need to establish a visible presence in Australia in order to sell there. Facilities would need to be established to provide buyers with after-sales service and technical support, since those are key factors in selling to the Australian oil and gas industry. Furthermore, it is vitally important that potential suppliers be prepared to establish long-term commitments to the Australian market. For the equipment buyers, significant cost savings are possible when supply is secured from a single firm for a broad range of related operations. Assured delivery times and quality control are also improved through product standardization. Therefore, firms seeking to enter this market with the intention of supplying on the basis of single contracts are not likely to be successful.

Several joint ventures have been contracted between Australian manufacturers and overseas companies, serving to provide Australians with access to overseas technology. The joint ventures also serve to provide the foreign supplier with both a base of operations in Australia and a means of meeting the local content preferences of buyers. For example, Johns Perry, Ltd., of Australia, and UIE of France, have teamed up to fabricate the process and production modules for the North Rankin "A" platform on the North West Shelf. In another North West Shelf assignment, the Geraldton Building Co., of Western Australia, and the Chicago Bridge & Rod Co. are combining to build the two accommodation modules and the helideck.

It is important for exporters to Australia to bear in mind the increasing significance of standards and regulations as market considerations in that country. Product standards are generally based on U.S. (API) or international codes. Local standards and regulations exist in the electricity and safety areas. Electrical wiring on products is usually rewired to local standards after being imported. Safety regulations are the responsibility of each state and vary considerably between states. Union regulations regarding safety and comfort are increasing.

f) The Competition and Competitor Activity

Although Australian capabilities are increasing, U.S. technology dominates the market. While most American companies have set up their own sales offices, there is a growing tendency towards more extensive local manufacture by subsidiaries that then become bases for regional exports.

Current estimated import shares for the oil and gas-field equipment are as follows:

	1979-80 %	1980-81 Forecast %	1983-84 Forecast %
U.S.	85	82	78
U.K.	5	4	4
Japan	2	8	12
West Germany	1	2	2
Other	7	4	4
Total	100	100	100

Source: Price Waterhouse Associates: "A Report on the Market in Australia for Oil and Gas Field Equipment."

Japanese companies are expected to increase their penetration of the market, especially for steel-related products such as platform jackets, well casings and other tubular products. Their share would increase even further if pipe requirements for the Dampier-Perth Pipeline are included. U.S., Japanese, British, French, Italian and German firms all maintain active marketing programs, occasionally supported, as in the case of Britain, by government-sponsored participation in fairs and missions.

g) The Action Plan

Of primary importance to increased Canadian penetration of the Australian market for oil, gas and pipeline equipment and services, is an active program to bring Canadian capabilities to the attention of procurement managers involved in Australian projects. In certain cases, penetration may require direct liaison or contact with the head offices of some of the larger multinational players (e.g., Exxon and Shell for development and production, and Fluor and Bechtel on the pipeline project side).

Marketing initiatives for oil and gas equipment should reflect strengths in Canadian supply capabilities in such areas as drilling, sour-gas processing and pipelines.

Efforts should be concentrated in areas where Australian supply capabilities are limited. In addition, discussions with third-country interests concerning possible co-operation in Australian resource-based Mega projects should be considered.

Canadian firms must publicize their products aggressively in Australia. Without question, local representation will be necessary if sales are to ensue. Many well-qualified firms are available that can initiate contact. The Department of Industry, Trade and Commerce can help Canadian companies identify those firms. It is usually advisable that firms chosen as representatives in Australia have offices or branches in most, if not all, of the primary operating centres of the oil and gas industry so as to ensure maximum territorial coverage.

Consistent with those objectives and necessary approaches to the market, the following action plan has been developed:

i) A market information program will be undertaken consisting of the material available from the Price Waterhouse Associates Report on Oil and Gas Field Equipment. A survey of Australian equipment requirements for the geological, geophysical, and seismic exploration sector will be included, as well as a detailed report on requirements for the various pipeline projects. A study of Australian requirements for subsea exploration and development will also be prepared. Related information will be made available concerning specific opportunities, market studies and situations reports, as appropriate. Specialists will be sent to Australia, when required, to help identify opportunities for Canadian exporters.

ii) A detailed report on Australian current and future capabilities in this sector will be undertaken, identifying local firms with whom Canadian companies could establish ties for technology transfers, joint-venture manufacturing, local assembly, and so on.

iii) A Canadian presence will be included at the Petroleum Technology Australia '81 Show, in Perth, in November. The province of Alberta will also have an exhibit. Further trade missions will be considered when appropriate.

iv) Publicity will be arranged in Australian trade journals and association publications and distribution will be arranged for "catalogues of Canadian capabilities" that will be prepared as a means of countering Australian reliance on U.S. publications for information on equipment manufacturers.

v) The posting to Australia of an officer with expertise in the Canadian petroleum industry (onshore and offshore) is being considered. The officer would be given a clear mandate to promote exportation of Canadian oil and gas equipment to Australia. The assignment should catalyze joint-venture contracting between Canadian and Australian firms.

vi) A Post will be designated to co-ordinate Canadian oil and gas equipment and services export activities with multinational corporations for projects and ongoing requirements in all parts of the world. Houston is the world's most important technology and procurement centre for the oil and gas industry. London (BP/Shell), The Netherlands (Shell), Los Angeles (Fluor) and San Francisco (Bechtel) are also major centres.

vii) Support will be given the presentation of papers and talks at meetings of the various Australian trade associations. The financial community, oil and gas industry, equipment and service sectors should be included, as well as the various regulatory bodies active in the Canadian oil-patch scene.

viii) Trading houses will be encouraged to become involved in the Australian market. Export consortia will be developed where possible.

ix) An inventory of major projects in Australia will be prepared and updated regularly.

2. Heavy Electrical Equipment

a) The Opportunity

The worldwide rush to replace oil-generated energy has focused attention on Australia's huge coal resources. Australia is using its coal as the basis for a massive expansion of its generating capacity at relatively low cost (as little as 1.8 cents per kW hour). The need arises from:

i) the growth in consumer demand, which is averaging 6 per cent per year; and

ii) the demand for relatively cheap electricity by energy intensive industries (such as aluminum smelters).

Current electric power development is taking place to an unprecedented extent, with the main activity in eastern Australia. Over the next 10 years, New South Wales will be investing $8.6 billion, Queensland $7.3 billion, and Victoria $6.7 billion. Queensland's generating capacity will rise from 3,000 mW to 8,000 mW by 1990, while Victoria's will increase from 5,210 mW to 9,280 mW in the same period.

Concurrently there is a tremendous requirement for new transmission lines, auxiliary switching equipment and heavy electrical equipment. New South Wales plans 200 km (124 miles) of 500 kV and 650 km (404 miles) of 330 kV transmission line by 1984. Victoria plans 538 km (334 miles) of 500 kV line by 1984, and Western Australia is examining a 1,600 km (994 miles) high voltage D.C. line from Perth to the Pilbara. On the user side, two new aluminum smelters are planned for the Hunter Valley N.S.W.; the Alcan smelter in N.S.W. is being doubled in capacity; the Alcoa smelter in Portland, Victoria is under way, and Alcan is planning a new smelter for Queensland. There is also significant activity in the development of mines, both open pit and underground, in Queensland, N.S.W. and Western Australia and, to a lesser extent, in South Australia. Open-pit mines require large amounts of energy for their drag lines, while underground mines need large amounts of electricity to operate their mine winders.

The tremendous growth in electric power generation will also affect design construction consultants. Engineers of all disciplines are in short supply. The power utilities that generally design and manage their power stations cannot expand their capabilities. For the first time, N.S.W.

and Queensland are looking to other countries for consultants who can design and manage power station developments.

The market for electrical generation and transmission equipment was valued at $143 million in 1980. That figure excludes large items such as turbogenerators or boilers that are items of the one-off type. Of this total market, local production accounts for $21 million while imports account for $124 million. Estimated real market growth is 10 per cent per annum until 1986.

b) The Canadian Industry

The heavy electrical equipment manufacturing industry is composed of manufacturers of two types of products: material, and equipment that serves to generate, transmit or distribute electricity (e.g., generators, batteries, transformers, wire and cable); and products that require electricity (e.g., industrial equipment, motors). Industrial activity in terms of employment and value of shipments is about evenly divided between two categories. Since conditions in the two groups are different, in this paper we subdivide the sector on the basis of those firms producing limited numbers of large, customized pieces of equipment and those producing high volumes of a relatively standardized product. Producers of customized wares are using a strong domestic technology base to produce goods that compete in domestic and foreign markets. It is largely due to those firms that the sector has such a thriving export business. In recent years, exports have remained steady at about 10 per cent of domestic output - a level that exceeds both the American and the Japanese. The firms manufacturing mass-produced goods supply mainly the domestic market. The small size of the Canadian market, coupled with somewhat fragmented production, has restricted the industry's ability to improve its competitive position through increasing scale and specialization. As a result, some of those firms are vulnerable to export competition from larger foreign producers who benefit from lower production costs. Efforts have now begun in some of those companies to achieve exports through establishment of world market mandates.

There are more than 200 firms in the Canadian heavy electrical equipment industry, employing about 30,000 people. Production is highly concentrated, however, with seven firms accounting for 40 per cent of sales. The industry is also regionally concentrated, with 90 per cent

of its activity located in Ontario and Quebec, although there are significant producers in all provinces except Prince Edward Island. The industry is considered a high-technology sector.

c) Recent Canadian Marketing Activity

In general, Canadian companies have not been active on an ongoing basis in the Australian market. Several companies have bid on specific contracts nonetheless. Combustion Engineering of Canada, in conjunction with International Combustion Australia Limited, has designed and built six thermal boilers in N.S.W. In addition, Trench Electric has sold transmission line equipment to both the N.S.W. and Victorian systems.

As a result of the purchase of Combustion Engineering boilers, the N.S.W. Electricity Commission has established contacts with the Ontario Hydro-Electric Commission, which uses similarly designed boilers. Although contact has been limited thus far to exchange of technical information, there may be opportunities in the future for more structured and long-term exchanges of personnel. The State Electricity Commission of Victoria also has informal links with the Ontario Hydro-Electric Commission.

d) Canadian Success Stories

Cumbustion Engineering of Canada has succeeded in supplying coal-fired boilers to the Electric Commission of N.S.W. Four 250 mW boilers for the Liddell Power Station and two 660 mW boilers for the Vales Point Power Station were supplied in a joint venture with International Combustion Australia Limited. The actual equipment supplied from Canada included the coal pulverizers as well as the headers and burners. In addition, all design work was done in Canada. The total Canadian content was approximately 20 per cent of the value of the contract. Combustion Engineering is working with the Electric Commission and is expected to bid on the upcoming 2 x 660 mW station that is as yet unnamed.

Trench Electric has benefited from the increased activity in the construction of transmission lines and substations. The company has successfully sold reactors, line traps and capacitor voltage transformers to the N.S.W., Victoria and Queensland electricity commissions. Sales in the year ending June 1981 will reach $2.0 million. The company is the first to supply Australia with 500 kV line traps and capacitor voltage transformers (cvt). The company's success is due to its reputation for

quality and its marketing network, which is provided through an Australian agent, Kendall Knight Pty., which closely monitors the market and obtains quotes from Trench on an individual contract basis. The company is also available to answer client questions and solve problems.

e) Market Considerations

The main impediment to successful marketing of heavy electrical equipment is the need for local representation. Sales and design capability are important where large components are concerned, since items are often integral to a much larger equipment package and design specifications have to be worked out and co-ordinated with other equipment to be used. As well, since certain types of equipment are requested in packaged tenders, the Canadian supplier should be in constant liaison to ensure that his equipment is included.

Tariffs of up to 30 per cent are applicable on items that are or can be manufactured in Australia. A sample of rates includes: circuit breakers, 15 per cent preferential; line traps, 30 per cent general; reactor coils, 25 per cent general.

f) The Competition and Competitor Activity

The major competitors are Japanese companies that have won all major turbogenerator, boiler, large motor and transformer or rectiformer tenders in the last few years. Purchasers consider Japanese equipment to be attractively priced with excellent financing and delivery terms, conservatively designed and constructed, and exceptionally reliable. Through large Japanese trading houses such as Mitsui and C. Itoh, excellent sales and service backup is available. No major Japanese-equipped power stations are yet in service, however, since their operational performance remains unproved.

The U.S., Germany, Sweden, Switzerland and Britain, but to a lesser extent in recent years, are also active in the market. Canadian equipment is generally competitive with equipment from those countries.

g) The Action Plan

The following action plan is proposed both to ensure that Canadian companies are aware of the opportunities that exist in Australia, and to enable them to establish competent representation:

i) A mission of key Canadian equipment suppliers will visit Australia in October 1981. The itinerary will include the major utilities, mining companies and aluminum smelters in Queensland, New South Wales, Victoria and Western Australia. The mission would consist of manufacturers of step-up and step-down transformers, transmission equipment, rectiformers, large motors for water pumps and fans, mine winders, and power station and transmission control systems;

ii) Canadian electrical engineers will be seconded to Australian electrical utilities to establish Canadian expertise and techniques in Australia. The main areas of interest will be in the design of power stations and high voltage transmission lines, and project management. Utilities in N.S.W. and Queensland have been approached and are anxious to pursue this proposal;

iii) The second stage of the Price Waterhouse study of the market for heavy industrial electrical equipment will be completed. It will provide a detailed analysis of the market and include lists of equipment purchasers, manufacturers and foreign competitors. It should also indicate companies representing foreign manufacturers of equipment complementing Canadian equipment and identify possible joint venture or licensing partners;

iv) Australian journalists specializing in power generation and transmission matters will be invited to Canada. Their reports will provide Australian buyers with information on the latest developments in Canada;

v) Project profiles (similar to the attached power station project list) will be produced quarterly. Their purpose will be to introduce Canadian manufacturers to the Australian market;

vi) Senior engineers from State Utilities will meet with Canadian counterparts and equipment manufacturers early in 1982 to discuss in-house design and project management;

vii) Power equipment seminars will be held in Australia in the fall of 1982.

POWER STATION PROJECT LIST

STATION	TYPE	SIZE	STATUS	COMPLETION DATE
N.S.W.				
WALLERAWANG	Thermal/Coal	1 x 500mW	Under construction	1981
ERARING	Thermal/Coal	4 x 660mW	Under construction	1983-84
BAYSWATER	Thermal/Coal	4 x 660mW	Boiler-generator contracts Let - IHI/MITSUI	1985-86
MT. PIPER	Thermal/Coal	2 x 660mW	Boiler-generator contracts Let - IHI/MITSUI	1987
Un-named	Thermal/Coal	2 x 660mW	Planned. Boiler contracts to be let January 1982	1989
QUEENSLAND				
GLADSTONE	Thermal/Coal	2 x 275mW	Under construction	1981-82
WIVENHOE	Pumped Storage/Hydro	2 x 250mW	Under construction	1983
TARONG	Thermal/Coal	4 x 350mW	Boiler-generator contracts Let - C. ITOH/HITACHI	1985
CALLIDE	Thermal/Coal	2 x 350mW	Boiler-generator contracts Let - C. ITOH/HITACHI	1986
BILOELA - Central Queensland	Thermal/Coal	4 x 350mW	Planned	1987
Un-named	Thermal/Coal	4-6x350mW	Planned	1988
BURDEKIN	Hydro	500mW	Feasibility study	N.A.
NORTHERN TERRITORY				
ORD RIVER	Hydro	2 x 30mW	Planned	1988
(Joint project with Western Australia. Site is actually in Western Australia)				

POWER STATION PROJECT LIST

STATION	TYPE	SIZE	STATUS	COMPLETION DATE
VICTORIA				
YALLOURN W-3&4	Thermal/Coal	2 x 375mW	Under construction	1981-82
DARTMOUTH	Hydro	1 x 150mW	Under construction	1981
NEWPORT D	Gas	1 x 500mW	Operating trials	1981
LOY YANG A	Thermal/Coal	4 x 500mW	Boiler-generator contracts let	1984-87
LOY YANG B	Thermal/Coal	4 x 500mW	Specifications issued	1988-91
DRIFFIELD	Thermal/Coal	4 x 500mW	Tenders to be called,81-82	1992-95
SOUTH AUSTRALIA				
TORRENS ISLAND 3 and 4	Thermal/Gas-Oil	2 x 200mW	Under construction	1981
NORTHERN POWER STATION	Thermal/Coal	2 x 250mW	Boiler-generator contracts let	1984-85
LOW-GRADE COAL PROJECT	- Investigating feasibility of building plants to burn High Sulphur, High Moisture, High Ash Coal. Coal samples sent to Germany for test burning			
WESTERN AUSTRALIA				
BUNBURY C	Thermal/Coal	2 x 350mW and optional 2	Preregistration of interest, turnkey project	1984-85
ORD RIVER	- (See NORTHERN TERRITORY)			
REMOTE AREAS	- Investigating small generators (less than 1 mW) of various power sources			
TASMANIA				
PIEMAN RIVER	Hydro	2 x 112mW	Turbine generator tenders let, Fuji	1986

3. Telecommunications

a) The Opportunity

Although Canadian sales of communications equipment and related services to Australia have been modest in the past, opportunities for exports do exist in areas such as telecommunications equipment for Telecom Australia, the Australian Broadcast Commission, and the Overseas Telecommunications Commission; satellite communications equipment and consultant services for Australia's first satellite, to be launched in 1985; Telidon hardware and services for private enterprise and, possibly, statutory corporations as Australia begins to implement videotex systems; telex multiplex equipment; and other communications equipment and services.

The Australian Telecommunications Commission, known as Telecom Australia, reports to Parliament through the minister of communications. It has exclusive control over provision of phone services; telex, data and telegram services; and relay facilities for radio and television broadcasting. With revenues of $3.0 billion, and profits of $280 million in fiscal 1979-80, the corporation also acquired $1.3 billion of fixed assets during that period. Of this amount, $1,130 million was spent on telecommunications equipment, including $293 million on telephones and related subscriber instruments, $255 million on exchange equipment, $22.4 million on data equipment, $21.1 million on teleprinters, and $4 million on modems. Telecom has historically placed 90 per cent of its asset purchases with local companies, which include the subsidiaries of many well-regarded multinational corporations such as Philips, ITT, Plessey, Siemens and L.M. Ericsson.

In April 1981, the Australian government announced in Parliament that a major review of Telecom would be undertaken to determine to what extent its telecommunications activities should be transferred to private corporations. The review, expected to last from 12 to 18 months, results from pressure on the government from private-sector corporations anxious to break Telecom's monopoly. The results of the review, and subsequent government action, may improve opportunities for new non-traditional suppliers, among them Canadians. It is recommended, therefore, that Canadian equipment manufacturers and consultants closely follow developments and strive to identify the firms that may emerge as private enterprise suppliers of telecommunications services.

Another development should interest Canadian firms. Until recently, Telecom Australia controlled interconnect equipment standards as well as the pre-qualification of equipment. Control over interconnect standards has now been transferred to an independent body. Should the new agency's approach differ from Telecom's, new consideration might be given Canadian-made equipment.

Domestic satellite communications is the second area of opportunity for Canadian companies, especially because, in its nature and scope, Canada's system is quite similar to that envisaged for Australia. In 1979, the Australian government announced its decision to implement a domestic communications satellite system (DOMSAT) at a cost then estimated at $277 million. In September 1980, the Overseas Telecommunications Commission was designated as interim authority for the system. Canadian firms have already submitted bids for equipment ranging from major city earth stations to rebroadcast stations and from telephone terminals and direct-to-home broadcast terminals to portions of the spacecraft itself and the satellite tracking, telemetry, control and monitoring equipment. The companies in question have been assisted by the Canadian government over the past 30 months.

An opportunity to sell Telidon videotex equipment and services is also emerging in Australia. Early indications suggest that Australian retail companies, after investigating the relative merits of competing technologies in this field, have been favorably impressed with Teledon.

b) The Canadian Industry

Responding to the needs of an affluent society and a vast and territorially rugged country, Canadian telecommunications companies have made Canada virtually self-sufficient in telecommunications. In the process, Canada has achieved a worldwide reputation in advanced telecommunications and is now recognized as a leader in communications technology. In the following areas in particular, Canadian technology is well suited to Australia's need for sophisticated and dependable systems.

In 1978, Canada's Department of Communications (DOC) announced the development of an advanced videotex terminal called Telidon, capable of producing images with a much higher resolution than currently available equipment. Superiority is also exhibited in flexibility and compatibility of data bases with different terminals and having a

designed capacity for future expansion. In early 1979, Bell Canada initiated a pilot, trial videotex system known as Vista, which used the public telephone network to transmit graphic and textual information stored in data banks. Subsequently other Canadian firms, notably Norpak, have taken up the Telidon technology and are now manufacturing a range of Telidon hardware and equipment. Northern Telecom is also considering current market opportunities and could enter some specialized areas of the Telidon field. Canadian Telidon hardware and information services companies are finding early acceptance in Australian and other export markets.

As with other videotex systems, Telidon consists of a slightly modified television set or display monitor, an interface decoder device, a telecommunications system and a central computer. Since Telidon has a microcomputer in all its terminals, it can fully exploit recent advances in computer graphics and telecom data technologies, so that it is uniquely fitted to convert the television set into an information tool.

Fibre-optics technology has been utilized in communications systems in Canada since 1976. In the field of subscriber loop plant, Bell Canada conducted a trial with 36 homes in Toronto, to demonstrate the practicability of simultaneous transmission of telephony, data, and television in urban loop facilities under working conditions. In the rural environment, an extensive field trial is being co-sponsored by the Canadian Telecommunications Carriers Association (CTCA) and DOC with the co-operation of the Manitoba Telephone System, Bell Canada, and Alberta Government Telephone, all members of the Trans-Canada Telephone System. Some 150 households will be connected in the small community of Elie, Manitoba, making the trial the first for multi-use tests of fibre-optic systems in a rural community. Industry capacity is being further augmented by a manufacturing facility for fibre-optic cable and terminal equipment being established this year by Northern Telecom in Saskatoon.

Other fibre-optic field trials and experiments are under way in Canada involving industry, governments and numerous carriers, of which Bell, AGT, B.C. Telephone and Manitoba Telephone provide consulting services. Alberta Government Telephone, for example, has already begun installing a fibre-optic network that will carry some 30,000 voice circuits over 50 kilometres (31 miles). When in operation, it will be one of the largest high capability

fibre-optic links in the world, and will have a life expectancy of 30 years. A similar program being undertaken by Saskatchewan Telephone will provide about 32,000 kilometres (19,884 miles) of fibre-optic communications.

Canada is also self sufficient in terrestrial microwave telecommunications. Currently, three major microwave networks use various interconnecting spur microwave links across Canada. Two of them are operated by TCTS at 4 GHZ and one is operated by CNCP Telecommunications at 6 GHZ. The total system also includes more than 100 satellite earth stations that play a crucial role in joining many communities throughout the country. In 1980, an additional (8 GHZ) digital radio system was incorporated to overbuild on the existing Trans-Canada Telephone System's 4 GHZ analogue system between Toronto and Calgary.

With the launching of the ANIK A series of satellites in 1972, Canada established the world's first geostationary domestic satellite communications system. Three of the satellites have provided communication services to 10 million km^2 (3.9 million square miles) in Canada. Since 1972, a second, third and fourth series of satellites have either been built or are under development in collaboration with U.S. and European industry. Most of the world's commercial communication satellites carry some form of Canadian mechanical and electronic subsystems. In co-operation with NASA, Canada has developed the Remote Manipulation System for the space shuttle program. Spar Aerospace Ltd. is the prime Canadian contractor for satellite and other space systems.

Canada acquired its own national digital data networks in 1973, when DATROUTE was introduced into the Trans-Canada Telephone System (TCTS). Introduction of the Infoswitch and Datapac packet followed in 1977. They in turn linked into U.S. systems and should, in time, form part of an integrated network for voice, data and visual transmission services across Canada and into the United States. Today, Canadian manufacturers and system companies are designing and developing exceptionally sophisticated information processing services. Northern Telecom and AEL Microtel offer a wide range of products for such applications. Earth station suppliers also include Spar Aerospace, SED Systems, and Raytheon Canada.

Many high frequency (HF, VHF and UHF) mobile radio systems are manufactured in Canada and provide an ever-increasing number of commercial and public services. The systems involve mobile stations, base stations and portables. Demand is growing for mobile radio telephone systems that interface into telephone networks providing access from coast-to-coast. In the Prairies, Alberta Government Telephone operates the world's largest integrated mobile radio telephone service, consisting of 24,000 mobile units hooked up to some 400 base stations. Further, the private sector in Alberta has more than 30,000 mobile units in service. Canadian suppliers of those systems include Motorola Canada, WR Communications, Spilsbury & Tyndall, and Mobile Data Incorporated.

Premier telecommunications manufacturers, such as Northern Telecom and Mitel, are now looking more closely to Pacific Rim markets for advanced digital switching products as part of their corporate marketing plans. Both firms manufacture state-of-the-art PABX products that are receiving wide acceptance on export markets. For Northern Telecom, the SL-1 digital switching system can be installed to serve up to 32 different subscribers. Another Northern Telecom product is the SL-10 packet switching system which connects a distributed set of data terminals to a single computer or helps create a single common network for a multitude of computers and terminals as part of the DATA PAC packet network of TCTS. Also at Northern Telecom is the DMS (digital multiplex switch) family of building blocks from line concentrators (DMS-1) and local office switching up to 6,000 lines (DMS-10) to central offices with potential up to 100,000 lines (DMS-100); toll switching up to 60,000 trunks (DMS-200); and a toll machine specifically tailored to meet international gateway applications (DMS-300).

While Mitel has not yet diversified into CO switches, their line of PABX products, SX/10/20/100/200, has fueled rapid export market expansion. They also manufacture a wide range of so-called telecom products designed to improve the technical and operating efficiency of existing telephone exchanges.

c) Recent Canadian Marketing Activity

The Canadian government - particularly through the departments of Communications and Industry, Trade and Commerce - has been directly involved in recent efforts to demonstrate Canadian telecommunications equipment in Australia. A Department of Communications mission to Australia in May 1979 held discussions with senior

government officials, members of Parliament, Telecom Australia, the Australian Broadcasting Commission, and the Overseas Telecommunications Commission. Subsequently, demonstrations of Canadian remote telephony and direct broadcast satellites were held in almost 50 separate locations in Queensland and New South Wales. Also, several companies - including Telesat Canada, Spar Aerospace, SED Systems, Canadian Astronautics, Cantel and Raytheon Canada - participated in a workshop in Canberra to demonstrate the applicability of Canadian communications systems to Australian conditions; applications for television and phone services in remote areas; Telesat Canada's network and experience; the Hermes experiments in tele-medicine and tele-education; fibre optics; Anik B and C programs, and Telidon.

d) Canadian Success Stories

In March 1981, Telesat Canada was designated Phase I consultant on the DOMSAT, a contract worth $500,000. Hopes are that similar contracts, worth $4-5 million, will be secured for the second and third phases.

With regard to Telidon, it was announced during the Videotex '81 conference in Toronto that Norpak and Hemton have made sales to Consolidated Electronic Industries of Melbourne, valued at $2 million and $1 million respectively, for provision of components that will be incorporated into a range of Telidon equipment in Australia. As well, in mid-1980, telex Time Division Multiplex (TDM) equipment, valued at approximately $600,000, was sold by Interdaco to the Overseas Telecommunications Commission.

e) Market Considerations

Notwithstanding recent developments in Australian telecommunications, historical trade patterns between Australia and its trading partners can be expected to continue to exert some influence over the near future. For example, Australia sells approximately $4 billion to Japan (mostly agricultural products and industrial raw materials), and buys only $2 billion (mostly manufactured goods) in return. Coupled with the geographical proximity of Japan and its strength in electronics, that factor makes a formidable competitor in the Australian telecommunications market. European and some U.S. firms are also well represented, and no doubt they too are anxious to improve their market positions. For them, as for interested Canadian firms, it is important to note that

Australian content requirements make joint-venture or licensing agreements the accepted way of doing business, if market volume or long-term supply objectives are to be realized.

Since Telecom Australia occupies a monopoly position in Australian telecommunications services, its procurement policies have had a significant influence on the volume and nature of Australia's imports of communications equipment. As was noted earlier, however, that situation may be altered somewhat as a result of the Australian government's inquiry into Telecom's operations. Private sector consortia in Australia have already indicated their readiness to provide many of the services that, until now, have been the exclusive preserve of Telecom. The establishment of an interim body to make interconnection standards decisions while the inquiry is in progress might also offer some tangible opportunities for Canadian manufacturers.

f) The Competition and Competitor Activity

Australia counts among its telecommunications equipment manufacturers the subsidiaries of such internationally recognized companies as Philips, Standard Telephone and Cables, Plessey, Siemens and L.M. Ericsson, as well as a homegrown firm of some standing (Amalgamated Wireless of Australia). Because of Telecom Australia's apparent preference for established companies and the Australian government's policies on preference for Australian goods, it seems advisable for serious Canadian manufacturers to consider joint-venture or licensing arrangements as a means of breaking into this Australian market.

Regarding the DOMSAT, the competition on the spacecraft is expected to come from Ford Aerospace, Satcom International and, perhaps, Thomson-CSF. The competition on the capital city earth stations could come from Hughes (together with Amalgamated Wireless of Australia), Nippon Electric Company, Thomson-CSF, General Telephone and Electrics, and Standard Telephone and Cables. The bids to the Department of Transport are thought to have come from Hughes (again with Amalgamated Wireless), Nippon Electric, Thomson-CSF, and Standard Telephone and Cables, as well as from the Canadian companies mentioned previously. For the Telecom portion of DOMSAT, Ericsson with Amalgamated Wireless, Nippon Electrics and Thomson-CSF may compete against the Canadians. On direct-to-home broadcast terminals, it appears that Japanese companies such as Nippon Electric, Fujitsu, and Sanyo will emerge as the major competitors.

The bulk of the terminals will be procured by private individuals or firms rather than by the Australian government.

g) The Action Plan

To be successful, Canadian marketing efforts will depend on the availability of accurate and timely information concerning developments in Australia. As well, a greater awareness on the part of Australian authorities regarding Canada's communications capabilities will need to be promoted. In addition to the normal intelligence gathering and assistance activities of Canadian consular posts in Australia the following points are specifically proposed:

i) Potential Australian customers will continue to be informed of the quality of available Canadian equipment. For Canadian promotional efforts to succeed, however, Canadian companies should be prepared to seek joint-venture or licensing arrangements with Australian firms so as to allow for some production in Australia.

ii) Although the equipment bids on DOMSAT are now in, Canadian satellite promotional activities should not come to a halt. Indeed, continued follow-up is essential. Accordingly, action will be taken to provide Australian authorities with up-to-date information on satellite communications developments in Canada, the Canadian aerospace industry, regulatory questions and the important subject of government-industry co-operation.

iii) The Telidon mission in February 1981, following on that in August 1979, was successful in creating interest. Appropriate follow-up should be maintained and consideration given to activities in support of those firms that have not yet been represented in Australia. Such activities would focus on product representation and spare parts and service back-up, over the short term with the intention of encouraging co-manufacturing over the longer term.

iv) Australians have shown lively interest in Canadian communications organizational structures, products and services over the last few years. In order to maintain the momentum, it is desirable that a steady flow of up-to-date information on telecommunications, satellite technology and Telidon be supplied to the appropriate Australia officials.

4. Forest Industries Equipment

a) The Opportunity

The Australian forestry industry is gearing itself for a rapid growth rate in the 1980s due to the increase in forestry reserves, particularly softwood plantings. From early plantings some 70 years ago, Australia has embarked on a sustained program of planting softwood, predominantly radiata pine, with a view to achieving near self-sufficiency in all grades of softwood products. Softwood grows quickly in Australia, producing first thinning pulpwood at 13 to 15 years and sawlogs or pulpwood on an integrated basis from 19 years to final crop at 35 to 45 years. With approximately 700,000 hectares (1,680,000 acres) currently planted out to pines, the program will continue at a rate of 25,000 hectares (60,000 acres) a year to reach an anticipated total area of 1.2 million hectares by the year 2000.

The swing away from indigenous eucalypt (hardwood) timbers is evidenced in the forecast that, by the end of this century, production of hardwood sawlogs or pulpwood will have fallen from 12.3 million cubic metres (435 million cu. ft.) to 11.2 million cubic metres (396 million cu. ft.) per year. By comparison, total annual production of softwood milling and processing will rise dramatically in the same period from 5.1 million to 13.3 million cubic metres (470 million cu. ft.). Few countries face such man-made wood resource expansion programs as does Australia today.

The softwood logging and sawmilling sectors have already experienced significant changes. Harvesting and tree processing units have replaced traditional chainsaw felling, and completely automated mills with high volume output have replaced the labor-intensive sawmill in the bush.

The next stage in Australia's development program will be an increase in the pulping capacity, geared to availability of resources. Projects valued at $2.1 billion are at the planning stage or are considered viable. A recent survey showed that, by reason of their small domestic markets, the Australian and New Zealand pulp and paper producers will have to build large, specialized, export-oriented plants to take full advantage of the extra wood supplies.

The Australian papermaking market is dominated by:

i) Australian Paper Manufacturers Ltd. (APM), producing 200 grades of kraft paper and paperboard;

ii) Associated Pulp & Paper Mills Ltd. (APPM), producers of fine paper, including telephone directory paper;

iii) Australian Newsprint Mills Ltd. (ANM), sole local producer of newsprint;

iv) Kimberley Clark Australia Pty Ltd. (APCEL, 50 per cent owned by APM), producer of tissue and toilet papers;

v) Bowater Scott Corporation Ltd., tissue and toilet paper manufacturers.

APM and APPM together account for about $1.6 billion of the projects likely to be undertaken, including pulpmills in South Australia, New South Wales, Queensland and Tasmania as well as the current pulpmill expansion of APM's large integrated mill at Maryvale in Victoria. Two other companies, W.A. Chip & Pulp of Perth and Harris Daishowa Ltd. of Eden, are considering adjoining pulpmills to their woodchipping facilities.

The largest project underway (scheduled for commissioning in June 1981) is the ANM's new mill at Albury, N.S.W. The initial feasibility study carried out by H.A. Simons, of Vancouver, who have been appointed project engineers.

The large-scale developments now taking place in softwood sawmilling are expected to create spinoffs in the hardware sector - which to date has largely been a fragmented, small, bush-type operation. In order to remain competitive against softwood lumber, the hardwood industry will need to rationalize through amalgamation and to introduce labor-saving techniques.

b) <u>The Canadian Industry</u>

i) Forest Harvesting Equipment:

Canada is a major producer and exporter of forest harvesting machinery. Canadian manufacturers produce a complete range of machinery suitable for harvesting all species of trees on all types of terrain.

The industry consists of 20 companies with $270 million of annual production of which $165 million are exports. Ontario produces $195 million, British

Columbia $45 million, and Quebec $30 million. The largest foreign market for Canadian products is the U.S., which absorbs about 70 per cent of Canada's exports in this sector.

Canada offers competitively priced and technologically advanced forest harvesting machinery that enjoys a proven reputation for rugged durability. In particular, Canada has established itself as a world leader in supplying the highly reliable wheeled skidders that form the basic element in mechanized logging operations. Canadian log skidders are in use in more than 75 countries throughout the world. Canadian forest harvesting machinery is produced either by Canadian-owned companies or by foreign-owned subsidiaries that enjoy a world product mandate for harvesting equipment.

ii) Sawmill Machinery:

Canada manufactures a full range of price-competitive, high-performance, long-lasting sawmill machinery, including both highly sophisticated computer-controlled machines and simpler, operator-controlled units that process all tree species from small diameter northern softwoods to large-diameter tropical hardwoods. The industry is composed of 35 companies (located primarily in British Columbia and Québec) that produce an annual $110 million in machinery, of which 40 per cent is currently exported.

Although most plants are Canadian owned, some of the larger companies are foreign controlled. With some relatively minor exceptions affecting sales to the U.S. and Western Europe, the multinational firms are as free as the Canadian-owned companies to compete in foreign markets. Consequently, Canadian-made machinery is currently operating in more than 25 countries, and marketing activities are conducted on all continents.

iii) Pulp and Paper Equipment:

The industry consists of approximately 60 companies with more than 50 per cent considered medium to large in size - that is having more than 100 employees. Most are located in the large urban centres of Ontario, Québec and British Columbia. Several firms supply major equipment to more than one industrial sector (i.e., pulp and paper,

mining, power plants, waste treatment plants, etc.). Annual production of pulp and paper machinery was some $200 million in 1979, approximately 30 per cent of it directed to export markets.

Canadian equipment production capabilities and expertise cover all grades of pulp, paper, and paperboard but are particularly strong in such areas as pulpmill and newsprint mill machinery. The Canadian machinery sector has developed a technological expertise second to none in newsprint manufacturing. One of the most significant developments of the last decade was the design in Canada of twin-wire sheet formers. Major technological advances were realized, also in recent years, in energy conservation and environment protection. They have been highlighted by full-scale installations of: a) chemi-mechanical pulping systems resulting in higher process yield with less energy consumption; and b) close-cycle chemical pulping systems with drastically reduced polluting effluent.

Subsidiaries of foreign companies, mostly American, comprise roughly 75 per cent of the Canadian pulp and paper equipment industry. The transfer of foreign capital and technology, and access by the subsidiaries to the parents' marketing networks, have enabled a rapid development of the Canadian industry. On the other hand, foreign control has contributed to limited R&D, restriction on market development (generally not applicable when Canadian government export financing is in place) and fragmentation of industrial activities. In recent years, some product rationalization agreements between U.S. parents and their subsidiaries have succeeded in offsetting some of those disadvantages.

c) Recent Canadian Marketing Activity

Prior to the 1980 Forestry Show at Myrtleford, Victoria, Canadian activity was marginal, due in part to the economic sluggishness of the Australian forestry sector. The timing of FIME 80 and the highly successful display of Canadian harvesting and milling machinery was the turning point for active interest by Canadian suppliers. A follow-up to FIME 80 (which had resulted in on-site sales of $1.8 million by the Canadian exhibitors) was the Australian trade mission to Canada in September 1980, jointly sponsored by the B.C. provincial government and the federal government. One result of the visit was the sale of equipment for SAPFOR's extension at Tarpeena,

South Australia, to be supplied by Cancar Pacific. The mill will be the first installation of the Cancar Chip'N Saw concept in Australia. An Allen Taylor mill at Bathurst, N.S.W., is also considering installation of a Chip'N Saw system. Also, S. Madill Ltd. of Nanaimo, B.C., negotiated a sale of some $300,000 worth of cable extraction systems to the Burnie forestry division of APPM, Ltd.

A further mission visited Australia in March 1981.

d) Canadian Success Stories

"Timberjack" machinery from Eaton Yale Ltd., of Woodstock, Ontario has been the outstanding success thus far. Timberjack's prominent exposure at FIME 80 has facilitated the sale in Australia of 15 forwarders and skidders, estimated at $2.0 million. Those sales, and those of other Canadian manu- facturers of forest harvesting equipment to date, were made possible by the advanced technological position those companies occupy in the softwood industry.

Sentrol Systems of Downsview, Ontario, succeeded in marketing its computer-based process control systems to the pulp and paper industry in Australia and provides on-the-spot sales and servicing. Its branch office in Australia is the first offshore outlet opened by Sentrol.

e) Market Considerations

Mechanical harvesting machines are not manufactured in Australia, and thus their importation is subject to a two per cent duty. Sawmilling equipment is dutiable except for specialty items not made in Australia. Canada does not enjoy any preference for milling or processing equipment except for chippers, which are dutiable at five per cent versus 15 per cent for imports at general rates. Normally, however, Canadian sawmilling equipment is rated at between 15 per cent and 19 per cent in common with similar goods from major competitors.

f) The Competition and Competitor Activity

With regard to harvesting equipment, competitors to Canadian firms include John Deere, Caterpillar, International Harvester, Volvo, and Kockums. Aggressive advertising and field-day demonstrations are heavily used by those companies. Kockums was successful in securing the ANM contract for mechanical harvesting equipment required to supply logs to their new mill at Alburn, N.S.W. Ten mechanical harvesting systems manufactured in

Sweden by Kockums and Logma, and supplied by Kockums Industries Australia Pty. Ltd., will be used to harvest timber in the largest commercial thinning operation in Australia. Each system consists of three machines: a Kockums 800 feller-buncher, a Logma 310 processor to delimb and cut into pre-determined lengths, and a Kockums tractor to transport the logs to the roadside.

There are several local manufacturers of sawmilling machinery and associated equipment. The largest are Isles Forge & Engineering Pty. Ltd. and Integrated Engineering Pty. Ltd., both located at Coffs Harbour in northern N.S.W. Those firms, and four or five smaller companies, were originally established to make sawmill machinery for the hardwood industry. They therefore lacked the capability and expertise to take advantage of the high-capacity automated softwood sawmill expansion program and sought licensing rights from overseas manufacturers, including Canada, in an effort to redress this imbalance.

Integrated Engineering, for example, has entered into manufacturing arrangements, joint ventures and other relations with several companies.

g) The Action Plan

A successful and focused initiative for this sector will require action in three major areas: forest harvesting equipment; sawmilling machinery; and pulp and paper equipment. For forest harvesting equipment, the objective will be to build on past successes. For sawmilling machinery, the objective will be to identify in greater detail, and to pursue, specific opportunities based on broader identification and marketing efforts to date. For pulp and paper machinery, identification and evaluation of opportunities have been initiated and will be pursued further to identify specific areas where Canadian suppliers should direct their efforts.

In addition to the normal intelligence-gathering and corporate assistance activities of the Canadian Posts in Australia, the following initiatives are proposed:

i) Preparation of situation reports on planned new projects;

ii) Awareness program to ensure that decision makers are familiar with Canadian goods and services and that favorable consideration is given in their development plans;

iii) Trade publicity in Australia concerning new technology available from Canada;

iv) PEMD B visits will be encouraged;

v) Incoming Pulp and Paper Equipment Mission FY82/83, inviting major contacts to Canada in connection with specific projects;

vi) A sawmill and forest harvesting technical seminar is scheduled for 1982 to coincide with the 11th All-Australian timber congress in Adelaide, South Australia, April 1982;

vii) Participation in the Forestry Industry Machinery Exposition in Myrtleford, Victoria, in April 1985.

5. Automotive Parts

a) The Opportunity

The Australian automobile industry has traditionally been domestically oriented. Annual car sales are approximately 500,000 units, of which 80 per cent must, by law, be domestically produced with a local content of at least 85 per cent. The remaining 15 per cent of the total production cost can be imported duty free. In addition to a 20 per cent quota on imports, the tariff on imported vehicles is 57.5 per cent. Exports have been minimal. Credits for exports will be introduced in 1982, however, and by 1985 local content will drop to 77.5 per cent in a complementation scheme whereby exports will be allowed to offset imports on a dollar-for-dollar basis. As a direct result of this scheme, General Motors-Holden (GMH) is building a four-cylinder engine plant whose output will go mainly to Europe and North America. A similar scheme has been introduced for parts manufacturers.

In addition to GMH, four other passenger vehicle manufacturers are particularly active in Australia. They are Ford, Mitsubishi (formerly Chrysler), Toyota and Datsun. GMH has about 29 per cent of the market; Ford 22.9 per cent; Datsun, Toyota and Mitsubishi about 11 per cent each. Volvo, Peugeot and some Leyland vehicles are also assembled locally. The Renault assembly plant was closed recently. Market demand has recently shifted to smaller four-cylinder cars as it has in North America, and G.M. is planning to produce its J-car in Australia. There is also a scramble to reduce the size of vehicles and make them more fuel efficient.

Component manufacturers produce a wide range of original equipment (OEM) and aftermarket (AM) parts and accessories. Most of the multinational corporations operate parts plants in Australia. The largest Australian firm is REPCO, which manufactures, reconditions, wholesales, retails, services, finances and exports auto parts. The company employs more than 11,000 people and operates 48 manufacturing plants, nine of which are outside Australia. Sales exceeded $554 million in 1979-80.

Yet, although Australia manufactures a wide range of parts, it imports almost $532 million worth of components. While the majority of imports came from the U.S., Japan and Germany, in 1980 Canada exported $61 million of auto parts to Australia.

As the industry adjusts to the so-called world car and begins to look at exports, it is finding that many of its plants are internationally non-competitive. As a result, the industry is being encouraged to restructure. It is the introduction of the world car, coupled with the export facilitation scheme, that will provide opportunities for increased Canadian exports of parts. In the case of OEM parts, contact should be made with the home offices of the Australian car companies and, if opportunities are identified, the Australian subsidiaries should be visited. For the aftermarket, opportunities exist for fifth wheels, light trailer axles, and accessories such as mirrors, lights, trim, mudflaps, etc.; exhaust emission parts such as PCV and EGR valves; fuel and air filters; McPherson struts; brake pads and shoes; friction materials for brakes and clutches; clamps; sealed beams; electrical switches; gauges; exhaust components (mufflers, clamps, etc.); sparkplugs; tires; wipers; batteries; truck suspension (tandem); fuses; trailer lights and mirrors.

b) The Canadian Industry

The automotive industry in Canada consists of vehicle manufacturers, original equipment parts manufacturers and aftermarket parts manufacturers. There is some overlap between those groups, with vehicle manufacturers producing parts in-house, and certain parts manufacturers producing for both the OEM and AM.

Approximately 50 per cent of automotive parts production is in-house, while about 20 per cent is supplied by subsidiaries of eight large multinational corporations (Borg Warner, TRW, Budd, Kelsey-Hayes, Eaton, Rockwell, Bendix and Hayes Dana). The remaining 30 per cent is produced by several hundred small - often Canadian-owned - corporations. Canadian parts production in 1979 exceeded six billion dollars, of which 80 per cent was exported, largely to the U.S. Production of aftermarket parts alone was about $670 million. While the industry has traditionally produced parts for the North American market, its orientation has changed over the last few years, and OEM parts are now being marketed in limited quantities in Japan and Europe. Some companies with proprietary products have been successful in selling to offshore manufacturers - Tridon (wipers), Duplate (windshield glass) and Varta (batteries) being notable examples. A growing number of companies are developing proprietary products or processes that will help them compete internationally. Parts companies supplying the aftermarket have found that they, in particular, must export or die. They have developed unique products that

sell worldwide (Thrush: mufflers; Tridon: wipers, flashers, clamps; Certified: brakes; etc.) and more than $400 million, out of a total Canadian production of $670 million, is exported worldwide. AM imports are approximately $840 million and are composed largely of components that are not available domestically.

The vehicle industry in Canada is largely composed of subsidiary operations of North American vehicle manufacturers (GM, Ford, Chrysler, AMC). Vehicles produced are essentially destined for the North American market, and exports to countries other than the U.S. are minimal.

c) Recent Canadian Marketing Activity

Canadian exports of automotive components totaled $61 million in 1980, 72 per cent ($44 million) consisting of completely knocked-down shipments of light trucks and some heavy truck components. The $17 million balance is supplied by independent Canadian parts manufacturers. The number of parts producers selling in Australia is increasing and they find the market attractive. Currently they are selling such products as sealed beams, brake pads and shoes, hose clamps, moulding, wheels and rims, fasteners, filters, etc. While in dollar terms the exports are not large, they are significant considering the small number of Canadian companies that actually operate in the market. As a direct result of the recent Auto Parts Show, Canadian exports will include a wider range of products such as batteries, key rings, mud flaps, components for rebuilding starter motors, automotive trim products, clutch diaphrams, sun shields, and battery and sparkplug cable sets.

ITC's marketing activity in Australia has been limited. Prior to a visit by an officer from the Industry Sector Branch in October 1980, promotional efforts consisted mainly of encouraging and supporting companies through PEMD. As a result of the market identification visit, an automotive parts and accessories mission was organized, in March 1981, in which 13 companies took part. Product display days were held in both Sydney and Melbourne. Direct sales resulting from the show were $532,000. It is anticipated that incremental sales by the exhibitors in 1981 over 1980 will be between $931,000 and $1 million, and should continue steady. Excellent contacts were made with importers, distributors and large retail chains during the mission, whose success proved Canada's capability to provide parts and accessories in a marketplace previously believed to be dominated by local Japanese and Taiwanese manufacturers and suppliers.

d) Canadian Success Stories

Areas in which Canadian firms have done well include brake parts (chiefly asbestos products), sealed beam headlights, and hose clamps. In the case of brake parts, Canada would seem to enjoy a natural advantage in raw material availability and manufacturing capacity. In the case of sealed beam headlights, Canada's share of Australian imports tripled (to $1,169,320) from 1977-78 to 1978-79 - almost matching the figures for the U.S. and Japan in the latter period. The main catalyst to that development was the relative decline of the Canadian dollar in terms of the other two currencies over the period. Imports from the Federal Republic of Germany went from a low base to $4,870,460 over the same period due to design changes in headlights. In the case of hose clamps, Tridon has done well by establishing a distribution centre in Australia and appointing local agents and distributors.

e) Market Considerations

As previously mentioned, the Australian automotive industry is highly protected by tariffs and quotas. The tariff on imported vehicles is 57.5 per cent. On parts it is 25 per cent. However Canada receives a preference, thereby dropping the tariff to 17.5 per cent. A complementation scheme is also in effect that allows parts and vehicle manufacturing to offset imports with exports to a limit of 20 per cent of production.

Australian distribution channels are similar to those in Canada and the U.S. OEM manufacturers produce in-house and procure their supplies directly from suppliers, either through the head offices in North America or Japan, or directly through the Australian purchasing office.

The main channels of distribution in the aftermarket are retail, wholesale, wholesale distributors, jobbers and distributors. As in North America, channels are interlinked and complex. It is extremely important to target the particular channel that best suits the product and to obtain a qualified, reputable representative.

f) The Action Plan

To ensure Canadian exporters a substantial share of the components Australian companies import from abroad, the major Canadian marketing efforts are mapped out below:

i) A follow-up Auto Parts show and mission in February or March 1982 is in the planning stages;

ii) Participation by Canadian companies in the Australian Automotive Parts and Accessories Show, to be held in Melbourne in August 1982, is being encouraged;

iii) Contact with vehicle manufacturers will be increased;

iv) Changes in Australian government policies (e.g., ongoing IAC enquiry into motor vehicle industry) are being studied in order to ascertain effect on opportunities and access for Canadian OEM and AM parts;

v) A survey of Australian import statistics will be undertaken to determine opportunities for Canadian products to replace British goods subsequent to loss of preferences by Britain;

vi) A program to distribute brochures, catalogues and details on new Canadian products to trade journals, importers and other organizations will be developed;

vii) Selected incoming buyers mission to Canada will be undertaken in April 1982 to coincide with the Canadian International Automotive Show in Toronto;

viii) A survey of the Australian truck industry is being undertaken to determine opportunities for specialized equipment from Canada.

6. Instrumentation and Industrial Process Control Systems

a) The Opportunity

The total Australian market for industrial process controls in 1980 was approximately $200 million. Projections suggest that the market will grow at an average rate of eight-to-10 per cent and exceed $260 million by the end of 1983.

Key factors in market growth include an expansion of the primary metals, chemicals and allied products industries; increased government expenditures in the utilities sector; a move towards automation; the opening of a number of coal mines in New South Wales; and gas and oil exploration in Western Australia. At this time, electronic and electric instruments account for 45 per cent of the market and non-electronic/non-electric instruments constitute another 25 per cent of sales. Control valves constitute 21 per cent of total sales while sales of process control computers and peripherals have a nine per cent share of the market.

Ninety per cent of Australia's demand for industrial process controls is met by imports. The industry sectors that exhibit excellent potential for Canadian suppliers include electric power generation, transmission and distribution, industrial heavy chemicals manufacturing, and smelting and refining of non-ferrous metals. As the influence of computer technology penetrates electronic and electrical process control instrumentation in Australia, Canada will be in an even better position due to the technological advantage it has in sectors such as pipeline, automation, and power-generation controls.

Consequently Canadian firms should be able to market several products successfully in Australia during the 1980s. In the area of sensing and measuring instruments, the sales potential of temperature-flow and liquid-level devices is good due to the number of new aluminum smelters and power stations that are expected in the 1980s. On-line chemical composition analysis is also an area that should have potential for foreign companies. That assessment is based on the expansion plans for the chemical industry and the expansion forecast for the non-ferrous smelting and refining industry.

The application of microelectronics will be a major growth area of industrial process control systems this decade. Australian industry recognizes the enormous benefits to be obtained from computer-based process control systems.

Excellent sales potential in data display instrumentation and devices is related to the demand for automated process control systems. Analogue recording and indicating devices and analogue panel meters will be in significant demand. Although most of the Australian industries using that type of equipment appear to prefer analogue, digital equipment and interfacers are becoming more popular.

A potential for Canadian supplies also exists for gas and oil pipeline automation and monitoring, coal mine mechanization, urban transportation controls and computerization, pulp and paper mills, steel rolling mills, automation of agricultural vehicles and implements, and sewage and water treatment plants. The main opportunity lies in the high degree of skills and experience vested in Canadian companies in such fields as software development, design and systems integration and special hardware for computer or microprocessor-based industrial process control and automation systems.

b) The Canadian Industry

Sixty-seven per cent of the Canadian market for process instrumentation, which was valued at $325 million in 1978, was supplied by Canadian-based firms. One hundred and thirty-eight companies, employing 5,300 persons, have been identified as active in that market, and, of those about 71 per cent are Canadian owned. Most of the Canadian-owned firms supply components and software subsystems to larger instrumentation and systems companies or to industrial users. On the other hand, several companies provide total systems development, supplemented by varying capabilities in the manufacture, assembly, installation and servicing of the instrumentation.

Canadian-based companies also exported $45 million in 1978, which represented 17 per cent of their total production value. Slightly more than half of those exports were provided by subsidiaries of large multinational corporations. Although there is evidence of some product mandating by the MNC's, it appears that subsidiaries have limited their export efforts for the most part to projects financed by CIDA or EDC, where they are effectively in a preferred position vis-à-vis their parent firms.

Canadian-owned firms, by contrast, are more actively export oriented, and that is particularly true for the broader-capability Canadian firms, whose export sales approximate 50 per cent of their total production. In general those companies are highly competent in the design and integration of control and automation system. Their

expertise is especially high in the areas of gas and oil exploration, exploitation and transportation; mining and mineral resources; and petrochemical, electric power, and water treatment and sewage plants. Since the equipment is usually too complex to be serviced from Canada, when supplying abroad the companies normally enter into joint-venture agreements with local systems houses or distributors. Canadian designed systems have been accepted throughout the world although the major area of export concentration has been the United States.

c) Recent Canadian Marketing Activity

In the past, the number of Canadian control and instrumentation equipment manufacturers marketing their products in Australia has been limited largely to specialized areas such as radiation pyrometers and spectrophotometers. Canadian manufacturers visiting Australia report that as a result of the Canadian dollar exchange rate they are price competitive. Furthermore, wholly-owned Canadian companies are gaining a reputation for reliable and state-of-the-art products and instrumentation systems. Canadian subsidiaries of the large multinational companies, such as Bailey Meter and Honeywell, are finding instrument and systems acceptance in Australia through global rationalization programs. The number of Canadian firms represented in the Australian marketplace is small. The firms produce quality products and systems mainly to service resource-boom opportunities. The firms have agreements with local systems houses and distributors who work closely with their customers and stand behind the Canadian product with after-sales support. Excluding the large multinationals, Canadian firms active in Australia include Sentrol Systems, Conspec Controls, Weightech Group, Milltronics, Promac Controls, Inc., Markland Specialty Eng., SED Systems and George Kelk, Ltd.

d) Canadian Success Stories

Sentrol Systems Inc. of Toronto is one of the world's largest manufacturers of process-control equipment for use in pulp and paper mills. Because of its established reputation, use of advanced technology, and price competitiveness in international markets, the company has won contracts to supply equipment to five Australian mills between 1979 and 1981. The total value of those contracts is 2.5 million dollars. Sentrol has set up an Australian subsidiary in Melbourne, Sensors Controls Pty. Ltd., which now employs 12 people.

Milltronics Ltd. of Peterborough, Ontario, has been represented in Australia since 1975 by Incontrol Pty. Ltd., Sydney. Total sales exceeded $210,000 in 1979 and are expected to quadruple during 1981. The product line includes industrial process-control instruments and systems including alarms, converters, detectors, feed-rate control systems, flow metering, level measuring, monitors and transducers.

e) Market Considerations

Most of the manufacturing carried on in this industry in Australia consists of the final assembly of imported components and locally produced casings and cabinets. Tariffs consequently impose a cost disadvantage only on imports that enter the country fully assembled. In the area of non-tariff restrictions, occasional problems have been experienced with clearance formalities required by the Australian Standards Association and other regulatory bodies in arranging approval of high technology microprocessor-based measuring equipment.

It appears that a close relationship tends to exist between the relatively small number of users and their suppliers of process-control equipment. The suppliers often are subsidiaries that perform final assembly work and market the products directly to the end user. The role of the supplier is a critical one, since users generally prefer to deal with well-established suppliers which can provide custom-designed products, adequate spare parts inventories, and engineering and service support.

The importance of inventories and an efficient distribution system is probably greater in Australia than in most markets because of the large distances separating the user from the manufacturer. As well, because of the historical development of the Australian market, many engineering services that are provided by consultants in other parts of the world, such as North America, are provided by venders in Australia. The services are particularly valuable in Australia when installing advanced equipment that is based on unfamiliar technology. Often, the quality of such support service will play a significant role in local purchase decisions, and international suppliers are often prepared to transfer personnel temporarily to Australia to assist users. In such an environment, the inability to secure a reliable local supplier or provide adequate levels of support service would seriously impede market entry.

f) The Competition and Competitor Activity

The United States is the dominant supplier, with an estimated export market share of 50 per cent in 1978-79. That share will likely increase during the next few years, as will the competition from Japan and Germany. Australian manufacturers of process control equipment account for less than 10 per cent of sales. Their market share will likely be eroded during the next few years due to competition from multinational manufacturers who enjoy significant cost advantages from economies of scale in production.

New developments in the Australian market include a tendency for large contracts awarded by the Australian government to include a vast array of control instrumentation. The equipment can be produced by the same company elsewhere in the same country. That arrangement tends to favor those countries that possess a strong industrial capability in the subcontracted areas.

g) The Action Plan

Canadian programs to expose Australian opportunities to Canadian businessmen will help increase the market share for Canadian instrumentation products and systems. To reinforce Canadian credibility and maximize opportunities - bearing in mind that an advanced technology product combined with a reliable agent offering sound support service is as important in this market as price or credit terms - the following strategy has been arranged:

i) An instrumentation mission visited the Australian International Engineering Exhibition (AIEE) in Melbourne in July 1981. The visit exposed Canadian exporters to both foreign and domestic competitors' wares and provided an opportunity to discuss agency arrangements. Visits to project sites to discuss opportunities for Canadian instrumentation were included;

ii) Additional relevant industry and trade shows in Australia will be identified for the use of Canadian firms that may wish to participate;

iii) Minimissions to investigate prospects with on-spot visits to Australia end-users will be organized. Possibilities in specific sectors (such as power generation, oil and gas extraction and chemical projects) will be investigated;

iv) An Australian instrumentation writer will be included in 1982-83 visiting journalists program;

v) Selective Canadian instrumentation success or new product stories will be publicized in Australian trade journals;

vi) Canadian trade shows will also be publicized, highlighting process-control instrumentation with a view to organizing a visit to Canada, under the incoming-buyers program, by a group of influential Australian end-users and agents;

vii) An instrumentation and process control directory that would highlight the sophisticated instrumentation, supervisory, and process-control techniques developed in Canada, will be prepared;

viii) A process-control and instrumentation incoming-buyers mission program will be developed.

7. Agricultural Equipment

a) The Opportunity

Planned expansion of the Australian grain industry presents Canadian agricultural equipment exporters with a prime market. For example, Australia hopes to increase its exports of wheat from 15 million tonnes in 1980 to 24 million tonnes by 1990. To accomplish that increase, major changes will have to take place in Australian grain production. New and more marginal agricultural land will have to be brought into production, and that will necessitate new methods for the control of soil erosion and conservation of moisture. More effective use of the land will be important. While the grazing cycle was used in the past to protect the land from soil erosion, a new method will be needed. The Canadian dry-land farming method, Stubble Mulch Farming, is one solution.

In addition to the need for specialized types of Canadian implements, the increase in production will affect demand for tractors and combine harvesters. The Australian market for agricultural equipment is already substantial, and Canadian companies are highly respected and have a good share of the market. In the year ending June 1980, approximately $266 million (manufacturers' costs) of tractors were sold in Australia. Imports represented 25 per cent of the implements and 75 per cent of the tractors sold.

b) The Canadian Industry

The Canadian farm machinery industry consists of approximately 200 companies, including the multinational companies with manufacturing plants in Canada and the "shortliners" or smaller, more specialized firms. The industry is concentrated in Ontario, Manitoba, Saskatchewan and Alberta. The North American market is generally rationalized. In that regard, of the $1 billion produced in Canada, more than 80 per cent is exported, while more than 80 per cent of the domestic market is supplied by imports.

The four multinationals with manufacturing facilities in Canada are Massey-Ferguson, John Deere, International Harvester and White Farm Equipment. Those firms account for more than 60 per cent of total agricultural farm equipment production. Major products include combines, harvesters, grain drills, hay balers, forage harvesting and tillage equipment, and manure spreaders. Production has been rationalized to the extent that the Canadian

facility supplies the North American market for each company and, in some instances (e.g. large combine harvesters), is the world supplier for the firms. Of the multinationals, White Farm Equipment and Massey-Ferguson are the most active in developing exports of Canadian-made equipment in the Australian market.

The shortline industry has a diversity of companies with annual sales ranging from $200,000 to $250 million. They tend to specialize in specific types of equipment such as tillage machines, hay harvesting equipment, potato harvesting equipment and, in the case of Versatile Equipment, four-wheel-drive tractors. For the Australian market, the companies located in the three Prairie provinces manufacture the most appropriate equipment. They have developed specialized machinery for the production of cereal grains for large farms under dry-land farming conditions. Canadian dry-land farming machines are of the largest sizes, are competitive in price, and incorporate the latest in dry-land farming technology. The equipment was designed to meet the needs of the Western Canadian grain farmer but is also well suited to the requirements of the large-scale Australian grain farmer.

Almost all shortline firms are Canadian owned and have complete autonomy in all export markets. More than 67 per cent of their production is exported. The U.S. Plains area, which is principally a grain growing region, has been a market for a substantial portion of the shortliners' production, while Australia is the largest offshore market. Canadian exports to Australia exceeded $25 million in 1980 and are expected to rise to $30 million in 1981.

c) Recent Canadian Marketing Activity

Canadian equipment was introduced in Australia by Massey-Ferguson through its exports of combine harvesters. In 1972, Versatile Farm Equipment of Winnipeg started exporting its four-wheel-drive tractors. It was not until November 1978, however, that the government launched its marketing effort in Australia with the Canadian exhibit at Orange, N.S.W. The following year, the Canadian presence included Ag-Quip in Gunnedah, N.S.W. and a small exhibit at the Dowerin, Western Australia Field Days. In 1980, following the evident success of that promotion, activity was further expanded to include four shows. They were: Ag-Quip, with 12 Canadian companies attending; Dowerin, Farmfest in Toowoomba, Queensland; and Eyre Peninsula Field Day in South Australia. The main thrust of all

Field Days was to promote and support the technique of Stubble Mulch Farming. To that end, the Department developed an audio-visual presentation which explained how Canadian equipment could be used in the Australian environment.

In addition, display panels showing the origins of Stubble Mulch Farming in Canada, as well as a technical manual on Stubble Mulch Farming, were developed.

The results of those efforts can be seen in the increase in Canadian agricultural exports. In the year ended June 1980, Canada exported $26.5 million of agricultural equipment, compared with $12.4 million in the year ended June 1979, and $16.8 million in the year ended June 1978. This represents an increase of 75 per cent over the average sales, in those two previous years, of $14.6 million. While the increase was not due solely to government promotional efforts, the governments's activities and encouragement of private companies played a major role in the success.

The detailed breakdown of exports to Australia for the year ended June 1980 are:

i) Soil Preparation and Cultivation Equipment: Canada $2,771,000; U.S. $7,243,000. TOTAL: $17,311,000;

ii) Combine Harvesters: Canada $7,527,000; U.S. $21,197,000. TOTAL: $40,838,000;

iii) Other Harvesting and Threshing Equipment: Canada $1,135,000; U.S. $17,796,000. TOTAL: $33,433,000;

iv) Agricultural Wheeled Tractors: Canada $8,099,000; U.S. $69,245,000. TOTAL: $168,903,000.

Canada accounts for 16 per cent of the imported soil preparation and cultivation equipment, 18 per cent of imported combine harvesters and five per cent of agricultural tractors.

Sixteen Canadian companies are active in the Australian market: Adja industries (silver markers); Fairford Industries (steel buildings); Flexi-Coil (land packers and ploughs); Friggstad Manufacturing (chisel ploughs and rock pickers); Macdon Industries (swathers); Morris Rod Weeder Company (chisel ploughs and rod weeders); Massey-Ferguson (combine harvesters); Noble Cultivators (blade ploughs); Riteway Manufacturing (rod weeders and rock pickers); Rock-O-Matic (rock pickers); Schulte Industries (rock

pickers); S.E.D. Systems (electronic monitors); Versatile Farm Equipment (tractors and swathers); and White Farm Equipment (combine harvesters).

d) Canadian Success Stories

i) Versatile Farm Equipment of Winnipeg began exporting four-wheel-drive tractors in 1972 - initially through a local agent/distributor. After four years of reasonable success, the company decided to penetrate the Australian market with its own distribution and servicing facility. In doing so, the company was able to make use of its dealer network, service its products and adjust its marketing to local conditions. In 1978, in order to make further use of its investment in Australia and to take advantage of marketing opportunities, Versatile came to an agreement with Morris Rod Weeder Company of Yorkton, Saskatchewan, to import and distribute its products in Australia. Later, Versatile purchased Noble Plough of Noble, Alberta, and began importing and distributing their equipment as well. The company is projecting substantial growth in the 1980s. On the export side in Australia, Versatile in 1979 bought Toft Brothers Ltd. of Queensland, makers of sugar-cane harvesters. As a result Versatile, overall, is now exporting more from Australia than it is importing into Australia.

ii) Leon's Farm Equipment of Yorkton, Saskatchewan, began exporting to Australia in 1979. Leon's established a good agency rapport with Symonds Products Ltd., of Western Australia. Together, the two companies developed a line of equipment suitable for conditions in Australia.

iii) Schulte Industries of Englefeld, Saskatchewan, is a relative newcomer to the Australian market. A number of manufacturers of rock pickers, including Schulte, were encouraged to attend the 1980 Ag-Quip Show. With the services of an Australian agent, significant sales have been realized. The key to the company's success has been the assistance of an agent capable of working with the firm to modify the machine to Australian requirements.

e) Market Considerations

Most tariffs are 15 per cent, with a reduced tariff of 7.5 per cent applicable to parts of certain agricultural implements. Even at those rates, Canadian exporters are

competitive with Australian manufacturers. The problem facing Canadian agricultural equipment exporters is finding capable agents and distributors. Most Australian distributors are often financially weak. They are interested in consolidating their profitable lines rather than adding new ranges of equipment.

The major advantage that Canada has is expertise in dry-land farming equipment. Canadian shortline manufacturers have specialized in that area, and are particularly well equipped for exploiting the growth of dry-land farming in Australia. Having already gone through an adaptation and experimental period at home, they are in a good position to adapt their products to Australian conditions. Due to differences in land-clearing practices and the nature of the soil, Australian agricultural conditions are harsher than those in Canada. To succeed in Australia, Canadian manufacturers will have to develop equipment suitable to local conditions.

f) The Competition and Competitor Activity

Canada's main competitor in the Australian market is the United States. There is strong competition for Canada's large four-wheel-drive agricultural tractors from companies such as International Harvester, John Deere, Steiger and Massey-Ferguson. So far, Versatile has been able to perform effectively, being first or second in sales of the four-wheel-drive market over 105 kw. Both International and John Deere have announced major programs to boost their sales of four-wheel-drive tractors, and one of their key targets has to be Versatile's market share. Canadian soil preparation and tillage equipment faces its main competition from domestic Australian companies, since only 25 per cent of that equipment is imported. Canadian exporters seem to be able to compete effectively on a price basis, and they certainly can compete on a quality basis. In addition, as local companies become more involved in producing Stubble Mulch equipment, acceptance broadens and the market increases. The production of the equipment domestically is a seal of approval for Canadian-styled implements. Combine harvesters face multinational competition: their future in Australia depends on the future of Massey-Ferguson and White Farm Equipment.

g) The Action Plan

Promotional activities will be designed to complement the marketing initiatives taken by the Canadian manufacturers who produce equipment that has application in Australia. Unlike the situation in many other countries, and with

many other products, the particular need arising in Australia, for which ITC is in a position to provide the greatest assistance to Canadian companies, is not one of direct marketing assistance but, rather, is of an indirect and technical nature. Specifically, efforts will be directed toward the farmer customers and various agricultural officials to inform them of the benefits inherent in Canadian farming practices that can be applied profitably in Australia. The marketing strategy includes various technical support projects that explain the benefits of Stubble-Mulch Farming as they relate to Australian agricultural production of cereal grains. A plan of action will consist of:

i) Updating, as required, technical brochures, audio-visual presentations and seminar programs. All have been used in conjunction with exhibits of Canadian farm machinery in Australia, both those formally organized by the department and those that have been initiated by Canadian companies;

ii) Maintaining support of Canadian agricultural companies through exhibits at key agricultural shows in Australia. In addition to working with the companies already exporting to Australia, a few new high-quality companies will be encouraged to attend the shows each year. Ag-Quip is the key show, and Dowerin, Western Australia; Toowoomba, Queensland; and Horsham, Victoria, are supporting events;

iii) Encouraging companies to set up Australian offices in order to remedy the lack of competent distributors. The offices would handle the marketing, importing and distributing of the equipment. Government support will take the form of PEMD E (consortium formation) or PEMD F (offshore offices) assistance;

iv) Encouraging additional exchanges of agricultural engineers and scientists (because professional exchanges have been useful in the past to familiarize Australian academics and technical personnel with Canadian techniques). Visiting professorships will be arranged; and schools of agricultural engineering, pastoral colleges, and agricultural specialists in soil and moisture conservation will be placed with State Departments of Agriculture;

v) Continuing to assist Canadian companies to find appropriate distribution through Australian distributors and dealers or in conjunction with Canadian companies that have established subsidiary marketing organizations in Australia;

vi) The planning of an agricultural seminar (including Stubble Mulch).

III. TABLES

TABLES 1 - 15

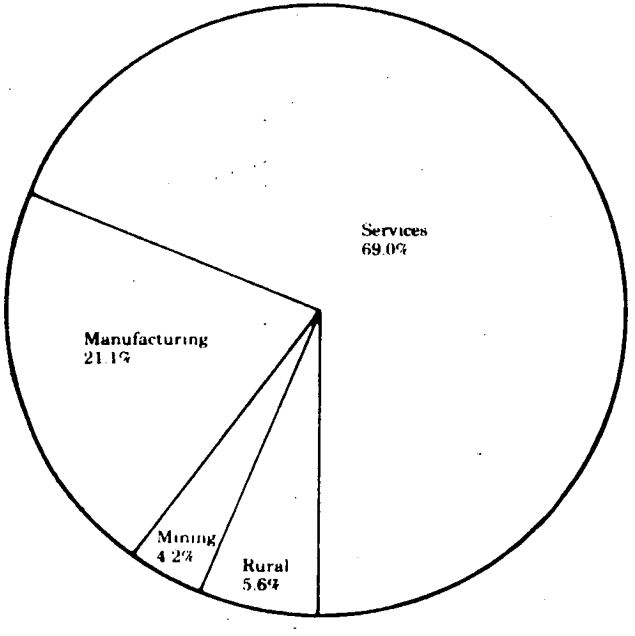
TABLE 1

AUSTRALIAN SECTORAL CONTRIBUTION TO GDP

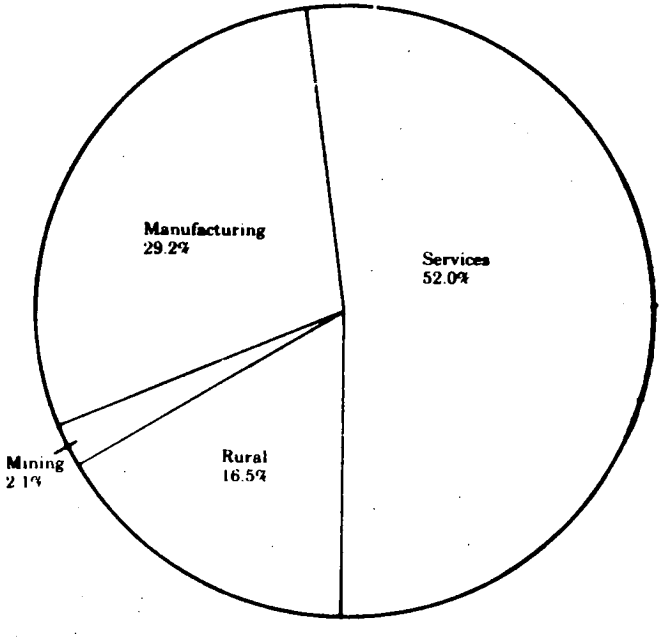
	1967-68		1968-69		1969-70		1970-71		1971-72		1972-73		1973-74		1974-75		1975-76		1976-77	
	$AM	% of GDP	$AM	% of GDP	$AM	% of GDP	$AM	% of GDP	$AM	% of GDP	$AM	% of GDP	$AM	% of GDP	$AM	% of GDP	$AM	% of GDP	$AM	% of GDP
CONTRIBUTION TO GDP																				
Rural	1,832	8.4	2,404	9.8	2,169	8.0	2,054	6.8	2,365	7.0	3,097	8.1	4,190	9.2	3,636	6.7	3,654	5.7	4,143	5.6
Mining	498	2.3	587	2.4	920	3.4	1,054	3.5	1,263	3.7	1,390	3.6	1,681	3.7	2,241	4.1	2,561	4.0	3,078	4.2
Manufacturing	5,727	26.3	6,327	25.7	6,962	25.5	7,607	25.2	8,115	24.1	8,956	23.4	10,504	23.0	12,232	22.4	13,701	21.5	15,516	21.1

Composition of the Economy

GDP at factor cost by industry: 1976-77—$A73,028m



GDP at factor cost by industry: 1956-57—$A10,236m



Source: Australian National Accounts

TABLE 2

AUSTRALIAN GDP SECTORS, REAL GROWTH RATES AND SHARES - 1961-86 ($)

	Annual Real Growth Rate[1] Fiscal 1967-76[2]	Projected Real Growth Rate Fiscal 1976-86	Share of Real GDP at Factor Cost 1961	1977	1986
Agriculture, etc.	2.8	2.1	11.9	8.6	7.4
Mining	9.4	8.3	1.8	4.3	4.9
Manufacturing	3.8	3.5	26.4	21.0	21.2
Utilities	3.9	3.8	3.2	3.0	3.0
Building	3.5	4.2	7.8	7.2	6.7
Trade	3.1	3.1	17.0	14.1	12.7
Communications	4.0	3.8	8.1	7.3	7.2
Administration, defence	6.1	5.9	3.4	5.1	5.1
All others[3]	8.2	5.5	20.4	29.4	31.8
TOTAL	4.6[4]	3.9[5]	100.0	100.0	100.0

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[1] 1966-67 prices.

[2] Fiscal years ending June 30.

[3] Finance, insurance, real estate, business services, community services, entertainment, restaurants, hotels, personal services, ownership of dwellings.

[4] 5.1 per cent if the recession of 1974-75 is excluded.

[5] The decline of the average GDP growth rate to 1986 is largely attributable to a decline in the growth of the labor force from an average 2.5 per cent to 2.0 per cent and shifts to the tertiary sector, with somewhat lower productivity growth.

Source: Business International

TABLE 3

VALUE ADDED BY AUSTRALIAN MANUFACTURING ESTABLISHMENTS

Value added by manufacturing establishments

1977-78
Total manufacturing value added—
$A20,231.4m

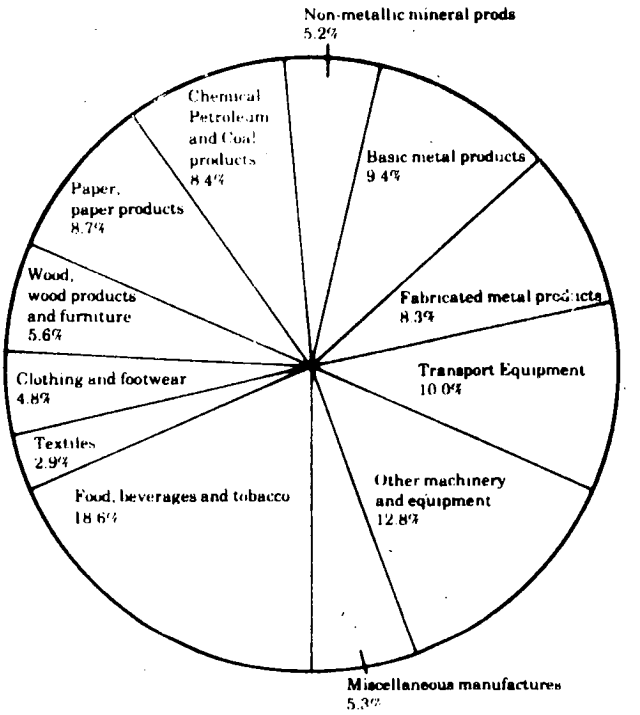

TABLE 4

INFLOW OF FOREIGN INVESTMENT IN ENTERPRISES IN AUSTRALIA - $AM

	U.K.	U.S.	Canada	Japan	EEC (excludes Britain)	Other	Total
1967-68	393	387	38	NIl	145	NIl	964
1968-69	483	320	22	NIl	179	NIl	1,004
1969-70	346	353	29	NIl	267	NIl	994
1970-71	539	473	52	NIl	485	NIl	1,549
1971-72	382	562	39	NIl	463	NIl	1,446
1972-73	121	89	6	51	51	176	496
1973-74	96	189	18	77	83	14	478
1974-75	115	355	17	67	157	183	894
1975-76	279	365	15	101	12	14	785
1976-77	360	624	70	175	267	66	1,562
1977-78	368	621	-4	191	63	38	1,276

Source: ABS: 5305.0, 1977-78

TABLE 5

AUSTRALIA'S INTERNATIONAL TRADE IN 1979-80

Leading Import Commodities

	$A billion
Machinery	5.1
Petroleum	2.8
Manufactures	2.6
Transport Equipment	2.2
Chemicals	2.1

Leading Sources of Imports

	%
EEC	24
U.S.	22
Japan	16
ASEAN	6
Saudi Arabia	4
New Zealand	4
Canada	2.7

Major Export Commodities

	$A billion
Wheat	2.9
Coal	2.2
Beef, Mutton and Lamb	2.1
Wool	2.1
Iron Ore	1.5

Major Customers' Shares of Exports

	%
Japan	27
EEC	14
U.S.	11
ASEAN	7
New Zealand	5
U.S.S.R.	5
China	4

TABLE 6

DIRECTION OF AUSTRALIAN TRADE (F.O.B.)

BY COUNTRY	1957-58		1967-68		1977-78		1978-79	
	($M)	% of total	($M)	% of total	($M)	% of total	($M)	% of total
Exports								
Japan	205.4	12.6	642.1	21.1	3,896.1	31.8	4,109.0	28.8
U.K.	442.8	27.1	426.3	14.0	482.1	3.9	571.3	4.0
U.S.A.	92.8	5.7	402.8	13.2	1,289.1	10.5	1,789.7	12.6
N.Z.	110.0	6.7	155.6	5.1	585.0	4.8	747.4	5.2
China (excl. Taiwan)	19.5	1.2	126.5	4.2	581.0	4.7	437.6	3.1
Germany FR	66.3	4.1	91.4	3.0	398.9	3.3	434.1	3.0
Canada	28.3	1.7	53.5	1.8	280.2	2.3	274.4	1.9
Other	670.8	40.9	1,146.5	37.6	4,757.1	38.8	5,879.2	41.3
TOTAL	1,635.9	100.0	3,044.7	100.0	12,269.5	100.0	14,242.7	100.0
Imports								
U.S.A.	208.9	13.2	840.9	25.8	2,319.9	20.8	3,225.6	23.5
U.K.	650.0	41.0	723.0	22.1	1,281.0	11.5	1,492.4	10.9
Japan	47.6	3.0	343.3	10.5	2,111.9	18.9	2,426.2	17.6
Germany FR	83.0	5.2	189.8	5.8	746.4	6.7	1,031.3	7.5
Canada	46.1	2.9	140.5	4.3	276.4	2.5	383.5	2.8
Saudi Arabia	14.5	0.9	49.0	1.5	355.2	3.2	359.5	2.6
N.Z.	25.5	1.6	61.6	1.9	360.1	3.2	424.9	3.1
Other	508.3	32.2	916.4	28.1	3,716.1	33.2	4,408.4	32.1
TOTAL	1,583.9	100.0	3,264.5	100.0	11,166.6	100.0	13,751.8	100.0
BY REGION								
Exports								
EEC(9)	814.4	49.8	783.6	25.7	1,722.0	14.0	2,012.8	14.1
ASEAN	69.0	4.2	194.0	6.4	856.8	7.0	1,091.0	7.7
N America	121.0	7.4	456.4	15.0	1,569.3	12.8	2,064.0	14.5
CPEs(a)	67.0	4.1	215.2	7.1	993.0	8.1	908.7(p)	6.4(p)
All developing countries	289.1	17.7	861.7	28.3	3,875.9	31.6	4,597.1(p)	32.3(p)
Imports								
EEC(9)	813.6	51.4	1,151.8	35.3	2,813.8	25.2	3,524.6	25.6
ASEAN	80.2	5.1	98.4	3.0	556.9	5.0	641.9	4.7
N America	255.2	16.1	981.4	30.1	2,596.2	23.3	3,609.1	26.2
CPEs(a)	15.4	1.0	40.7	1.2	170.2	1.5	204.1(p)	1.5(p)
All developing countries	345.4	21.8	505.4	15.5	2,646.0	23.7	2,911.4(p)	21.2(p)

(a) Centrally planned economy countries.
(p) Preliminary.

Source: ABS: Overseas Trade, 1961-62
CSS: Pattern of Trade, Part 1: Direction of Trade 1971-72, 1978-79

* 1979 - The latest year for which figures were available when the material for this report was assembled.

TABLE 7

COMPOSITION OF AUSTRALIAN EXPORTS

	Value			Proportion of Total		
	1976-77	1977-78	1978-79*	1976-77	1977-78	1978-79*
	$M	$M	$M	%	%	%
Live animals, chiefly for food	60.4	104.4	120.1	0.5	0.9	0.8
Beef and veal	618.3	823.6	1,363.4	5.3	6.7	9.6
Mutton and lamb	167.7	181.0	187.2	1.4	1.5	1.3
Other meats	99.8	114.3	160.0	0.9	0.9	1.1
Dairy products and birds' eggs	199.2	199.0	219.7	1.7	1.6	1.5
Fish, crustaceans and molluscs	136.4	144.5	194.2	1.2	1.2	1.4
Wheat and meslin, unmilled	863.5	1,011.1	794.6	7.4	8.2	5.6
Rice	57.1	66.6	70.4	0.5	0.5	0.5
Barley, unmilled	222.5	121.8	149.5	1.9	1.0	1.1
Cereal grains, unmilled; other	121.7	62.4	78.7	1.0	0.5	0.6
Cereal and flour preparations	54.1	65.9	71.1	0.5	0.5	0.5
Fruit and nuts (excl. oil nuts) fresh or dried	50.7	69.8	93.2	0.4	0.6	0.7
Fruit, preserved; and preparations	48.2	45.5	50.1	0.4	0.4	0.4
Sugar, raw	629.4	527.6	440.1	5.4	4.3	3.1
Feeding stuff for animals	47.5	48.9	50.4	0.4	0.4	0.4
Cattle hides	117.8	127.5	217.5	1.0	1.0	1.5
Sheep and lamb skins	111.2	107.6	111.1	1.0	0.9	0.8
Pulpwood (incl. chips and wood waste)	79.5	82.5	93.6	0.7	0.7	0.7
Greasy wool	1,276.4	993.5	1,227.7	11.0	8.1	8.6
Other wool and animal hair (excl. wool tops)	158.7	150.2	206.9	1.4	1.2	1.5
Crude fertilizers and minerals (excl. coal)	53.0	72.2	102.9	0.5	0.6	0.7
Iron ore and concentrates	901.7	920.9	967.7	7.7	7.5	6.8
Uranium & thorium, ores & concentrates	27.8	88.2	85.0	0.2	0.7	0.6
Ores & concentrates of base metal n.e.s.	1,211.9	1,278.0	1,355.0	10.4	10.4	9.5
Coal	1,281.9	1,481.8	1,518.8	11.0	12.1	10.7
Petroleum products & related materials	211.0	241.7	316.8	1.8	2.0	2.2
Animal oils and fats	68.4	100.4	123.6	0.6	0.8	0.9
Inorganic chemicals	27.2	33.7	48.6	0.2	0.3	0.3
Medical & pharmaceutical products	44.1	47.2	65.2	0.4	0.4	0.5
Artificial resins & plastic materials	30.0	32.1	51.9	0.3	0.3	0.4
Textile yarns, fabrics, made-up articles	73.7	68.3	90.0	0.6	0.6	0.6
Pearls & precious & semiprecious stones	39.6	43.0	79.6	0.3	0.4	0.6
Iron and steel	435.0	460.1	581.0	3.7	3.7	4.1
Copper and copper alloys	136.0	118.4	156.0	1.2	1.0	1.1
Nickel and nickel alloys	79.1	42.7	102.7	0.7	0.3	0.7
Aluminum and aluminum alloys	64.8	75.8	99.0	0.6	0.6	0.7
Lead and lead alloys	166.0	194.6	262.2	1.4	1.6	1.8
Zinc and zinc alloys	112.0	98.5	120.0	1.0	0.8	0.8
Machinery specialized for industry	104.5	113.7	126.9	0.9	0.9	0.9
General industrial machinery & equipment	87.8	89.8	104.9	0.8	0.7	0.7
Electric machinery, apparatus & appliances	70.1	64.3	65.2	-	0.5	0.5
Road vehicles	93.2	92.6	136.2	0.8	0.8	1.0
Other transport equipment	47.4	92.2	131.8	0.4	0.8	0.9
Professional, scientific & controlling instruments	30.2	44.7	58.5	0.3	0.4	0.4
Photographic apparatus and equipment	39.2	47.4	63.9	0.3	0.4	0.5
Other items	1,095.9	1,279.5	1,520.4	9.4	10.4	10.7
TOTAL EXPORTS	11,651.6	12,269.5	14,233.3	100.0	100.0	100.0

* 1979 - The latest year for which figures were available when the material for this report was assembled.

TABLE 8

COMPOSITION OF AUSTRALIAN IMPORTS (a)

	Value			Proportion of Total		
	1976-77	1977-78	1978-79P	1976-77	1977-78	1978-79P
	$M	$M	$M	%	%	%
Fish, crustaceans and molluscs	109.9	120.2	125.9	1.1	1.1	0.9
Vegetables and fruit	72.0	89.3	88.0	0.7	0.8	0.6
Coffee	88.2	92.3	80.9	0.8	0.8	0.6
Cocoa	44.7	65.4	64.3	0.4	0.6	0.5
Alcoholic beverages	52.0	59.0	71.0	0.5	0.5	0.5
Tobacco and tobacco manufactures	47.0	62.7	59.7	0.5	0.6	0.4
Crude rubber	44.4	47.4	58.8	0.4	0.4	0.4
Wood, simply worked & railway sleepers of wood	141.5	123.5	153.8	1.4	1.1	1.1
Pulp and waste paper	66.9	57.6	71.0	0.6	0.5	0.5
Textile fibres and wastes	64.8	68.6	74.0	0.6	0.6	0.5
Fertilizers, crude	42.5	55.6	83.5	0.4	0.5	0.6
Petroleum oil, crude	394.5	473.5	399.6	3.8	4.2	2.9
Petroleum products, refined	584.5	664.9	715.9	5.6	6.0	5.2
Fixed vegetable oils and fats	48.2	56.7	55.9	0.5	0.5	0.4
Organic chemicals	245.4	262.8	325.5	2.4	2.4	2.4
Inorganic chemicals	110.7	125.9	139.0	1.1	1.1	1.0
Dyeing, tanning & coloring materials	54.0	54.8	69.2	0.5	0.5	0.5
Medicinal and pharmaceutical products	101.7	111.5	130.8	1.0	1.0	1.0
Essential oils and perfume materials	39.7	51.5	68.4	0.4	0.5	0.5
Artificial resins and plastic materials	215.2	230.3	280.9	2.1	2.1	2.0
Tires and tubes	93.0	92.3	93.7	0.9	0.8	0.7
Wood and cork manufactures	59.2	52.2	64.2	0.6	0.5	0.5
Paper and paperboard	258.0	254.8	312.9	2.5	2.3	2.3
Textile yarn and thread	119.4	129.2	166.1	1.1	1.2	1.2
Woven fabrics, cotton & manmade fibres	269.6	283.4	363.1	2.6	2.5	2.6
Floor coverings	78.2	77.8	82.8	0.8	0.7	0.6
Nonmetallic mineral manufactures	223.0	242.5	272.3	2.1	2.2	2.0
Iron and steel	216.6	236.1	274.2	2.1	2.1	2.0
Internal combustion piston engines & parts	191.7	199.9	236.3	1.8	1.8	1.7
Rotating electric plants & parts	76.8	82.7	123.3	0.7	0.7	0.9
Machinery specialized for industry	616.3	632.2	826.4	5.9	5.7	6.0
Metalworking machinery	90.0	93.2	138.9	0.9	0.8	1.0
General industrial machinery & equipment	460.6	546.9	710.5	4.4	4.9	5.2
Office machines & automatic data processors	302.7	378.2	489.2	2.9	3.4	3.6
Telecomm. & sound recording apparatus	427.0	315.1	382.9	4.1	2.8	2.8
Electric machinery, apparatus & appliances	520.9	532.9	656.7	5.0	4.8	4.8
Passenger motorcars	446.0	424.0	527.3	4.3	3.8	3.8
Motor vehicles other than passenger motorcars	307.9	303.1	385.9	3.0	2.7	2.8
Parts & accessories n.e.s. for road motor vehicles	285.5	271.8	408.3	2.7	2.4	3.0
Aircraft & associated equipment & parts	139.4	142.0	442.1	1.3	1.3	3.2
Ships, boats (inc.hovercraft) & floating structures	17.2	86.7	221.1	0.2	0.8	1.6
Furniture	53.6	59.3	70.7	0.5	0.5	0.5
Clothing and accessories	242.6	267.7	280.9	2.3	2.4	2.0
Footwear	74.7	85.8	94.0	0.7	0.8	0.7
Professional, scientific & controlling instruments	165.2	197.7	250.3	1.6	1.8	1.8
Photographic apparatus & equipment	196.9	210.6	265.5	1.9	1.9	1.9
Printed matter	158.7	186.2	227.1	1.5	1.7	1.7
Perambulators, toys, games & sporting goods	116.7	119.4	147.1	1.1	1.1	1.1
Musical instruments & parts	67.9	62.6	74.4	0.7	0.6	0.5
Other items	1,567.8	1,726.8	2,052.4	15.1	15.5	14.9
TOTAL IMPORTS	10,410.6	11,166.6	13,756.7	100.0	100.0	100.0

(a) Groupings may exclude certain data which are classified confidential.

* 1979 - The latest year for which figures were available when the material for this report was assembled.

TABLE 9

MAJOR CANADIAN EXPORTS TO AUSTRALIA[1]

($ millions)

	1979	1980
Newsprint	51.4	66.1
Lumber	75.0	63.3
Sulphur	15.0	53.2
Motor vehicle parts	79.9	45.4
Wood pulp	26.8	39.1
Carpets in rolls	25.9	27.2
Potash	9.2	18.3
Asbestos	12.8	12.4
Combine reaper-threshers	7.6	11.5
Manmade fibres, incl. nylon	7.8	11.5
Total commodities listed	311.4	348.0
(Percent of total)	(56%)	(52%)
TOTAL EXPORTS	556.6	663.5
(Percent change)		(+19%)

[1] Statistics Canada

TABLE 10

MAJOR CANADIAN END PRODUCT EXPORTS TO AUSTRALIA[1]

($ millions)

	1979	1980
Motor vehicle parts	79.9	45.4
Carpets in rolls	25.9	27.2
Combine reaper-threshers	7.6	11.5
Wheel tractors, new and used	3.3	8.8
Card punch sort computers	10.7	8.5
Motor vehicles, n.e.s.	4.6	5.6
Woodland log handling equipment	1.1	4.6
Commercial telecommunications equipment	1.5	4.4
Electric lamps, bulbs, tubes	4.2	3.9
Carpets, incl. mats, floor coverings, n.e.s.	2.6	3.8
Total commodities listed	141.4	123.7
(Percent of total)	(59%)	(53%)
TOTAL END PRODUCT EXPORTS	241.5	234.4
(Percent change)		(-3%)

[1] Statistics Canada

TABLE 11

MAJOR CANADIAN IMPORTS FROM AUSTRALIA[1]

($ millions)

	1979	1980
Raw sugar	81.0	188.7
Alumina	79.8	76.9
Metal ores, concentrates, scrap, n.e.s.	68.8	42.2
Raisins, dried	20.0	25.6
Nickel ores, concentrates	35.5	19.9
Corned beef, canned	5.4	6.1
Veal, fresh, frozen	7.2	4.9
Precooked frozen food preps., n.e.s.	4.1	3.9
Wool, scoured, washed	5.0	3.7
Mutton, fresh, frozen	11.2	3.0
Total commodities listed	318.0	374.9
(Percent of total)	(68%)	(74%)
TOTAL IMPORTS	466.1	507.1
(Percent change)		(+9%)

[1] Statistics Canada

TABLE 12

CANADIAN TRADE WITH AUSTRALIA[1]

($ millions)

Year	Exports	Imports	Net Trade Balance
1970	197.8	146.1	+51.7
1971	180.2	125.7	+54.5
1972	160.3	196.7	-36.4
1973	214.4	242.6	-28.2
1974	317.4	335.0	-17.6
1975	248.0	344.8	-96.8
1976	369.5	339.2	+30.3
1977	408.9	353.0	+55.9
1978	412.4	353.1	+59.3
1979	556.6	466.1	+90.5
1980	663.5	507.1	+156.4

[1] Statistics Canada

TABLE 13

ITC FAIRS AND MISSIONS EXPOSURE TO AUSTRALIA

FISCAL YEAR	TRADE FAIRS	OUTGOING MISSIONS	INCOMING MISSIONS	MINISTERIAL MISSIONS
78/79	Intl' Australasian Floor Covering Mart, Sydney Shopping Plaza Consumer Products Promotions (PARAMATTA), Sydney Australian Nat. Field Days Farm Machinery Exh. N.S.W. Intl' Toy & Sporting Goods Show, Sydney	NIl	NIl	NIl
79/80	Australasian Floor Covering Mart, Sydney Dowerin Field Days Agricultural Equipment Exh. Dowerin (IB) Ag-Quip Farm Machinery Exh., Guennedsh Australasian Floor Covering Mart, Sydney	Oil & Gas Technology Mission & Seminar to Aust. (Melbourne-Perth)	NIl	NIl
80/81	FIME Forest Industries Machinery Expo, Myrtleford Ag-Quip Agricultural Equipment Trade Fair, Gunnedah Royal Easter Show, Sydney (IB) Intl. Toy & Sporting Goods Fair, Sydney	Dryland Farming Seminar to Australia Computer Technology Mission to Malaysia, Japan and Australia Auto Parts Seminar & Sample Display Mission to Australia Dryland Farming Seminar (Wimmera Field Days) to Australia Ocean Industries Technology Mission to Malaysia, Indonesia & Australia	NIl	Ministerial Mission to Australia and New Zealand
81/82	1. Ag-Quip Agricultural Eqpt. Trade Fair Gunnedah, N.S.W. August 18-20/81 2. International Toy & Sporting Goods Show, Sydney, Australia, March 17-20/82 3. Royal Easter Show, Sydney, Apr. 10-21/81 4. AIEE/81 - Australian 14th Engineering Exp. Melbourne, July 27-Aug. 1/81	1. Pulp & Paper to Australia, Apr./81 2. Ind. Process Control & Automatic on Equip. & System, July/81 3. Atlantic Provinces Export Mission to Australia, Nov./81 4. Trading House & Franchise Mission to Australia, Sept./81 5. Automotive Parts Mission, Feb./82 6. Electrical Equip. Mission, Mar. 31/82	1. Jewellery Buyers from Australia to Toronto, July 19-21/81 2. Agricultural Machine Buyers to West Farm Pro, June 17-20/81	1. Oil & Gas Eqpt. Mission from W.A., May 7-15/81

TABLE 14

PEMD APPROVALS BY SECTION, 1971-1980

AUSTRALIA

	70/71	71/72	72/73	73/74	74/75	75/76	76/77	77/78	78/79	79/80	80/81
Section A** - Approvals	4	6	6	7	7	4	6	6	9	0	-
- Successes	0	2	0	0	1	0	0	1	0	0	-
Section B - Approvals	0	29	23	18	22	25	25	33	50	9	14
- Successes	0	13	9	6	9	15	12	6	3	0	-
Section C - Approvals	0	1	1	1	3	6	5	3	6	3	-
- Successes	0	1	1	0	1	2	1	1	0	0	-
Section D - Approvals	0	0	1	1	1	0	4	3	6	0	1
- Successes	0	0	0	1	0	0	3	0	0	0	-
Section E - Approvals	0	0	0	0	0	0	0	0	0	0	-
- Successes	0	0	0	0	0	0	0	0	0	0	-
Section F* - Approvals	-	-	-	-	-	-	-	-	0	0	-
- Successes	-	-	-	-	-	-	-	-	0	0	-
Section R* - Approvals	-	-	-	-	-	-	-	-	0	1	3
- Successes	-	-	-	-	-	-	-	-	0	0	-

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* These sections of PEMD were introduced in 1979.

** Section A was temporarily suspended from March to Sept. 1980 due to a lack of funds.

Source: Department of Industry, Trade and Commerce

TABLE 15

PEMD APPROVALS BY SECTOR, 1971-81*

March 31, 1981

a) GOODS VERSUS SERVICES

	SECTIONS				
	A	B	C	D	R
Goods	28	177	19	18	3
Services	38	103	17	8	1
TOTAL	66	280	36	26	4

b) BY MAJOR FOCUS

	SECTIONS				
	A	B	C	D	R
Chemicals	2	17	-	-	-
Agroindustry	2	36	2	4	4
Fishing and fisheries	-	3	-	-	-
Environmental and energy	5	7	5	1	-
Forestry	14	8	-	2	-
Mining resources	7	9	-	2	-
Transport	1	22	3	-	-
Communications Instr.	23	44	6	3	-
Industrial	6	59	5	6	-
Social Services**	6	75	15	8	-
TOTAL	66	280	36	26	4

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* A list of selected companies successful under the program follows as part of this table

** Including housing, education, hospitals, etc.

Source: Department of Industry, Trade and Commerce.

SELECTED CANADIAN COMPANIES SUCCESSFUL IN THE AUSTRALIAN MARKET UNDER THE PROGRAM FOR EXPORT MARKET DEVELOPMENT

Bailey Meter Co. Ltd.
Pointe-Claire, Québec

Burnside Equipment Ltd.
Downsview, Ontario

Casavant Frères Ltd.
St-Hyacinthe, Québec

Central Dynamics
Pointe-Claire, Québec

Coulter Copper & Brass
Toronto, Ontario

Daisey Decoration Products
Toronto, Ontario

Elastometal Ltd.
Burlington, Ontario

Foseco Canada Ltd.
Guelph, Ontario

Ingersoll Machine & Tool Co. Ltd.
Ingersoll, Ontario

Lister Bolt & Chain
Richmond, British Columbia

Lo Lift Corp. Ltd.
Mississauga, Ontario

London Mat Ind. Ltd.
London, Ontario

Macdon Ind. Ltd.
Winnipeg, Manitoba

MacDonald Dettwilet & Assocs.
Richmond, British Columbia

Mastic Inc.
London, Ontario

The McArthur Chemical Co. Ltd.
Lachine, Québec

Michael Shulman Assoc.
(Infra Pak Division)
Toronto, Ontario

Midland-Ross of Canada Ltd.
LaSalle, Québec

Morris Rod-Weeder Co. Ltd.
Yorkton, Saskatchewan

National Business Systems Inc.
Mississauga, Ontario

Ontario Drive & Gear Ltd.
New Hamburg, Ontario

Quebec Wires Ltd.
Trois-Rivieres, Québec

True Craft Log Structures Ltd.
North Vancouver, British Columbia

Wallace Murray Can Ltd.
Granby, Québec

Woods Bag & Canvas Co. Ltd.
Toronto, Ontario

IV. APPENDICES

i) Administration of Australian Foreign Investment Policy

ii) Selected Resource Development Projects in Australia

iii) Selected Canadian Investment in Australia

iv) Fairs and Exhibitions in Australia

v) Canadian Government Contacts with regard to Australia

ADMINISTRATION OF AUSTRALIAN FOREIGN INVESTMENT POLICY

The Treasurer is responsible for the administration of the Government's foreign investment policy. In this task he is advised by the Foreign Investment Review Board.

The Board's main functions are:

- to advise the Government on foreign investment matters generally;
- to foster an awareness and understanding of the Government's policy in the community at large and in the private enterprise sector in particular;
- to give guidance to foreign investors on those aspects of their proposals that may not be in conformity with policy and suggest ways by which such proposals might be amended;
- to work towards a high level of Australian participation in new investment undertakings;
- to establish liaison with State Government authorities; and
- to keep in touch with the activities of foreign-controlled businesses operating in Australia.

In undertaking these tasks, the Board is assisted by the Foreign Investment Division of the Commonwealth Treasury which acts as its Executive. Other Government agencies are consulted as appropriate.

Proposals Which Should be Submitted to the Foreign Investment Review Board

The Board examines certain types of proposals by foreign interests to invest in Australia.

A foreign interest is defined as:

- a natural person not ordinarily resident in Australia;
- a foreign-controlled corporation or business; or
- any corporation or business in which there is a substantial foreign interest regardless of whether the corporation or business is foreign-controlled. ('Substantial interest' is defined in section 9 of the Foreign Takeovers Act and covers a holding of 15 per cent or more of the issued shares or voting power of a company by a single or associated foreign interests, of 40 per cent or more in aggregate by two or more foreign interests).

The following categories of proposals by foreign interests should be submitted for examination:

(a) Proposals falling within the scope of the Foreign Takeovers Act. These include:
  (i) any acquisition or issue of shares which would result in or increase a substantial interest in an existing Australian company;
  (ii) any acquisition of an Australian business by the purchase of assets;
  (iii) any agreement (including alteration of Articles of Association) that would give a substantial foreign shareholder in an Australian business rights to representation on the board of that business; and
  (iv) any arrangement relating:
    to the leasing or the granting of other rights to use assets of an Australian business;
    to participation in the management or profits of an Australian business.

  It is the practice of the Government not to intervene, except in special circumstances, in proposals where the total assets of the target company or business are less than $2 million.

(b) Investment proposals not coming under the Foreign Takeovers Act but falling within the following categories:
  (i) all proposals to establish a new business or project, irrespective of size, in industries subject to special restrictions; namely, finance, insurance, the media, civil aviation, uranium and activities relating to uranium;
  (ii) direct investments by foreign governments or their agencies (i.e. excluding portfolio investments or investments related to their official representation);
  (iii) other proposals to establish new businesses, where the total amount of the investment is $5 million or more (including diversification into activities not previously undertaken directly in Australia and new projects in mining or other natural resource industries); and
  (iv) proposals to acquire real estate valued at $250 000 or more (see detailed provisions p. 16).

Examination of Proposals

The Government seeks to ensure that foreign investment is in accord with Australia's interests by maximising the benefits and minimising any disadvantages of such investment. Proposals are considered on their merits against certain criteria, the most important of which are listed below:

(a) whether, against the background of existing circumstances in the relevant industry, the proposal would produce, either directly or indirectly, net economic benefits to Australia in relation to the following matters:
  (i) competition, price levels and efficiency;
  (ii) introduction of technology or managerial or workforce skills new to Australia;
  (iii) improvement in the industrial or commercial structure of the economy, or in the quality and variety of goods and services available in Australia; and
  (iv) development of or access to new export markets.

If a proposal is judged to be not contrary to the national interest on the basis of the above criteria, the following additional criteria are taken into account:

(b) whether the business or project concerned could be expected to be conducted in a manner consistent with Australia's best interests in matters such as:
  (i) local processing of materials and the utilisation of Australian components and services;
  (ii) involvement of Australians on policy-making boards of businesses;
  (iii) research and development;
  (iv) royalty, licensing and patent arrangements; and
  (v) industrial relations and employment opportunities;
(c) whether the proposal would be in conformity with other Government economic and industrial policies and with the broad objectives of national policies concerned with such matters as Australia's defence and security, Aboriginal interests, decentralisation and the environment, as well as with Australia's obligations under international treaties;
(d) the extent to which Australian equity participation has been sought and the level of Australian management and control following implementation of the proposal (see also p. 17);
(e) taxation considerations (including the manner in which a proposal is to be financed);
(f) the interests of Australian shareholders, employees, creditors and policy holders affected by the proposal.

All of the criteria are not necessarily relevant to each proposal. The list is drawn on to the extent appropriate in the circumstances of a particular case. In the examination process a liberal approach is taken towards proposals that are accepted as being Australian controlled upon implementation. Except for investment in the natural resources area, in real estate, banking, insurance, financial intermediaries, the media and civil aviation, such proposals are approved unless there are special circumstances.

Where proposals concern areas of the economy in which foreign ownership and control is already extensive, or would become extensive as a result of the implementation of the proposal, the Government expects to see significant economic benefits and/or significant Australian equity participation before approval is granted.

Areas in Which Restrictions Apply to Foreign Investment

There are areas of the economy where, because of national interest considerations, the Australian Government imposes restrictions on foreign investment.

Finance

Banking

It is the policy of the Government, as it has been of all previous Governments since 1945, not to grant foreign interests authority to carry on banking business in Australia or to

allow them to acquire interests in existing Australian banks. Under the Banks (Shareholdings) Act, individual or associated holdings in an Australian bank are limited to less than 10 per cent. The Government would also be opposed to acquisitions short of that figure where the intention of the overseas interest was to exercise an influence over the bank concerned. Approval is, however, generally given by the Treasurer for overseas banks to establish representative offices in Australia for liaison purposes.

Non-bank financial intermediaries and insurance companies

The financial sector plays a pivotal role in the economy and all proposals by foreign interests to establish a new non-bank financial intermediary (nbfi) or an insurance company are closely examined. In view of the extensive level of foreign ownership and control in some parts of the financial sector, proposals must show substantial net economic benefits to Australia to obtain approval or, where the net economic benefits are small, must involve an effective partnership between Australian interests and the foreign investor in the ownership and control of the company concerned. In some cases approval may be more readily granted where a financial intermediary's operations are strictly ancillary to other business (e.g. an in-house financier) and do not have significant implications for the financial sector.

All proposals to acquire or increase substantial interests in an existing nbfi or insurance company are closely examined, regardless of the size of the company. Again, substantial benefits must be demonstrated, taking account of the implications of the proposal for the financial sector and for the level of Australian ownership.

Media

Broadcasting and television

Foreign investment in broadcasting and television is governed by the Broadcasting and Television Act, which provides that no less than 80 per cent of the issued capital of a company holding a broadcasting or television licence must be beneficially owned by Australian residents and that no single overseas shareholder shall have more than 15 per cent of the issued capital of such a company.

Newspapers

All proposals for foreign investment in newspapers in Australia, irrespective of the size of the proposed investment, are subject to case-by-case examination. Foreign investment in mass circulation newspapers is restricted. Further, approval is not normally given to proposals by foreign interests to invest in ethnic newspapers in Australia, unless there is substantial involvement by the local ethnic community and effective local control of editorial policy.

Civil Aviation

Foreign equity in domestic civil aviation is restricted. All proposals for foreign investment in this industry, irrespective of the size of the proposed investment, are subject to case-by-case assessment.

Real Estate

Although the Government's general policy is to welcome foreign investment in Australia, special consideration is regarded as necessary in the case of proposals involving substantial investment in real estate. The Government is concerned that foreign interests should not engage in real estate investment that is of a speculative nature or that is intended purely for capital gain or investment income without accompanying benefits to the Australian economy.

In this context, real estate includes any option or interest in Australian freehold land, or in a lease of land, or improvements thereon, having a term of more than five years, or in a financing arrangement that provides for the sharing of profits from an investment in real estate.

In order to keep to a minimum the real estate proposals requiring notification to the Foreign Investment Review Board, the Government has exempted from the need for foreign investment approval a wide range of transactions (these exemptions do not affect requirements under the Foreign Takeovers Act or Banking (Foreign Exchange) Regulations), as follows:

(a) individual (one-off) acquisitions of less than $250 000 (unless such an acquisition is part of a property investment program involving total acquisitions since 8 June 1978 of more than $250 000, in which case it should be referred for consideration);
(b) acquisitions by foreign-controlled charities or charitable trusts operating in Australia for the primary benefit of Australians;
(c) acquisitions by life assurance companies, representing investment of their Australian statutory funds (annual notification of these acquisitions is required, including reference to the relationship between the value of total real estate holdings and the statutory funds);
(d) acquisitions by Australian pension funds of foreign employers, representing the investment of pension funds for the benefit of Australian superannuants (annual notification of these acquisitions is required, including reference to the relationship between the value of total real estate holdings and the pension funds);
(e) acquisitions of offices and residences by foreign government missions for use as official missions or residences for staff, subject to sale to Australians or other eligible purchasers when no longer being used for those purposes; and
(f) acquisitions of real estate, for example, a factory site, that are necessary for the continuation of the normal business activities of a foreign interest other than a business of real estate acquisition, development or investment.

Proposals for foreign investment in real estate not covered by the above exemptions require notification on an individual basis. However, for acquisitions of real estate which form part of a major real estate project or continuing program, such as for development and sale to Australians or eligible persons, arrangements may be made with the Board for advance notification and approval on an annual program basis.

All examinable proposals are considered in the light of their expected benefits to the Australian economy and having regard to the level of Australian participation in ownership and control of the business. Special emphasis is attached to Australian participation in major real estate projects and approval would normally be forthcoming where there is 50 per cent or more Australian ownership.

Australian Participation

The Government wishes to encourage Australian participation in new businesses and mineral projects because it believes that this will be in the long term interests of both Australia and the foreign investor. For this reason, one of the criteria used in the examination of individual proposals is the extent to which Australian equity participation has been sought and the level of Australian management and control that will exist following implementation of the proposal.

There are specific guidelines for Australian participation in the natural resources sector.

Uranium

Because of the unique status that the Government attaches to uranium, any project involving investment by foreign interests in the mining and production of uranium, or in uranium enrichment, or in activities in any way connected with the nuclear fuel industry, are subject to examination. A proposed project for the mining and production of uranium not already in production will only be allowed to proceed provided it has a minimum 75 per cent Australian equity and is Australian controlled. These requirements must be met by the time the project comes into production. In assessing whether a project meets the 75 per cent Australian equity requirement the level of foreign portfolio investment in participating companies is taken into account. However, in the absence of special circumstances, individual portfolio shareholdings of less than 10 per cent in an Australian uranium company will be disregarded.

Mining (other than uranium), agriculture, pastoral, fishing and forestry

A proposal for a new business or project in these areas involving a total investment of $5 million or more will, as a general rule, only be

allowed to proceed if it has a minimum 50 per cent Australian equity together with at least 50 per cent of the voting strength on the board or controlling body held by Australian interests.

Proposals that are not contrary to the national interest but which do not meet the guideline of a minimum of 50 per cent Australian equity may be allowed to proceed if the Government judges that the unavailability of sufficient Australian equity capital on reasonable terms and conditions would unduly delay the development of Australia's natural resources. In that event, however, the Government will, as appropriate, seek satisfactory arrangements for Australian equity to be increased to at least 50 per cent within an agreed period.

Mineral Exploration

It is not mandatory for foreign interests to seek Australian participation in their mineral exploration activities. However, the Government wishes to see, to the extent practicable, a continuing and significant level of Australian involvement in mineral exploration. Accordingly, it expects foreign interests to seek Australian participation in those projects that can reasonably be expected to proceed to the development stage. Foreign exploration companies are also expected to advise the Foreign Investment Review Board annually of their forward exploration programs. Any proposed developments arising out of exploration activities are subject to examination in terms of the relevant guidelines for new mineral projects.

Scope for Foreign Companies to Naturalise

The Government welcomes proposals to increase Australian participation in existing foreign-owned companies. It has provided a framework and an incentive for the introduction of additional Australian equity into predominantly foreign owned companies. Companies whose proposals to become 'naturalised' over a period are accepted by the Government may avail themselves of certain benefits.

Naturalised and naturalising companies

A company may be granted *naturalised status* by the Government if:

(i) it is at least 51 per cent Australian-owned;

(ii) its Articles of Association provide that a majority of members of the board are Australian citizens; and

(iii) general understandings have been reached between the company, major shareholder interests and the Government about the exercise of voting powers in respect of the company's business in Australia.

A company wishing to naturalise—a *naturalising company*—must meet certain preconditions. It must:

(i) have a minimum of 25 per cent Australian equity;

(ii) provide in its Article of Association for a majority of Australian citizens on its board; and

(iii) give a public commitment to increase Australian equity to 51 per cent, subject to agreed understandings between the company, major shareholder interests and the Government, and have regular discussions with the Foreign Investment Review Board on progress towards achieving 51 per cent Australian ownership.

A company wishing to naturalise is required to reach an understanding with the Government on practical arrangements for achieving 51 per cent Australian ownership. These arrangements will include a general understanding with the major shareholder interests of the company on the process of naturalisation and the exercise of voting powers in respect of the company's business in Australia. The rights of a naturalising company may be withdrawn if it does not adhere to the understanding with the Government.

The Government will expect the process of naturalisation to take place primarily by way of new share issues to Australians to fund new projects and expansions, rather than by takeovers which remain subject to case-by-case examination under the Foreign Takeovers Act.

Benefits from naturalisation

A naturalised or naturalising company may undertake new projects (other than projects involving uranium, finance, insurance, the media and civil aviation, where special restrictions apply):

(i) on its own or in partnership with Australian companies, naturalised or naturalising companies; or

(ii) in any such combination jointly with foreign companies provided that the 'resultant mix' observes the 50 per cent equity and control guidelines where applicable.

Note: For purposes of calculating the mix in (ii), a naturalising company is given prior credit for 51 per cent Australian ownership, and a naturalised company such higher percentage of Australian ownership as it may have attained. Both naturalising and naturalised companies are regarded as Australian-controlled.

Notification requirements

A company accepted by the Government as a naturalised or naturalising company is not required to notify proposals to develop a new resource project that is subject to the 50 per cent rule where it intends to proceed on its own or in partnership with Australian-owned companies or other naturalised or naturalising companies. All other proposals must be notified to the Foreign Investment Review Board. However, notification arrangements applying to new investment proposals by naturalised or naturalising companies in other sectors may be the subject of special agreement with the Government.

The naturalisation arrangements do not apply to foreign participation in uranium projects and do not affect a company's position under the provisions of the Foreign Takeovers Act.

Companies should not feel that they are expected, or have an obligation, to proceed to 'Australianise'. It is a matter for individual companies to decide whether they wish to do so.

Australian Sources of Finance

Foreign-controlled companies incorporated in Australia, or operating here as locally registered foreign companies, may raise funds for their local requirements in the Australian capital market. (Prior exchange control approval is necessary if borrowings are to be guaranteed from overseas.) Such foreign companies proposing to borrow locally are invited to consider alternative sources of financing, including the raising of local equity by means of new share issues or other placements, subject to normal stock exchange requirements. The Australian Industry Development Corporation is available to assist companies seeking Australian equity partners.

Authority for the Policy

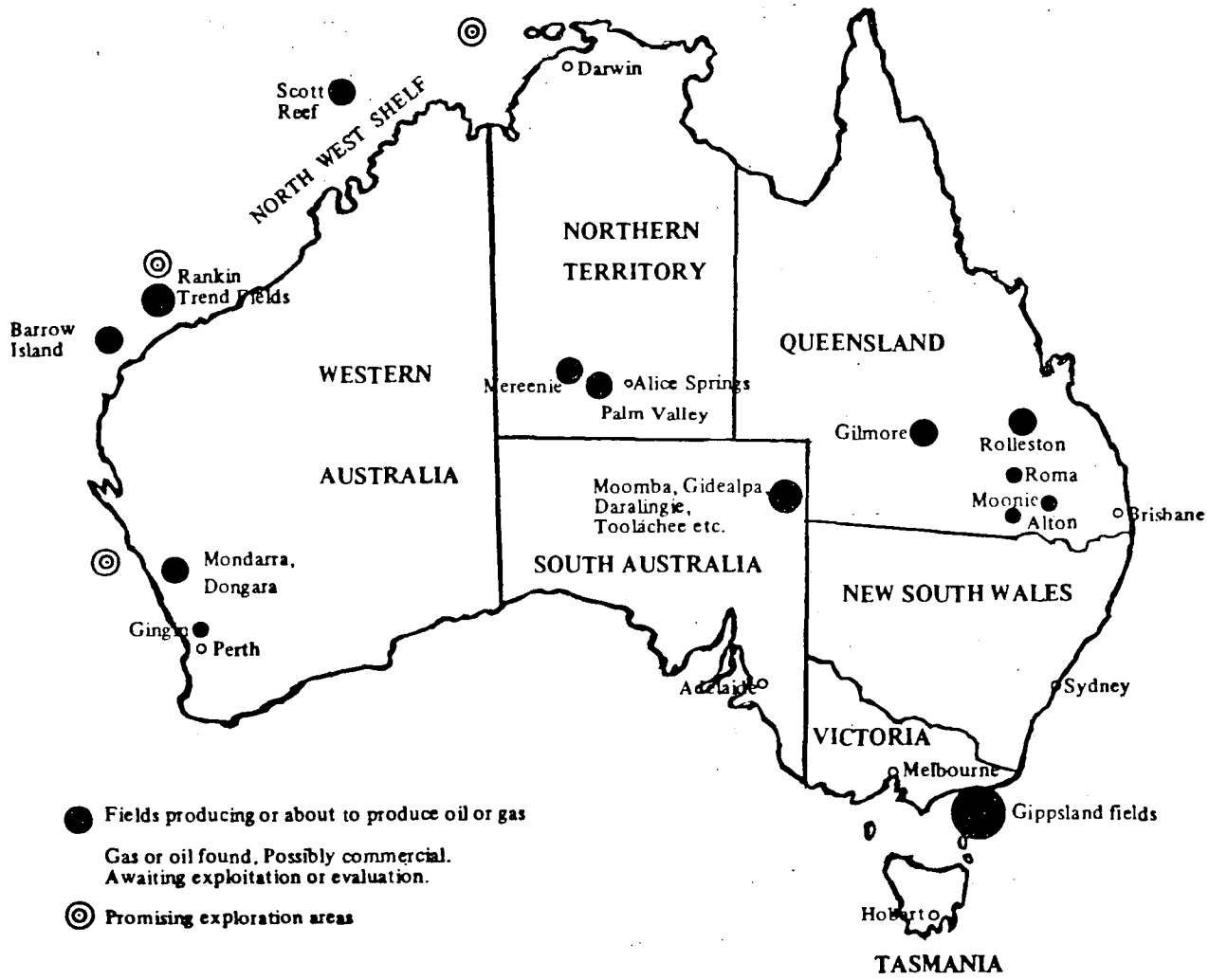
The Government's administration of its foreign investment policy is based on the powers available to it under the Foreign Takeovers Act, the Banking (Foreign Exchange) Regulations and export controls. In the implementation of those aspects of its policy not covered by legislation the Government seeks the co-operation of all parties.

SELECTED RESOURCE DEVELOPMENT PROJECTS IN AUSTRALIA*

1. OIL AND GAS

Currently Australia produces about 70 per cent of its crude oil requirements. By 1985, this could fall to 45 per cent if new reserves are not found. The country is selfsufficient in gas.

In the past two years, there has been greatly increased petroleum exploration activity as the government decided to increase the crude oil prices to reach international levels, raise prices for natural gas, relax foreign investment regulations, and restore certain concessions. In the Gippsland, Surat and Copper Basins, and in the North West Shelf-Exmouth Plateau areas, there has been a rush to obtain exploration permits, and the renewed activity has already had some results.



* As of November 1980.

PROJECTS

North West Shelf Natural Gas Project (W.A.)

- Five billion dollars. Consortium of Woodside, BHP, BP, Shell and Cal Asiatic with Woodside as operator. Development of North Rankin Gas field (130 km (80 miles) offshore from port of Dampier) to provide 6.5 TPY LNG for export (for 1986) and 370 million cu.ft. per day pipeline quality gas (for 1984). The project will consist of:

  a) Two offshore drilling/production platforms;

  b) A 130 km (80 miles) submarine pipeline 38-40" in diameter and 1" thick;

  c) onshore plant to treat gas for domestic sales and liquefy it for export, LNG storage, condensate storage, marine loading facilities and other associated facilities;

  d) LNG carriers.

  Project will proceed in two stages:

  1) gas from the first platform to be piped to Perth starting 1984;

  2) gas from the second and third platforms to be liquefied for export (1986).

  The consultants to Woodside for the over-all project are Worley Engineering. Tenders have been called for all long-lead-time equipment, and shortlists for other equipment have been prepared.

  Contract signed in October with W.A. government to supply natural gas over a 20-year period. Negotiations of LNG contracts proceeding.

Dampier-Perth Pipeline (W.A.)

- Western Australia State Electricity Commission, $500 million: 1,500 km (932 miles) of 30" (some 24") pipeline to supply Perth area, including aluminum smelters and refineries, with 300 million cu.ft. of gas per day. The Royal Bank/ Orion Group are financial advisors to the SEC for this project. Consulting engineers: Fluor and Mansel (Australia). Preregistration of supplies began in October 1980.

Exmouth Plateau Petroleum Exploration (W.A.)

- The most promising oil exploration activity in Australia is taking place on the Exmouth Plateau beyond the North West Shelf. The drilling is extremely difficult and costly because of the depth of the water (800-2,000 meters) (2,625-6,562 feet), the underwater tides and the cyclonic weather conditions. The four consortia that won exploration titles will be spending some $300 million before 1983:

- Esso (50 per cent) with Hematite/BHP (50 per cent); two permits: $128 million;

- Hudbay (40 per cent) with Canadian Superior (30 per cent), Pan Canadian Petroleum (20 per cent), Australian Oil and Gas Corp (10 per cent); one permit: $21 million;

- Phillips (20 per cent) with Mobil (20 per cent), Gulf (20 per cent), MIM (20 per cent), BP (20 per cent); one permit: $30 million;

- Woodside Oil (41-2/3 per cent) with BP (16-2/3 per cent), Cal Asiatic (16-2/3 per cent), Mid Eastern Oil (8-1/3 per cent), Shell (8-1/3 per cent), Hermatite/BHP (8-1/3 per cent); one permit: $34 million.

To date the drilling has not been successful.

Bass Straits (Vic)

- Exxon and BHP will be spending approximately $1.5 billion beginning 1980 to further develop these oil fields. Two jackets are currently being fabricated: West Kingfish expected to be erected in 1981, and Cobia, in 1982. Manufacture of the jacket for Fortescue will commence this year for erection in 1983.

Moomba Liquids Plant (S.A.)

- $525 million. Santos Limited. Feasibility study being prepared by Davy Pacific. Awaiting decision on proposed Redcliffe petrochemical plant which would use ethane as feedstock. Other liquids would be used by the motor industry in Adelaide.

South Australia Liquids Pipeline (S.A.)

- $65 million. Santos Limited. 528 km (328 miles) pipeline to transport oil and condensates from Moomba plant to Port Stanvac. Will be financed by State government. Engineering consultants: Bechtel. If Dow proceeds with petrochemical plant in Redcliffe, a second line would be built to transport ethane for feedstock.

Rundle Oil Shale Development (Qld)

- Esso, Southern Pacific Petroleum NL, Central Pacific Minerals NL, estimated three billion barrels of oil.

  Stage I: Three retorts to produce 23,000 TPD oil by 1983 ($300 million);
  Stage II: Forty retorts to produce 225,000 b/d by 1987;
  Open Pit: will move one million tons of shale daily.

  Project at preliminary stage.

Julia Creek Oil Shale Projects (Qld)

- CSR (formerly in consortium with Aquitaine and Tosco, who have since dropped out). Surface oil shale containing up to two billion barrels of oil. Tosco (The Oil Share Company, U.S.) process is being tested. Pilot plant would cost $360 million. Total project development will cost $2 billion. CSR currently accelerating development work and estimates cost of oil would be $42/bbl.

Matraville Refinery Expansion (N.S.W.)

- Total Holdings (Australia). $180 million; to increase capacity to 45,000 b/d by 1983. Tenders to be called in April 1980.

2. PETROCHEMICAL INDUSTRY

At present the petrochemical industry in Australia is not highly developed. There are some 30 plants in all, of which the Mobil-Esso Altona plant and the ICI Botany Bay plant are the largest. The Altona plant produces some 160,000 TPY and the Botany Bay plant produces 100,000 TPY.

PROJECTS

Botany Bay Integrated Petrochemical Complex

- $520 million. Expansion and replacement of present facilities to produce 250,000 TPY. ICI-owned and operated. Lump sum turnkey project.

Point Wilson (Victoria) Petrochemical Complex

- ICI Australia; $650 million. Initially, vinyl chloride monomer plant; later, caustic chlorine and ethylene. Will not start infrastructure until end 1980, but contracts (in $50-100 million chunks) beginning in 1981 for production in 1984. Eventually this complex will be larger than Botany Bay.

Redcliffe Petrochemical Plant (Cooper Basin, S.A.)

- $1,200 million. Dow Chemical. Using feedstock from Moomba gas fields plant would produce petrochemicals for export and local consumption. With ICI announcement of two plant expansions, it is less likely that Redcliffe will go ahead. The South Australia State government is exerting strong pressure on the company to proceed. A decision to be made in fall of 1980 but Dow decided to postpone decision two years.

Altona Petrochemical Plant Expansion (Vic)

- Altona Petrochemical Co. Ltd. (Esso/Mobil) to double capacity to 300,000 TPY ethylene, its major product, by 1983-84. $390 million.

Altona Polyethylene Plant Expansion (Vic)

- Union Carbide to increase total output to 110,000 TPY by 1981 by debottlenecking and modification of present facility. Expansion tied in with that of the Altona Ethylene plant, the supplier of ethylene. Cost $100 million.

3. ALUMINUM-ALUMINA

Australia is the world's largest bauxite producer and produces 24 per cent of non-communist world's alumina, but only three per cent of it is aluminum. With bauxite and relatively cheap energy, the Australian aluminum industry will expand rapidly in the next few years, and the Chase Manhattan Bank estimates that, by 1990, the smelting capacity will be increased ninefold to reach two million TPY.

SMELTERS

- Existing capacity in Australia - 280,000 TPY in three smelters:

1. Comalco Tasmania Smelter: 112,000 TPY
2. Alcoa Pt. Henry Smelter: 100,000 TPY
3. Alcan Kurri Kurri Smelter: 68,000 TPY (being expanded to 90,000 TPY)

Expansions

Kurri Kurri Aluminum Smelter Expansion (N.S.W.)

- Alcan. Recent expansion increased production to 68,000 TPY. Further expansion of 22,000 TPY, planned at estimated cost of $60 million, will bring production to 90,000 TPY by 1981, when final expansion will begin to raise production to 130,000 TPY.

Point Henry Aluminum Smelter Expansion (Vic)

- Alcoa of Australia. To increase current production of 120,000 TPY by 57,000 TPY by addition of third potline. Estimated cost, $130 million. Construction began in early 1979 for production early in 1981.

Bell Bay Aluminum Smelter Upgrading (Tas)

- Comalco. $40 million. Improvement of smelter over 16-month period for completion June 1981. Will include slight increase of output from 112,000 TPY to 117,000 TPY.

New Plants

Alcan Gladstone Aluminum Smelter (Qld)

- Alcan Queensland Ltd. $330 million. 100,000 TPY initial capacity to go to 250,000 TPY. Detailed feasibility study being carried out by Alcan (Montreal) to be completed early 1980. Expected start-up 1983. Construction began June 1980.

Portland Aluminum Smelter (Vic)

- Alcoa of Australia. $450 million. Construction of initial phase began in 1980 for production of 120,000 TPY in 1983. Estimated cost $465 million. To be ultimately expanded to 535,000 TPY. Feasibility study and EIS proceeding.

Gladstone Aluminum Smelter (Qld)

- Comalco (30 per cent), Kaiser Aluminium & Chemical Co. (20 per cent), Japanese interests (50 per cent). $1 billion. Four potlines for capacity of 400,000 TPY. Construction of first phases to begin last half of 1979 for production of 103,000 TPY in 1981, 206,000 TPY in 1983, and 412,000 TPY to be reached by 1979. Bechtel is engineering and construction manager.

Tomago Aluminum Smelter (N.S.W.)

- Aluminum Pechiney (France 36 per cent, Gove Alumina 36 per cent, AMP Society 15 per cent). $900 million. Feasibility study being done by company for 220,000 TPY smelter using alumina from Queensland Alumina Refinery in which Pechiney has 20 per cent interest. 110,000 TPY to come onstream in 1983, increased to 220,000 TPY in 1985.

Lochinvar Aluminum Smelter (N.S.W.)

- Alumax (Amax of U.S., Mitsui, BHP). $890 million. 260,000 TPY. Start-up in 1984. Site work began in June 1980.

Perth Aluminum Smelter (W.A.)

- Alcoa. $1 billion; first potline of 132,000 TPY to come onstream in 1986, with second potline of 108,000 later. Proposal submitted to W.A. government in August 1980.

Hunter Valley Aluminum Smelter (N.S.W.)

- Nebalco Aluminum. 150,000 TPY. No detailed plans announced.

REFINERIES

- Annual alumina production approximately 7.2 million TPY in four refineries:

1. Gladstone: 2.4 million TPY (Queensland Alumina)
2. Kwinana: 1.4 million TPY (Alcoa)
3. Pinjarra: 2.4 million TPY (Alcoa)
4. Gove: 1.0 million TPY (Nabalco)

Wagerup Alumina Refinery (W.A.)

- Alcoa of Australia. Starting capacity will be 500,000 TPY, to be expanded over 20 years to two million TPY. Estimated cost $500 million. Civil works to begin in mid-1979 for completion in early 1983. Alcoa Pittsburg are the engineering consultants. Feasibility study being completed and suppliers are being contacted for longer lead-time items (Mr. Roger Gray, Central Supply Superintendant, Alcoa, Fremantle, W.A.). Tenders for equipment, issued fall 1979.

Worsley Alumina Refinery (W.A.)

- Alwest Pty Ltd. (Reynolds lead partner, Shell Kobe Steel, BHP, Billiton). Bechtel has completed feasibility study for one million TPY refinery, capital cost of approximately $1.1 billion. Engineering and design to start-up in 1983.

Gladstone Alumina Refinery Expansion (Qld)

- Queensland Alumina will carry out detailed design and engineering studies for expansion of refinery by 350,000 TPY at value of $260 million. Go-ahead decision expected by September 1980.

Mitchell Plateau Alumina Refinery

- Alumax, Billiton, CRA, Marubeni, Sumitomo. $1.3 billion for total development project (bauxite, alumina, forestry, fisheries, processing). Feasibility study for 800,000 TPY refinery completed in July 1980. Additional drilling, bulk sampling and construction of pilot plant still required.

4. URANIUM

Australia is reported to have some 20 per cent of the world's uranium, but uranium mining and exporting has been and continues to be a subject of great controversy in Australia for moral, environmental and economic reasons. In the Northern Territory, where four of the potential mines are located, there is also the problem of aboriginal rights.

From the 1950s to mid-1960s, uranium was exported from the Rum Jungle (N.T.), Radium Hill, Mt. Painter (S.A.) and Mary Kathleen (Qld) mines, but exports were interrupted for 10 years and resumed in 1977.

Gradually the new projects are receiving all the necessary approvals and are starting to develop.

PROJECTS

Yeelirrie Uranium Development (W.A.)

- Western Mining Corp. Ore is low-grade (0.14 per cent U308), but easy open-cut recovery.

  Phase I (1979-1981) - feasibility study consisting of further drilling, and construction and operation of Kalgoorlie research pilot plant to determine appropriate metallurgical process.

  Phase II (1982-1984) - development of open-pit mine, mill and associated facilities to produce 2,500 TPY uranium oxide (yellow coke) and 1,000 TPY vanadium oxide. Total cost, $400 million.

  Government approvals have been received; Phase I is under way, handled by WMC in-house.

Ranger Uranium Project (N.T.)

- Ranger Uranium Mines Pty Ltd. (Peko Wallsend Operations, Electrolytic Zinc Co.). $780 million. 100,000 tonnes of uranium. Development of mine, mill and treatment facilities for 3,000 TPY uranium oxide. Agreement with Northern Land Council over aboriginal rights signed in November 1978, government approval to proceed received in January 1979. Work began in April 1979 for completion early 1982. Wright Engineers in joint venture with Davy Pacific (U.K.) obtained contract for design, construction and commissioning. Wright is responsible for technical design. Kilborn Engineers did consultancy work in tailings disposal. Atco supplied prefab housing. September 1980; detailed design almost completed, construction of ore-treatment plant half completed, stripping of overburden begun.

Nabarek Uranium Project (N.T.)

- Queensland Mines (Kathleen Investments 50 per cent, Noranda). $80 million. Agreement with Northern Land Council signed December 1978. Mining begun in May will be completed by end of 1979. Processing plant to be ready second half of 1980 and shipments of 1,100 TPY of uranium oxide to Japan should begin 1981 and continue for 8-10 years.

Koongarra Uranium Project (N.T.)

- Denison Mines (acquired in Sept. 1980 from Noranda). $90 million. Deposit averages .3 per cent uranium oxide. 1,000 TPY for 12 years followed by a five year rehabilitation. Must include Australian partner for 75 per cent interest before operations begin.

Lake Way Uranium Project (W.A.)

- Westinghouse, Dehli, Vam. $80 million. Small deposit. Environmental and cost-feasibility work is under way and decision to go ahead is expected before end 1979. Westinghouse process will be used and Westinghouse will use uranium for its nuclear plants.

Jabiluka Uranium Project (N.T.)

- Pancontinental Mining (65 per cent), Getty Oil (35 per cent). Production to begin 1983-84 at 3,000 TPY rising to 9,000 TPY, EIS submitted mid-1979.

Ben Lombard Uranium Project (Qld)

- Minatome (French). Proven resources of 2,000 tonnes, located near coast. Project announced April 1979 by Queensland government, production to begin early 1980s.

Plumbago Uranium Project (S.A.)

- Esso Exploration and Production Ltd. Exploration still at early stages but deposit looks promising.

Minindi Creek Uranium Project (W.A.)

- Cliffmines N.L. $10 million. Preliminary exploration completed.

Beverly Uranium Project

- Phelps Dodge (50 per cent), Oilmin (16-2/3 per cent), Transoil (16-2/3 per cent). $130 million. Production to start up in 1982 at three million lbs. U308 per annum.

Honneymoon Uranium Project (S.A.)

- CSR/MIM/Teton (U.S.). Probable reserves of 2,400 tonnes uranium oxide. Plans announced Sept. 1980. 100 TPY pilot plant. Feasibility study to be completed by end 1980.

5. COAL

Black coal is second only to iron ore in value of production and export earnings. Natural reserves of black coal are estimated at not less than 200,000 million tons, brown coal at 66,700 million tons. New South Wales is the leading coal-producing state (1979: 50 million tons). Queensland, with the rapidly developing Bowen Basin, is also a major producer: 27 million tons in 1979, to rise to 33.4 million tons in 1980 and 61 million tons by 1985.

With the current high cost of petroleum, steaming coal has become increasingly important as an alternative source of energy, and the measured Australian reserves of bituminous coal are roughly comparable in energy content to the proven oil reserves in Saudi Arabia.

Australia's coal development in the short and medium-terms is valued at some $5 billion.

STEAMING COAL

Blair Athol Thermal (Bowen Basin, Qld)

- CRA 62 per cent, Atlantic Richfield 38 per cent. 600 million-ton thermal coal deposit - one of best quality steaming coal deposits in world. Open-cut, for export using Hay Point up to five million TPY. Value $400-500 million. Government rejected Japanese application to acquire 19 per cent share.

Drayton Steaming Coal (N.S.W.)

- Theiss 55.5 per cent, Shell 45.5 per cent. Open-cut steaming coal for export. 100 million tons reserves. Feasibility study completed but cannot proceed until markets are secured. Discussions being held with Japanese (Mitsui) and South Koreans for equity in exchange for markets. Value $60 million.

Tarong Steaming Coal (N.S.W.)

- IOL/CRA 100 per cent. Open-cut steaming coal for Tarong Thermal Station to be located on site. Five million TPY. Construction to begin 1981-82, completion 1984-85. Value $64 million.

Mount Arthur South Steaming Coal (N.S.W.)

- Electricity Commission of N.S.W. 50 per cent, Ampol Petroleum 20 per cent, Pioneer Concrete Services 20 per cent, Electrical Power Development Co. (Japan) 10 per cent. $135 million. Reserves of not less than 200 million tons. Production level not yet decided. For export.

Mount Arthur North Steaming Coal (N.S.W.)

- Electricity Commission of N.S.W. 100 per cent; open-pit steaming (65 per cent) and coking (35 per cent) coal, the coking coal for export. Eventually up to 10 million TPY. To commence production of one million TPY in 1984-85.

Mt. Thorley Steaming Coal (N.S.W.)

- R.W. Miller, Pohang Iron & Steel (South Korea) 20 per cent. Open-cut beginning with 400,000 TPY to reach four million TPY. For export. Feasibility study in progress requires two-year lead time. Value $70 million for first phase, reaching $130 million for full production.

Rolleston Steaming Coal (Qld)

- Brigalow Mines; open-cut, low-ash, non-coking coal. Preliminary feasibility study completed but markets required.

Theodore Steaming Coal (Qld)

- Theodore Coal Pty Ltd. (Theiss 50 per cent, Mines Administration Pty, AAR/CSR, IOL/CRA). Open-cut and underground steaming and coking coal. Exploration and evaluation advanced but require markets. Will not proceed for 5-10 years.

Ulan Steaming Coal Mine Expansion

- White Industries, Mitsubishi (40 per cent) to expand production from 250,000 TPY to 4 million TPY. Koreans are seeking 20 per cent interest. Value $45 million.

Warkworth Thermal and Coking Coal (N.S.W.) (Hunter Valley No. 1)

- Coal and Allied Industries Ltd. (CAIL). Open-cut coking and non-coking coal for export. Initial production two million TPY, to go to four million TPY. To begin production in 1980. Value $87 million.

Yarrabee Steaming Coal (Qld)

- Brigalow Mines (CSR). Semi-anthracite steaming coal. 23 million T reserves. Open-cut mining. Feasibility studies carried out. May proceed without long-term contracts.

Birds Rock Steaming Coal (N.S.W.)

- N.S.W. SEC/Tarheigo Coal Mining (Japan). $135 million. Underground. For production of one million TPY in 1984 with output reaching two million TPY in 1985/86. Contract to be signed Sept.-Oct. with Japanese for 1.5 million TPY.

Harmitage Steaming Coal Expansion

- Oakbridge, Sumitomo (15 per cent) - production to be increased from 750,000 TPY to 1.5 million TPY, export to Japan. Feasibility study being done.

Clarence Steaming Coal Mine (N.S.W.)

- Oakbridge (51 per cent), BP (4.9 per cent). Underground; two million TPY with production starting in 1980. Contract signed with ATIC (France) for 2.5 million T over five years starting July 1980. Also contract signed with CEGD (U.K.) for 2.5 million T.

Curragh (Qld)

- Qld. Electricity Commission. 250 million T steaming and coking coal. Steaming to be used by SEC Qld., possibly at Blackwater; $500 million. Approved by Qld. Cabinet. Coking coal to be exported.

Saxonvale Steaming Coal (N.S.W.)

- BHP $380 million. Initial production 1.1 million TPY in 1982 increasing to 4.5 million TPY in 1986. Rail line to be built linking Saxonvale to Mt. Thorley. Ten-year contract for 1.1 million TPY signed with Japanese. Project awaits state and federal approvals.

Broke & Saxonville Thermal

- BHP (October 79). Development could be undertaken quickly once contracts received.

Loy Yang Brown Coal (Vic)

- SEC Vic. Open-cut. 4.7 billion T recoverable coal. To begin 1981. For Loy Yang power station.

COKING COAL

German Creek Coking Coal Project (Bowen Basin, Qld)

- Capricorn Coal Development Pty (Austin & Butta 30 per cent; Intercontinental Fuels, U.K. 25 per cent; Commercial Union, U.K. 25 per cent; U.K. National Coal Board 10 per cent; Ruhrbohle, FGR 10 per cent); 337 million tonnes coking coal reserves, initially open-cut, later underground. Production at three million TPY. Decision to go. Production would begin mid-1982. Value $400 million. Infrastructure work has begun, including construction of dam and trial underground mine. Coal contracted to Japanese and Europeans.

Gregory Coking Coal (Bowen Basin, Qld)

- Dampier Mining (BHP). Open-cut coking coal for export (Japan, Brazil, South Korea) through Gladstone. Production three million TPY with washery, railway, new port facilities at Gladstone. Site works well underway in 1979. Value $300 million. Contract signed with Pohang (Korea) 500,000 TPY beginning 1980.

Hail Creek Coking Coal (Bowen Basin, Qld)

- Hail Creek Associates (AAR/CSR 54 per cent, Esso 25 per cent, IOL/CRA 15 per cent, Japanese six per cent) open cut 740 million tonnes high-quality hard coking coal, 4.5 million TPY for export. Coal preparation plant, new town, major dam, water pipeline, upgrading of railroad and new port facilities at Hay Point. Technical and feasibility studies done, now negotiating with Japanese steel mills. 1983 at earliest. Value $960 million.

Nebo Coking Coal (Bowen Basin, Qld)

- Theiss Dampier Mitsui. Open-cut and underground, coking and steaming coal, massive reserves in six coal fields. Three million TPY for export. Mine site is relatively remote. Considerable infrastructure requirements: dam, railroad line and rolling stock, transmission lines, new port at Hay Point with onshore storage and handling facilities, etc. To begin production in 1983-84. Value $500 million. Discussing 13-year contract with Japanese steel mills.

Norwich Park Coking (Bowen Basin, Qld)

- Central Queensland Coal Associates (COCA) - (Utah, 80 per cent, Australian Mutual Provident Society eight per cent, Mitsubishi 12 per cent), open-cut coking coal for export. 4.3 million TPY. To be completed in early 1980s. Value $250 million. Eight-year contract, 500,000 TPY to 1.3 million T beginning 1980.

Oaky Creek Coking Coal (Bowen Basin, Qld)

- Houston Oil and Minerals (50 per cent), MIM (20 per cent), Spanish Italians, Hoogovens Delfstoffen (10 per cent). Open-cut and underground high-grade metallurgical coal. Production, three million TPY. Currently investing rapidly in infrastructure to comply with Qld. government mining lease conditions. Completion for 1981/82. Value $260 million. Agreements reached with Italians and Spaniards for coal markets, but FIRB turned down proposal as Australian equity only 20 per cent (Oct. 80).

West Mouri Coking Coal (Qld)

- Brigalow Mines (Theiss 50 per cent, MIM 50 per cent), large deposit high-grade coking coal but located at considerable depth. Long-term prospect.

Boggabri Coal Project (N.S.W.)

- AMAX 50 per cent, BHP 50 per cent. Coking and non-coking coal. Feasibility study completed in 1979 and development could begin in early 1980s. Value $100 million.

Collinsville/Newlands Coal Project (Qld)

- Collinsville Coal Co. Pty (100 per cent MIM). Coking (Collinsville) and steaming (Newlands) coal, open-cut and underground. Stage 1 (completed 1979), one million TPY will be increased to 1.5 million TPY coking and 2.5 million TPY steaming coal. Expansion scheduled to be determined and will require new port (Abbotts Point) that is currently being discussed. Contract signed with Japanese for 700,000 TPY starting 1980 to one million TPY starting 1983.

Bargo Coking Coal Project (N.S.W.)

- BHP-CAIL-Peko Wallsend, equal partners. Coking coal for export. Underground; 1.5 million TPY. Sinking shaft. Total lead-time for construction is five years. Cost $75 million. Exploratory shaft, 1980.

COAL LIQUEFACTION

Qld-Victoria-NSW State governments

- $5 million study being prepared by West Germans (and half financed by the FRG Government) to determine feasibility of establishing commercial coal liquefaction plant in each of three states. To be completed mid-1981.

Kobe Steel, Mitsubishi Chemical, Nissho-Iwai

- to construct pilot plant with daily capacity of 50 tons Victoria brown coal.

Millmerran Liquefaction Project (Qld)

- AMAX Mitsui Millmerran. $4 billion. Non-coking coal with liquefaction potential. Mine, liquefaction plant and associated facilities for coal consumption of five million TPY. Will use SASOL technology to produce 60,000 bbls/year transportation fuel. Feasibility study being prepared by Fluor, to be completed mid-1981.

6. COPPER

Copper was the first mineral mined in Australia (1841) and is still of considerable importance. The major mines are the Mount Isa Mine in Queensland, which, in 1978, treated about five million tons of copper; and the Mt. Lyell Mine in Tasmania. Other mines are located in Queensland, New South Wales and South Australia.

PROJECTS

Roxby Downs Copper/Uranium Project (S.A.)

- Western Mining Corp-BHP. Exceptionally large copper-uranium body (with some gold) centered at Oympic Dam (value of minerals estimated at $65 billion). A substantive three-year evaluation program is planned for entire area starting at end of 1979 ($50 million). Stage II would be development of mine, smelter, refinery, leaching plant, etc., worth $1.3 to $2 billion for start-up in 1980. It will be a high-capacity underground mine and might require up to 30 per cent offshore equipment. Feasibility study being prepared by BHP. There is substantial political pressure to proceed.

Benambra Copper-Lead-Zinc Project (Vic)

- WMC 51 per cent, BHP 49 per cent. Project still at exploration stage, but the grade of ore appears to be unusually high and it is expected that it could be developed rapidly, i.e. production to begin within five years. Ore is close to surface on side of hill and it might be a shallow underground mine. Project is environmentally sensitive. Drilling continuing in 1980.

Golden Grove Copper Project (W.A.)

- EZ, AMAX, Esso. $80 million. Reserves of 13.5 million T of 3.5 per cent copper. Still at exploration stage. May spend up to $7 million to better define project. Construction to begin 1981 for production in 1983. Would include concentrator.

Tenant Creek Copper Smelter Expansion (N.T.)

- Peko Wallsend. $50 million for modernization of smelter to 25,000 TPY and development of Gecko Mine. Contract signed with Sumitomo for $27 million investment in smelter, 15,000 TPY blister copper for eight years.

Lady Annie Copper Mine (Qld)

- MIM. Propsect near Mt. Isa. MIM looking at prospect. $130 million.

Mount Chalmers Copper Mine (Qld)

- Peko Wallsend. Subject to feasibility study.

Koongie Park Copper Project (W.A.) (Gordon Downs)

- ICI, Kennecott, Newmont. Drilling stage. For production in mid-1980s.

Teutonic Bore Copper-Lead-Zinc Silver (W.A.)

- MIM, Selection of Trust, Selcast. $50 million. Initially, open pit, later underground. Stripping of overburden begun April 1980. Equipment now being purchased. Production to begin mid-1981 at rate of 300,000 TPY.

Diane Copper Project (Qld)

- White Industries. High-grade copper body. 38,000 tonnes reserves averaging 25.2 per cent copper. Indicated reserves 70,000 tonnes 23 per cent copper.

7. LEAD/ZINC/SILVER

Australia ranks third in the world as a producer of lead, and fourth as a producer of zinc. The three major mines are the Broken Hill Mine in N.S.W., the Mount Isa Mine in Queensland, and the Read-Rosebery Mine in Tasmania.

PROJECTS

Que River (McIntosh) Lead Zinc Copper Mine (Tas)

- Cominco/Aberfoyle. $20 million. Underground high-grade, low tonnage, 150,000-200,000 TPY. Exploration had been suspended but go-ahead decision announced Ausgust 1979. Production is to begin early 1981.

McArthur River Zinc Lead Mine (N.T.)

- MIM. $1.3 billion. Pilot plant operating. Substantive geological and metallurgical investigations completed conventional methods of recovery are not too successful and project currently in mothballs.

Sorba Hills Zinc/Lead Mine (W.A.)

- Aquitaine, MIM, Serem. Sinking shaft, defining project.

Eleura Silver-Lead-Zinc Mine (N.S.W.)

- EZ Industries. $195 million. Underground mine to produce 1.1 million TPY. To come onstream in 1982. Design and construct contract awarded to Fluor. July 80. Construction contract awarded. Tenders being prepared for equipment.

Salt Creek (Mons Cupri) Lead-Zinc-Copper-Silver Projects (W.A.)

- Texas-Gulf, Whim Creek, Agnew-Clough. Appears to be large, low-grade deposit. Drilling and testing stage.

Mt. Isa Mine Expansion

- MIM. $65 million over next three years to expand production of silver, lead and zinc by 20 per cent to 240,000 TPY zinc, 540,000 TPY silver and 180,000 TPY lead.

Hilton Silver-Lead-Zinc Mine

- MIM. $20 million on preliminary development of deep underground mine 20 km (12 miles) from Mt. Isa. Open pit. For production of 500 TPY in 1984-85.

Lady Loretta Silver-Lead Mine

- MIM. $100 million. Feasibility study being carried out. Good possibility it may go ahead in next few years. Concentrator would be on site.

Cockle Creek Zinc Plant Expansion (N.S.W.)

- Sulphide Corp. $150 million. Doubling production of zinc to 145,000 TPY and sulphuric acid to 280,000 TPY using electrolytic process. Includes roaster, acid plant and cell house for electrolysis. For commissioning 1984. Feasibility study in final stages.

8. NICKEL

Australia is the fourth largest nickel producer in the world and, with the exception of the small Greenvale mine in Queensland, its nickel comes from the Kalgoorlie region of Western Australia. Western Mining Corporation is the major company with two large mines: Kambalda (1.5 million TPY), and Windarra (1 million TPY), with concentrators of the same capacity in both areas, a 450,000-TPY smelter at Kalgoorlie and a 30,000-TPY refinery (using the Sherritt-Gordon process) at Kevinana. There are smaller mines at Nepean (Metals Exploration), Scotia and Carr Boyd Rocks (Greater Boulder-North Kalgoorlie), and Widgiemooltha (Inco-BHP). The Anaconda-CRA mine at Redross was shut down in 1978 and, also in 1978, the first phase 30,000 TPY Agnew mine came on-stream.

PROJECTS

Mount Keith Nickel Mine (W.A.)

- Australian Consolidated Minerals, AMAX, Metals Exploration. Massive low-grade nickel sulphide deposit. Drilling and geophysical work completed. Awaiting rise in world prices.

Forrestania Nickel Mine (W.A.)

- AMAX, Amoco, Endeavour. $40 million. Eight million tonnes reserves of more than two per cent nickel. Awaiting higher prices, markets (1983?). Would include construction of concentrator.

Agnew Nickel Mine, Phase II

- Agnew Mining (MIM, Western Selcast). $66 million. Expansion of mine to be completed 1983. Some equipment tenders already let. Decline shaft to 1,000 metres. Considering flash smelting for nickel concentrates.

Sally Malay Nickel-Copper Mine (W.A.)

- Australian Anglo-American. Exploration stage. Promising deposits of nickel and copper, and some silver.

Widgeimooltha Nickel Mine (W.A.)

- Metals Exploration, Outokumpu (Finland). Just announced interest in developing mine.

9. **IRON**

A major mineral in Australia, iron ore exports account for some 25 per cent of mineral export income.

Approximately 90 per cent of the iron resources are located in Western Australia in the Pilbara area. In order of importance, the major mines are as follows:

Mt. Newman-Whaleback. Mt. Newman Mining (BHP)
Mt. Tom Price. Hamersley Iron (CRA)
Robe River (Panawonica). Cliffs (WA) Mining
Paraburdoo. Hamersley Iron
Mt. Goldsworthy. Goldsworthy Mining

In addition, there are mines at Cockatoo Island, Koolan Island and Koolyanobbing (all Dampier) in Western Australia; Middleback Range in South Australia, and Savage River in Tasmania. The mines are all open-cut. BHP is the sole Australian steel producer.

The world market for iron ore has been depressed for some years, and until the steel industries of Japan (55 per cent of iron ore exports) and Western Europe improve, production will remain static. There will be sufficient demand for only one of the planned projects to proceed in the 1980s and the companies are each making great efforts to ensure that it is theirs. Area C is considered the front runner.

With the continuous labor problems halting production and exports of iron ore with increasing frequency, traditional customers are beginning to seek more secure sources of ore.

PROJECTS

Area C Iron Ore Mine

- Goldsworthy (Consolidated Gold Fields, MIM, Utah). $600 million. To replace Goldsworthy, which will shut down in 1983. This project appears to have some priority (according to statements by W.A. Minister of Industrial Development), and the Japanese are reconsidering their involvement. ten million TPY by 1983.

Deepdale Iron Ore Project (W.A.)

- Dampier Mining (BHP), longer-range prospects for development. Mid-1980s.

Marandoo Iron Ore (W.A.)

- Texas-Gulf. Would be a major project ($800 million), but first needs markets. Not before mid-1980s.

Robe River Iron Ore Project

- Cleveland-Cliffs, Mitsui, Robe River, CRA. To open up West Angelas reserves when current Robe River deposits are depleted.

Weld Range Iron Ore Project

- Northern Mining. $425 million. Mine and heavy media plant. Seeking markets offering equity.

Yandicogina Creek Iron Ore Project

- CSR. Huge iron ore deposit. Initial feasibility study being undertaken.

Geelong Steel Mill (Vic)

- BHP. $35 million. 200,000 TPY electric arc smelting facility to produce steel billet for existing rod mill.

Jumbo Steel Mill (W.A.)

- Hammersley. To process iron from Pilbara area for shipment to Japan. Will possibly use gas-fired direct reduction. Hammersley visited Japan July 1980 to discuss re equity and markets.

Mini Steel Mill (W.A.)

- Bond Corp. Inquiring for potential suppliers May 1980.

Mt. Newman Heavy Media Separation Plant

- Dampier-BHP (30 per cent), Amax Iron Ore Corp. (25 per cent), Sellrust (five per cent), Mitsui (10 per cent). $100 million. Being completed.

10. OTHER METALS AND MINERALS

PROJECTS

Tasmania Tin Development

- CRA. Seven-to-eight million T, open pit. Preliminary drilling. Detailed evaluation and metal-testing to begin mid-1980. Will require specialized concentrating plant.

Ashton Diamond Drilling (W.A.)

- CRA (wish Ashton, AO, Northern Mining, Tanganyika). Two deposits: Ellendale, in terms of quality best in world; Argyle, best in world in terms of weight. Open pit. Studies and design being done by Minenco (engineering arm of CRA). $150-250 million.

Finniston Gold Mine (W.A.)

- Kalgoorlie Mining Assoc. $30-40 million. Reopening for production of 400,000 TPY.

Kidston Gold Mine (Qld)

- Placer Development (100 per cent). Open pit. Feasibility study being carried out.

Drake Gold/Silver Mine (N.S.W.)

- Aberfoyle (60 per cent), Mt. Carrington. Small high-grade deposits and large low-grade deposit. Still drilling to determine extent of deposit. May construct $35 million plant to process lower grade ores or smaller $3-5 million plant for high grade.

Mt. Pleasant Molybdenum Mine (N.S.W.)

- CSR. At early stage of development but results are encouraging.

Titanium-Tin Deposit (W.A.)

- Greenbushes Tin NL. Deposit with combined value of $2.7 billion. Cost of development $82 million. 650,000 lbs/year tantalite. For production 1981. Additional drilling being undertaken.

Titanium Plant (N.S.W.)

- Western Mining, General Dynamics, United Technologies. $135 million. 10,000 TPY. Project Announced Sept. 80.

Geelong Silicon Metal Plant (Vic)

- Kaiser Aluminium Australia. $68 million.

11. FORESTRY

The forestry industry in the past has been principally based on the hardwoods (eucalypt) of the east and southeast coasts, Tasmania and the southwest corner of Western Australia. Those resources are used for sawn

timber, wood chips for exports, and for the production of paper, fibreboards and poles. Little new development is expected, however, and in fact, by 1990 hardwood production is expected to decrease.

It is the development of softwoods that has given great impetus to the forest industry in Australia. Softwoods (not native to Australia) were first planted 70 years ago and the plantations of radiata pine now exceed 700,000 hectares and are increasing by 25,000 hectares each year. In addition to projects currently underway, it is estimated that some $1.9 billion will be invested in exploration of pine resources in the next decade.

The three major pulp and paper manufacturers are APPM (Association of Pulp and Paper Makers), ANM (Australian Newsprint Mills), and APM (Australian Paper Manufacturers). APM is Australia's largest producer of packaging paper and paperboard.

ITC sponsored participation in FIME 80, a forestry equipment exhibition in Australia in April 1980 and co-hosted, with the B.C. government, an incoming forestry mission in September 1980.

PROJECTS

Mt. Gambier Woodchip Plant (S.A.)

- Punular Paper Mills of India for export to buy. To be completed in 1984. First stage with pulpmill to follow.

Eden Woodchip Mill (N.S.W.)

- Harris-Daishowa Ltd. $10 million. Duplication of current operation. H.A. Simons carrying out front-end engineering studies.

Myrtleford Plywood Mill (Vic)

- Bowater Scott Corp. $7 million. To be added to the current sawmill-pulpmill complex. Will use local softwood resources.

Wagga Wagga Fibreboard Plant (N.S.W.)

- A.V. Wehl Industries-Canterbury Timber Products of N.Z. $46 million. Medium-density fibreboard plant with output of 60,000 TPY.

Tarpeena (Mt. Gambier) Stud Mill (S.A.)

- SAPFOR. $3 million. To double current capacity by 25,000 cubic metres (882,861 cubic feet) per year. Feasibility study not yet prepared. Current mill has mostly Swedish SCANDEX equipment.

Bathurst (Oberon) Pulpmill (N.S.W.)

- Bathpine (Standard Sawmilling-MK Hunt NZ). $66 million. 300 TPD for export. Sprott (NZ) is consultant. Procurement began in 1979.

Wesley Vale Pulpmill (Tas)

- APPM. $550 million. 200,000 TPY chemical pulp from mixture of pine and eucalypt. H.A. Simons prepared feasibility study in mid-70s. Pulpmill delayed pending completion of paper mill.

Beerburrum (Petrie) Pulpmill (Qld)

- APM-MIM-SGIO. $260 million. 200,000 TPY kraft pulp from softwood. For export. Negotiating with South Koreans for equity and markets. Could go on-stream in 1985. Jakko Poyry of Finland doing feasibility study.

Maryvale Pulpmill (Vic)

- APM. To increase output of softwood kraft pulp by 80,000 TPY and of sulphite pulp by 60,000 TPY (over 10 years). Feasibility study being carried out by H.A. Simons.

Eden Pulpmill (N.S.W.)

- Harris-Daishowa Ltd. $160 million. World scale 200,000 TPY. TMP using softwood from nearby government-owned plantations. Prefeasibility study stage only.

Mt. Gambier Pulpmill (S.A.)

- Punular Paper Mills of India. $96 million. 350,000 TPY TMP mill using pine. For export to India. Feasibility study not done.

Port Huon Pulpmill (Tas)

- APM. 80,000 TPY sulphite pulp from hardwood. Feasibility study not yet contracted.

Western Australia Pulpmill

- W.A. Chip and Pulp Co. Pty Ltd. Company has signed agreement with W.A. government.

Wesley Vale Papermill (Tas)

- APPM. $275 million. To incorporate lightweight coated papermaking machine. Feasibility study prepared by Jakko Poyry of Finland. Board decision expected soon.

Albury-Wodonga Newsprint Plant (N.S.W.)

- ANM. $240 million. 180,000 TPY newsprint. H.A. Simons responsible for feasibility study, design and supervision. To come on-stream in 1981. Plant equipment purchased from Finland.

Millicent Paperboard Plant (S.A.)

- Cellulose Ltd. (APM). Upgrading of plant.

12. INFRASTRUCTURE

ELECTRIC POWER

Approximately 80 per cent of Australia's electricity is generated by thermal stations, mainly coal-fed. Hydroelectric power is found in Tasmania, the Snowy Mountains, and the Ord River in Western Australia.

With the huge energy demands of the aluminum smelters that will be constructed over the next few years, thermal plants will be a priority.

PROJECTS

Ord River Hydroelectric Project (W.A.)

- Western Australia State Electricity Commission (SECWA) $120 million. 60 MGW. Feasibility and technical studies completed by Snowy Mountain Engineering as were financing and technical studies. Financing package being worked out. Tendering expected to take place within next 12 months. Transmission line to Darwin (N.T.) will be responsibility of Northern Territory.

Pieman River Hydroelectric Project (Tas)

- Tasmania Hydroelectric Commission. 225 MW (2 x 112). Specs to be issued in August 1980, commissioning expected in 1986. Tender for generating sets close Dec. 1980.

Gordon River Hydro Scheme (Tas)

- Tasmania Hydroelectric Commission. Stage I, 300-350 MGW, completed. Stage II, Lower Gordon, 300-350 MGW; in planning stage for commissioning in 1990.

Pilbara Power Pool (W.A.)

- SECWA. $140 million. To interconnect steam-based power systems currently operated independently by iron ore companies in Pilbara area and connect to Port Hedland. Preliminary negotiating stage with iron ore companies.

Loy Yang Thermal Power Station (Vic)

- Victoria SEC. Total value $2.5 billion with two brown-coal mines, two thermal stations. Stage I is being completed and Stage II for second 4,000 MGW plant will go to tender in 1981.

New South Wales Thermal Plants

- The SEC of N.S.W. has tendered all equipment for thermal development to 1987 but plan to commission two standardized 660 MGW units annually from 1988 onward, the first of which would go to tender in 1982.

Nuclear Plant (W.A.)

- SECWA - $1 billion - 600-800 MGW. $500,000 being spent over next two years on detailed engineering and geological studies on two possible sites. Construction could start in 1985 for completion in 1995.

Perth/Pilbara Transmission Line (W.A.)

- SECWA/CRA - EHV line to transmit cheaper coal-fired electricity from Perth area to mine area of Pilbara.

PORTS

Australia has 20,000 km (12,428 miles) of coastline and some 70 ports of commercial significance. The ports currently handling the largest volumes are Port Hedland and Dampier (iron ore from Western Australia), Sydney, Newcastle (coal), Fremantle and Kwinana (Western Australia). With the huge increases expected in exports of coal, aluminium, LNG, uranium, etc., the development of the Australian ports, particularly in Western Australia, Queensland and Newcastle, is being greatly accelerated.

WESTERN AUSTRALIA

Dampier

- Pilbara Ports Services (private). Currently an iron ore port only (10 years old), but expansions take place every two years. Must be developed to handle LNG as part of North West Shelf project, and a new government authority is being established to include PPS and Woodside.

Port Hedland

- Port Hedland Port Authority - established port with Customs facilities etc. and will receive much of the overseas material for the North West Shelf project. Will also be used as a service base for the oil rigs.

Exmouth Gulf

- Would probably be developed as service port for oil rigs if oil is found. Currently a minor fishing, prawning, defence surveillance port. Contact presently would be Department of Industrial Development.

Geraldton

- Being extended to service oil exploration rigs by construction of new berths, dredging.

Bunburry

- Alcoa is adding a berth.

Fremantle

- Inner harbour for containers. Each company has its own facilities and is generally expanding and upgrading.

Esperance

- Being expanded to handle buckwheat.

New South Wales

- Controlled by Maritime Services Board.

Port Kembla

- Coal loader - $155 million - almost completed.

Newcastle

- Requires a third coal loader by 1985 at latest to double capacity, with addition of 2 x 3,500 T/h - $100 million - current capacity 25 million TPY.

Sydney

- Currently being upgraded and almost all tenders have been let.

Williamstown

- Not likely to go forward as it would be easier and cheaper to expand capacities of current ports.

Botany Bay

- There is sufficient land for expansion as container terminal and tank farm. The planned coal loader was stopped by state Labour government but would probably proceed if government changes.

Clarence River

- Gov'ts. have been talking of major port development but hinterland could not support it. Dredging alone would cost $20 million. Maritime Services Board favours greater use of barges along coast, but unions oppose it.

VICTORIA

Upgrading Grain Export Facilities

- Improved storage and shipping facilities at Portland and upgraded rail truck handling equipment at Geelong - $9 million.

QUEENSLAND (Queensland Maritime Service)

Hay Point

- Doubling coal loading capacity with addition of 2 x 150,000 T berths. $195 million. Engineers - McDonald, Wagner & Priddle. Tenders for equipment will be out in 1981. Additional expansion will take place at or near Hay Point to handle great increase in exports of coal from Bowen Basin.

Brisbane

- Expansion. Rendal & Partners are consulting engineers.

Gladstone Area Port

- Port will be built near Gladstone to handle shale oil exports from Rundle.

Abbot Point

- To handle 120,000 DWT - coal exports from Collinsville/Newlands - preliminary planning stage.

Aurukum Port

- Cape York peninsula. Deepwater port to handle export of resources particularly bauxite. Required before 1990. At conceptual stage only.

RAIL

The state and federal governments operate some 40,500 km (25,110 miles) of rail line in Australia with private companies (mining, and sugar-cane mainly) operating several thousand additional kilometers of line. Unfortunately, these lines are a mixture of three different rail gauges and only recently has an effort been made to standardize the system.

There is at present a strong trend towards electrification of the railways to take advantage of this relatively cheaper source of power.

PROJECTS

Sydney-Melbourne Rail Electrification

- $400 million. Early planning stage.

Blackwater-Brisbane Rail Electrification

- $355 million. Work to commence 1980 for completion in 1985. Financed by Queensland government. To transport coal.

Ulan-Newcastle Rail Link

- White Industries. 279 km (173 miles) - to transport coal. Plan to begin soon.

Electrification of Gosford-Newcastle Line

- Public Transport of N.S.W. - $165 million - for completion in 1983. Part of on going upgrading program.

Darwin-Alice Springs Rail Link (N.T.)

- Ministry of Transport - $550 million - State/Commonwealth proposal being assessed by Ministry of Transport.

SELECTED CANADIAN INVESTMENT IN AUSTRALIA

Canadian Company	Australian Company	Products	Australian Assets	Percent Canadian Equity
Albany Felt Company of Canada Limited	Albany Felt Pty Limited	Felts, industrial filtration fabrics and articles, needled textile products	$5,817,314	100
Alcan Aluminum Limited	Alcan Australia Ltd.	Aluminum and aluminum alloys products	$74,000,000	70
Ashner Food Products Limited	Ashner Food Products Pty Limited	Fruit drink crystals, flavor bases, food stabilizers	$57,753	100
Bayer Foreign Investments Ltd.	Bayer Australia Limited	Industrial chemicals, agricultural chemicals, pharmaceutical and veterinary preparations	$19,000,000	100
Burndy Canada Ltd.	Burndy Canada Ltd.	Electrical connectors, cable supporting systems	$350,000	Branch
Canada Packers Ltd.	Corio Meat Packing (1965) Pty Ltd.	Beef, mutton, lamb and pork - fresh, frozen, chilled canned meats, ham and bacon, edible and inedible tallow, meat meal, hides, skins, sheepskin rugs, casing	$14,508,015	65
Canadian Hardinge Machine Tools Ltd.	Hardinge Australia Pty Ltd.	Collets, feed fingers, machine tools and attachments	$140,000	51
Canron Ltd.	Tamper (Australia) Pty Ltd.	Railway maintenance machinery	$955,000	100
Capital Wire Cloth Ltd.	Capital Wires Pty Ltd.	Stainless steel, nickel alloy and bronze and brass wires	$834,000	100
Castor Investments Limited	F.P.E. Australia Pty Limited	Electrical switchgear, motor control gear, circuit breakers, bus ducts, distribution transformers, fuse switches, earth leakage equipment	$3,100,000	100
Chesebrough-Pond's International Ltd.	Chesebrough-Pond's International Ltd.	Cosmetics and toiletries, perfume	n/a	100

Canadian Company	Australian Company	Products	Australian Assets	Percent Canadian Equity
Consumer Glass Co. Ltd.	Glass Container Limited	Glass containers	$20,487,673	38.88
The Cooper Tool Group Limited	The Cooper Tool Group Limited	Retractable tape rules, electric soldering irons	$77,168	Branch
Custom Card of Cda Ltd.	Custom Card (N.S.W.) Pty Ltd.	Greeting cards	$279,751	75
Emco Ltd.	Wheaton Australia Pty Ltd.	Pipes, valves, pumps	$779,432	100
Extrusion Machine Co. Limited	Extrusion Machine Company (Australia) Pty Ltd.	Extrusion die manufacturers	$163,349	50
Ford Motor Company of Canada Limited	Ford Motor Company of Australia Limited	Passenger and commercial motor vehicles, agricultural and industrial tractors and implements, construction equipment, industrial engines, motor vehicle parts and accessories, tractor and implement parts, accessories	$280,356,570	100
I.T.E. Industries Limited	I.T.E. Industries Australia Pty Ltd.	Electric power equipment for: power transmission distribution, naval ships, industrial control	$2,000,000	100
Jamesway Co. Limited	Harrison Jamesway Pty Limited	Poultry cages, incubators, automatic feeding systems, dairy feeders, lot feeding systems, re-inforcing mesh	$1,563,254	50
Lily Cups Limited	Hygienic-Lily Limited	Paper cups, containers and plates, plastic cups and containers	$12,500,000	50
Massey-Ferguson Limited	Massey-Ferguson Holdings (Australia) Limited	Agricultural and light industrial tractors, other agricultural machinery, construction machinery, service parts and diesel engines	$74,158,805	100

Canadian Company	Australian Company	Products	Australian Assets	Percent Canadian Equity
Moore Corporation Limited	Lamson Industries Australia Limited	Printed business forms, docket books, carbon sets, continuous-computer stationery and forms handling equipment carbon papers and inked ribbons, document handling conveyors, vacuum tubes, lifts, waste compaction and dust extraction systems	$22,100,000	59.3
Morgan Adhesives of Canada	Morgan Adhesives of Canada Ltd.	Carpet seaming tape, protective car trim, pressure sensitive shipping envelopes	$104,000	Branch
Muscamo Canada Limited	Bata Shoe Company of Australia Pty Ltd.	Footwear	$4,063,438	95
National Trust Company Ltd.	Electric Lamp Manufacturers (Aust.) Pty Ltd.	Electric incandescent and fluorescent lamps	$14,960,687	44
National Trust Company Ltd.	Philips Industries Holdings Limited	Television receivers, radios, tape recorders, record players, washing machines, clothes dryers, refrigerators, shavers, bicycles, hearing aids, telecommunications equipment, computers and business systems, industrial and educational vision and sound systems, pharmaceutical and biochemical products and vaccines, formed metal products, electronic components and materials, lighting products, navigational and meteorological equipment, scientific and industrial equipment and medical systems and equipment	$139,481,000	78
Placer Development Limited	Fox Manufacturing Co.	Conveyors, underground mining equipment, drilling equipment, transport vehicles for mining, towing tractors	$10,817,283	100
Placer Development Limited	Placer Holdings Pty Limited	Conveyor, mining and drilling equipment, plywood veneers, lubricants	$20,721,758	100

Canadian Company	Australian Company	Products	Australian Assets	Percent Canadian Equity
Rio Algom Ltd.	Atlas Steels (Aust.) Pty Ltd.	Stainless steels, bar and wire, high-speed steels	$5,320,590	100
Sala Machine Works Ltd.	Sala Australia Pty Limited	Pumps, disc filters, balline drums, classifiers, trommel screens, thickeners, speed reducers, complete processing plants, sewerage treatment equipment	$987,842	83
Sandoz Holdings Ltd.	Sandoz Australia Holdings Pty Ltd.	Pharmaceuticals, dyes and chemicals	$11,475,000	100
Shaw Pipe Industries Ltd.	Shaw Pipe Protection (Australia) Pty Ltd	Pipe protection and heat shrink sleeves	$2,903,345	100
Siemens Beteiligungen Ltd.	Medical Applications Pty Ltd.	X-ray and electromedical systems	$3,547,378	45
J.C. Stephenson	Sternson Aust. Pty Ltd.	Concrete mixtures	$145,006	10
G.F. Stern and Sons Ltd.				30
Thomson Equitable Corporation Ltd.	Thomson Nelson (Australia) Limited	Publishers	$1,896,035	100
Woodsreef Minerals Limited	Woodsreef Mines Ltd.	Asbestos fibre	$23,352,209	58

Date and Frequency	Title	Date and Frequency	Title	Date and Frequency	Title
1982					
January Biennial	Holiday and Travel Show	27 February - 4 March	West Australian Home Show	20-24 March Annual	March Melbourne Giftware Fair
6-9 February Annual	Intertex	February or March Triennial	The Moving Image Trade Show	23-28 March	Emergency Vehicles, Equipment, Safety and Security (ECESS '82)
20-24 February Annual	International Gift Trade Fair	March Annual	Canberra Business Efficiency Exhibition	March Annual	International Toy and Sporting Goods Trade Fair
20-24 February Annual	International Watch, Clock and Jewellery Fair	3-7 March Annual	Caravan and Camping Show	March Annual	Queensland Furniture Fair
20-24 February Annual	International China, Glassware and Tableware Trade Fair	4-14 March Annual	International Motor Show	March Annual	Club, Hotel Trade Fair
22-26 February Annual	International Matpak '82	6-9 March Annual	National Men's Wear Fair	27 March-4 April Annual	Adelaide International Motor Show
23-24 February Annual	Queensland State Automotive Parts, Accessories and Equipment Trade Show	20-22 March Annual	National Children's Wear Fair	March/April Annual	Telegraph Home and Building Exhibition

* Detailed information may be obtained from the Pacific, Asian, African & Middle Eastern Affairs Branch, Department of Industry, Trade and Commerce

Date and Frequency	Title	Date and Frequency	Title	Date and Frequency	Title
2-13 April Annual	Royal Easter Show	May Annual	Queensland Caravan and Camping Show	June Annual	Caravan and Camping Show
18-21 April Biennial	Educare '82	May Annual	The Herald Sailboat Show	5-9 July Every 4 years	AUSPLAS '82
8-11 May Bi-annual	National Womens Wear Fashion Fair	May Annual	Daily Mirror Home Improvement and Outdoor Living Exhibition	20-22 July Annual	National Automotive Parts, Accessories and Equipment Trade Show
11-16 May Annual	Australian Furniture and Home Furnishings Exhibition	May Every 18 months	Australian Technology Resources Exchange Fair (TRX)	July Annual	National Boat and Camping Show Melbourne
14-23 May Annual	Adelaide International Expo	11-14 June Annual	Pool and Spa Show	July Annual	Adelaide Boat Show
Mid May Annual	Hardware Promenade	16-21 June Biennial	Swimming Pool Association Convention '82 (Incorporating Trade Show)	July Annual	Consumer Electronics Show (Incorporating Interiect)
26 May-7 June Annual	Computers, Communications Electronics and Educational Technology (CETIA) Exhibition and Convention	20-24 June Biennial	International Catering Trade Fair	July Biennial	Building, Environment and Construction Engineering Exhibition and Conference
29 May-6 June Annual	Perth International Expo	June Annual	Business '82	July Biennial	NSW Truck Show

Date and Frequency	Title	Date and Frequency	Title	Date and Frequency	Title
5-14 August Annual	Royal National Agricultural and Industrial Exhibition	27 August-1 September Annual	Mutual Acceptance Leisure Pleasure Show	September Annual	Sydney Spring Gift Fair
10-12 August Annual	DATA '82	3-11 September Annual	Royal Adelaide Show	September Annual	Sydney Watch, Clock and Jewellery Spring Fair
14-18 August Annual	Melbourne Giftware Exhibition	7-9 September Annual	DATA '82	2-5 October Bi-annual	National Women's Wear Fashion Fair
20-29 August Annual	29th Sydney International Motor Show	13-18 September Annual	Australia's International Engineering Exhibition (AIEE)	Mid-October Annual	Recreation and Outdoor Living Show
28-31 August Annual	Brisbane Giftware Exhibition	15-25 September Annual	Royal Melbourne Show	28-31 October Biennial	Adelaide Truck and Bus Show
August Annual	The Business to Business Exhibition	Mid-September Annual	Greata Food Industry Convention	October Annual	APAS '82 (Australian Pet and Aquarium Show)
August Annual	Sydney International Boat Show	29 September-4 October Annual	Telegraph Home Show	October Annual	Royal Hobart Show
August Annual	The Sun News-Pictorial International Home Show	September Biennial or Triennial	Business Efficiency Fair (BEF)	October Annual	Expovin International Wine and Food Exhibitions
August Biennial	Library and Information Trade Fair	September Annual	Telegraph Boat Show	October Annual	Hardware Trade Parade '82

Date and Frequency	Title	Date and Frequency	Title	Date and Frequency	Title
		1983			
October Annual	Canberra Home and Leisure Show	7-12 February Every 4 years	Australia's International Mining and Exploration Exhibition (AIMEX)	2-6 March	Caravan and Camping Show
2-5 November Biennial	Automation, Control and Instrumentation Technology (ACIT) Exhibition and Convention	February Annual	International Gift Trade Fair	March Annual	International Motor Show
15-18 November Annual	Australian National Field Days	February Annual	Queensland State Automotive Parts, Accessories and Equipment Trade Show	March Annual	International Toy and Sporting Goods Trade Fair
November Annual	Newcastle and Hunter Valley Home Improvement Exhibition	February Annual	Intertex	March Annual	Club, Hotel Trade Fair
November Annual	Expovin International Wine and Food Exhibition	February Annual	International Watch, Clock and Jewellery Fair	March Annual	Queensland Furniture Fair
		February Annual	International China, Glassware and Tableware Trade Fair	March Annual	National Men's Wear Fair
		26 February- 3 March Annual	West Australian Home Show	March Annual	National Children's Wear Fair

Date and Frequency	Title	Date and Frequency	Title	Date and Frequency	Title
March Annual	March Melbourne Giftware Fair	13-22 May Annual	Adelaide International Expo	28 May-5 June Annual	Perth International Expo
March Annual	Canberra Business Efficiency Exhibition	Mid May Annual	Hardware Promenade	June Annual	Business '83
25 March-5 April Annual	Royal Easter Show	May Annual	Daily Mirror Home Improvement and Outdoor Living Exhibition	June Annual	Caravan and Camping Show
March/April Annual	Telegraph Home and Building Exhibition	May Annual	The Herald Sailboat Show	June Annual	Pool and Spa Show
9-17 April Annual	Adelaide International Motor Show	May Annual	Queensland Caravan and Camping Show	June Biennial	Energy Alternatives Exhibition
April Biennial	Queensland Truck Show	May Bi-annual	National Women's Wear Fashion Fair	27 June-1 July Annual	International Matpak '83
3-8 May Annual	Australian Furniture and Home Furnishings Exhibition	May Biennial	Melbourne Truck Show	July Annual	National Boat and Camping Show Melbourne
		25 May-3 June Annual	Computers, Communications Electronics and Educational Technology (CETIA) Exhibition and Convention	July Annual	Adelaide Boat Show

Date and Frequency	Title	Date and Frequency	Title	Date and Frequency	Title
July Annual	Consumer Electronics Show (Incorporating Interlect)	August Annual	Melbourne Giftware Exhibition	14-24 September Annual	Royal Melbourne Show
1-6 August Annual	Australia's International Engineering Exhibition (AIEE)	August Annual	Brisbane Giftware Exhibition	Mid-September Annual	Greata Food Industry Convention
4-6 August Annual	DATA '83	August Annual	Business to Business Exhibition	September Annual	Sydney Spring Gift Fair
11-20 August Annual	Royal National Agricultural and Industrial Exhibition	August Biennial	Foodservice '83	September Annual	Sydney Watch, Clock and Jewellery Spring Fair
16-18 August Annual	National Automotive Parts, Accessories and Equipment Trade Show	August Annual	Sydney International Boat Show	September Annual	Telegraph Boat Show
19-28 August Annual	30th Sydney International Motor Show	August Biennial or Triennial	Business Efficiency Fair (BEF)	28 September-3 October Annual	Telegraph Home Show
August Annual	The Sun News-Pictorial International Home Show	26-31 August Annual	Mutual Acceptance Leisure-Pleasure Show	Mid October Annual	Recreation and Outdoor Living Show
August Biennial	IREECON International '83	2-10 September Annual	Royal Adelaide Show	18-20 October Annual	DATA '83

Date and Frequency	Title	Date and Frequency	Title
October Annual	Australian Pet and Aquarium Show (APAS)	October Annual	Hardware Trade Parade '83
October Biennial	International Hospital and Medical Equipment Exhibition (HOSPMEDEX)	October every 18 months	Australian Technology Resources Exchange Fair (TRX)
October Annual	Royal Hobart Show	1-4 November Biennial	Electrical, Electronics, Engineering, Automation and Control (EEEAC) Exhibition and Convention with the Components Technology Show (CTS)
October Annual	Expovin International Wine and Food Exhibition	14-17 November Annual	Australian National Field Day
October Annual	Canberra Home and Leisure Show	November Annual	Newcastle and Hunter Valley Home Improvement Exhibition
October Bi-annual	National Women's Wear Fashion Fair	November Annual	Expovin International Wine and Food Exhibition

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