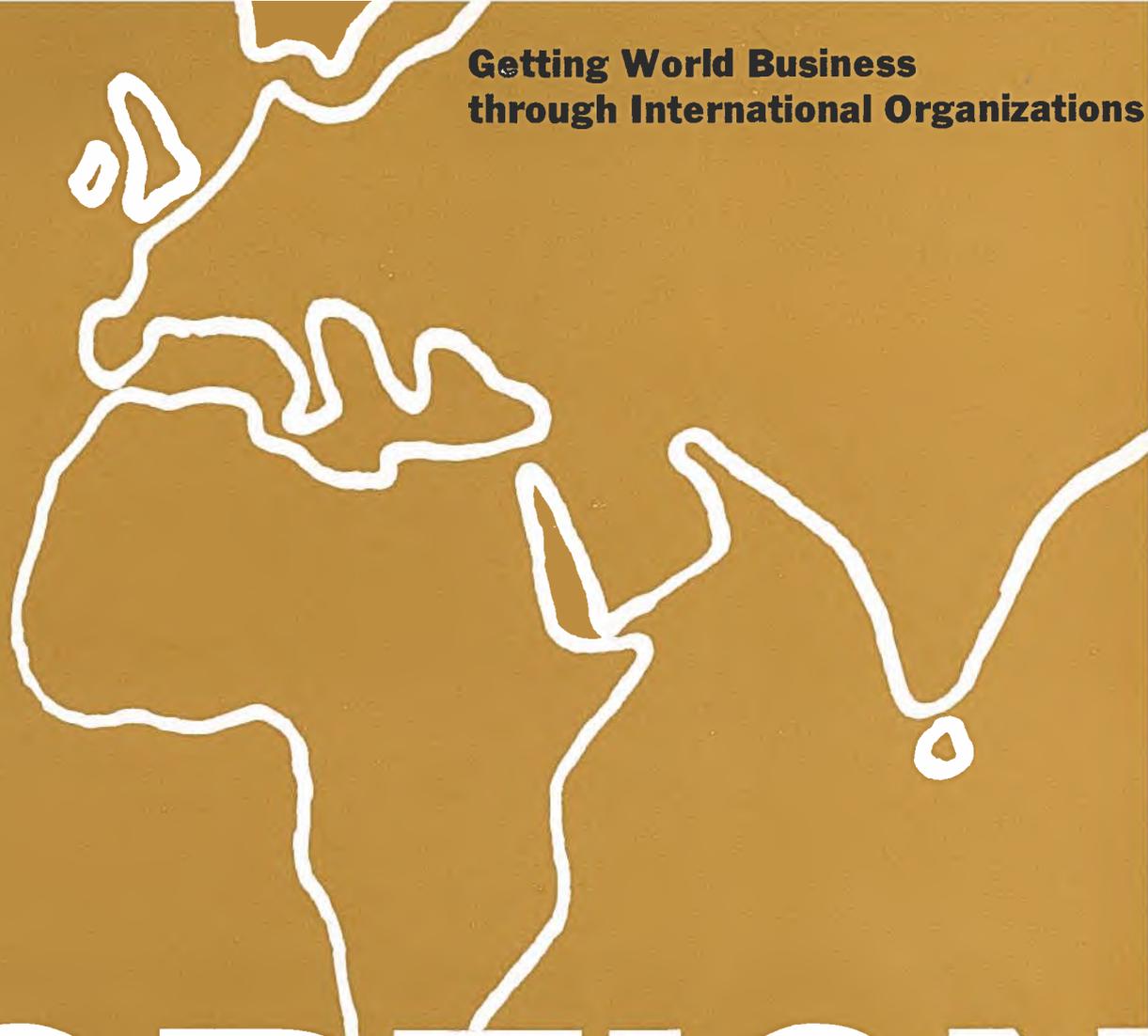


**Getting World Business
through International Organizations**



FOREIGN TRADE

**DEPARTMENT
OF TRADE AND
COMMERCE
OTTAWA**

OCT. 19. 63

FOREIGN TRADE

OCTOBER 19, 1963

Vol. 120 No. 8

Established in 1904. Published fortnightly by the Department of Trade and Commerce.

The Hon. MITCHELL SHARP, Minister.

JAMES A. ROBERTS, Deputy Minister.

Please forward all orders to: Queen's Printer, Government Printing Bureau, Ottawa.

Price \$5.00 a year in Canada; \$7.00 abroad. Single copies: 25 cents each.

Material appearing in this magazine may be reprinted, preferably with credit to "Foreign Trade".

Getting World Business through:

The World Bank Group

4

The IBRD, the IFC, and the IDA merit first place among the well-known international lending organizations. How they differ from each other, the types of projects each finances, the procedures each follows in the letting of overseas contracts—these are all explained in this report from our Washington office.

The Inter-American Development Bank

7

Only four years old, the IADB is playing a notable rôle in financing development in Latin America. Although Canada is not one of its 19 members, Canadian firms can and do compete for IADB-sponsored contracts—sometimes successfully.

The United Nations Special Fund

9

The UN Special Fund works in a field in which Canadian firms have had extensive experience—natural resources surveys and pre-engineering studies. This report also tells of three Canadian firms that have secured Special Fund business.

UNESCO, NATO and SHAPE

13

These three Paris-based organizations operate large purchasing programs—the first for civilian and the other two for military needs. Canadian companies need to be familiar with the procedures for bidding on infrastructure projects.

ECIC Long-Term Export Financing

16

Special facilities for financing exports of capital equipment and engineering services have proved their worth in first three years of operation, with \$225 million committed. Could your firm also take advantage of these facilities?

Canada's Program of Grant Aid to Developing Countries

19

Many Canadian companies have had their initiation into foreign work in contracts under Canadian grant aid programs, such as the Colombo Plan. The result often is independent contracts or repeat business after the initial job is completed.

Hunting Surveys the World

22

Power Development for Malaya

24

Seeking Out Engineering Opportunities

25

Peru Plans Hydroelectric Projects

28

Foreign Exchange Rates

34

Foreign Tariffs and Trade Regulations

33

Plants and Projects

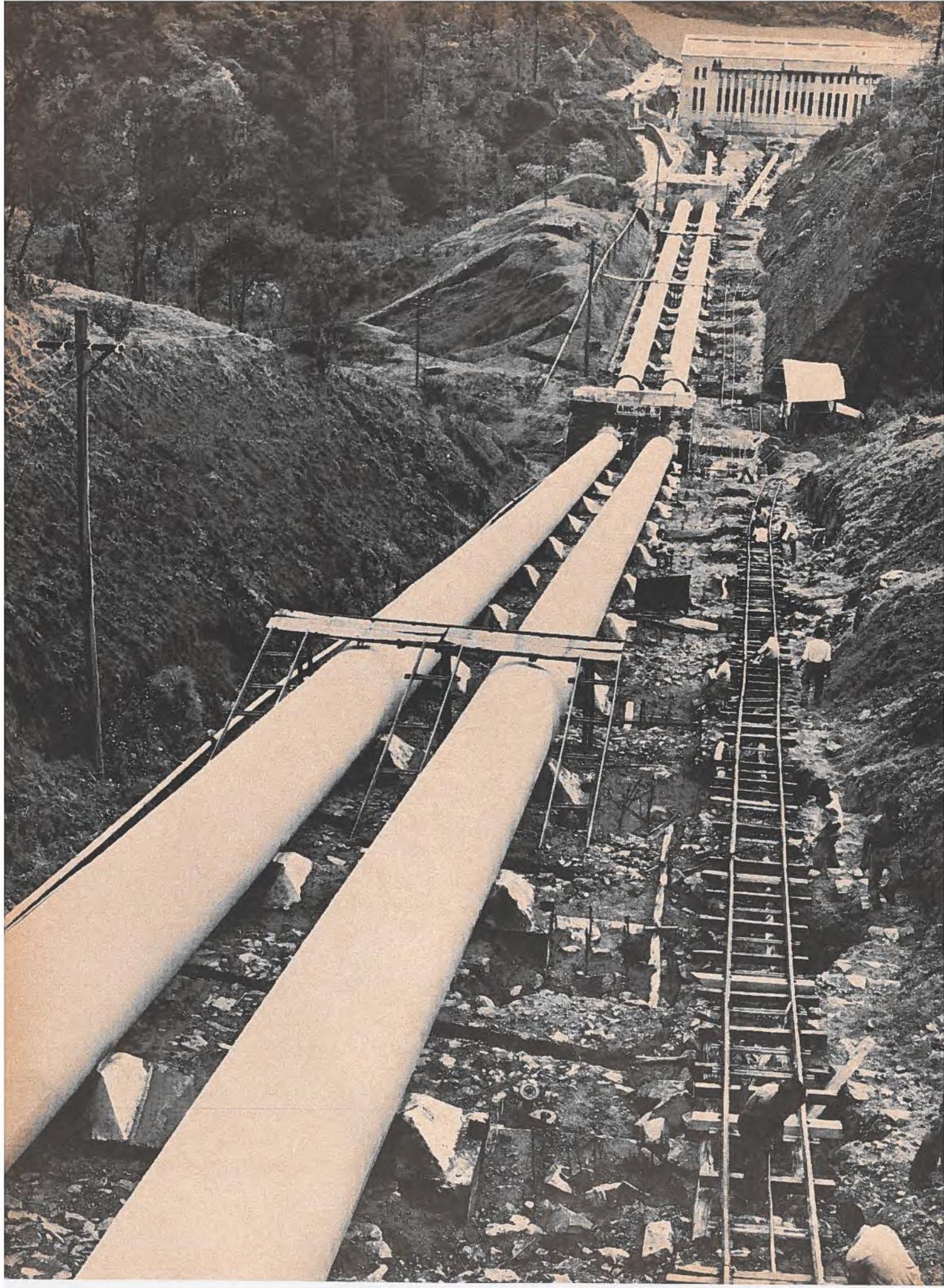
31

Trade Commissioners on Tour

36

Transportation Notes

36



Getting World Business through International Organizations

The huge \$50 million hydroelectric project in Kundah, South India, pictured on the opposite page is only one of the varied assignments that Canadian engineers are currently carrying out on many continents. Some are in the less developed countries such as India, where resources must be mapped and exploited, where the expansion of industry waits upon the coming of more power, and where irrigation must precede a rise in food production. Canada, still close to its own development stage, has the knowhow and the skills to hasten this process. But money—a great deal of money—is needed.

In the postwar years many countries, separately or together, have offered aid outright to the developing nations. International organizations have also been set up to finance, through long or short term loans, development plans or specific projects. This movement to help the newer nations has opened up great opportunities, particularly for engineers, construction companies, and suppliers of capital equipment.

Many Canadian engineering firms have been initiated into foreign work on projects like Kundah, financed by our contribution to the Colombo Plan. The experience they have gained has convinced them that there is a place for them in the international field and they have gone on to compete for business generated by the international organizations. In this competition, their experience abroad has enhanced their chances of success.

“Foreign Trade” is presenting in this issue a special feature on the international financing organizations, partly to correct two misconceptions that linger. One is that Canadian firms are not eligible to compete for much of this business; the other, that they do not get their share of it. The articles on the following pages explain the functions of the lending organizations, how they operate, and how engineering firms should pursue the opportunities they open up. To prove that Canadians can and do obtain contracts, we are including brief reports on some of the jobs financed and/or administered by the World Bank, the UN Special Fund, and others that Canadian engineers are working on today.

To round out our presentation, we have added advice from a member of the engineering fraternity on how to uncover opportunities in foreign countries and outlines of our grant aid program and of the facilities that the Export Credits Insurance Corporation provides for the long-term financing of sales of engineering services and capital equipment.

“Foreign Trade” planned this feature with the help of the Trade and Commerce officers in Ottawa directly involved in promoting the export of engineering services and equipment. We enlisted other aid too—from the Trade Commissioners in Washington and Paris, the Export Credits Insurance Corporation, the External Aid Office, and from a number of Canadian engineers. Their assistance was invaluable and the result, we hope, stimulating.

Canadian firms which have not yet undertaken foreign work but whose interest is aroused should get in touch at once with the Engineering and Equipment Division of the Department here in Ottawa. Its officers are in continuous contact with the international organizations discussed in these pages, and stand ready to help companies plan intelligent campaigns for foreign contracts.

The World Bank Group

International Bank for Reconstruction and Development

Function	To aid in the development of productive facilities and resources in member countries.
Capital	Provided by the over 60 member countries, which each subscribe a part of the total capital.
Loans Made	For long-term financing of capital projects, with emphasis on electric power development and improvement of transportation. Has loaned nearly \$4,500 million to date. Loans must be guaranteed by a member government.
Opportunities for Canadians	Canadian engineering firms and capital goods manufacturers can compete for contracts, awarded by proper authority in the borrowing country.

International Finance Corporation

Function	To promote economic development in member countries by providing financing on terms not possible under World Bank regulations.
Capital	Provided by subscriptions from member countries.
Loans Made	For terms of up to 50 years at nominal rates of interest. Tends to finance infrastructure projects.
Opportunities for Canadians	As for IFC projects.

International Development Association

Function	To encourage growth of productive private enterprise in member countries, especially in less developed areas.
Capital	Provided by subscriptions of member countries and proceeds of sale of investments.
Loans Made	For productive private ventures, at higher rates of interest and for shorter terms than World Bank loans; guarantee of member government not required. Emphasis on manufacturing and processing enterprises.
Opportunities for Canadians	As for World Bank projects.

THE most important of the international lending institutions is the group of organizations composed of the International Bank for Reconstruction and Development (World Bank), the International Finance Corporation, and the International Development Association. Together, these three are becoming an increasingly important source of finance for exporters of engineering services and capital goods. Canada is a member of all these organizations.

The three bodies share a common directorate, secretariat, and headquarters. When a request for a loan comes in from an overseas country, the directors (who meet under different hats on successive days) refer it to the appropriate organization, depending on the type of loan conditions which, in their judgment, seem most suitable.

IBRD

The International Bank for Reconstruction and Development was founded at the Bretton Woods Conference in 1944 and began operations in 1946. Virtually all countries outside the Sino-Soviet Bloc belong to it. Briefly, the World Bank undertakes to aid in the establishment of productive facilities and in the development of natural resources in member countries. It offers long-term financing (15 to 25 years) of capital projects on a strictly commercial basis and charges commercial rates of interest. It does not consider itself in competition with private investment and in fact will not participate in projects for which private financing is available from other sources at reasonable rates of interest.

Because in the less developed countries the need is mainly for basic projects to aid industry and agriculture, the Bank makes the bulk of its loans for electric power projects and for improving trans-

portation. Out of total loans to date of nearly \$4,500 million, power generating and distribution facilities have accounted for about one third and transportation projects for another third. Industrial and agricultural projects have absorbed the remainder.

IFC

The International Finance Corporation was created in 1956 with the objective of encouraging the growth of productive private enterprise in the less developed countries which are members of the World Bank. Unlike the Bank, which requires government guarantees for its project loans, the IFC operates rather like a prudent businessman lending money for private ventures and, in some instances, taking an equity interest in a new enterprise. Like the World Bank, the IFC does not compete with private capital but rather supplements it when not enough capital is obtainable on reasonable terms. The interest rates on IFC loans are usually slightly higher than the World Bank charges and its terms somewhat shorter (5 to 15 years). It is difficult to state succinctly the type of project that the IFC will finance. The only condition is that it be "productive" but generally speaking it tends to finance either manufacturing or processing enterprises.

IDA

The third agency in the World Bank group is the International Development Association. It was set up in 1960 to make capital available for the economic development of member countries not in a position to raise all their external financial needs at conventional terms and rates of interest. The IDA makes loans for up to 50 years at nominal interest rates, and with long grace periods. With such flexible terms, a project financed through IDA need not be revenue-producing. It has therefore tended to finance principal infrastructure projects in the

less developed areas—such as water supply, sewerage, sanitation, housing, roads, etc.

Canadians Can Obtain Contracts

Canadian industry has obtained a substantial number of contracts for engineering services and capital equipment under World Bank financing from 1949 up to the present. But although the value of these contracts is impressive, it could be much larger. Much of it represents purchases of capital goods in Canada during the early 1950's, when there was a seller's market for this type of equipment. Recent indications are, however, that Canadian manufacturers of capital goods are again looking to overseas markets and our exports of heavy engineering equipment are showing some expansion.

The export of Canadian consulting engineering services for World Bank projects last year was also encouraging. Canadian consulting engineering firms participated in about one third of the \$3.9 million worth of pre-engineering feasibility studies financed by the World Bank or by the UN Special Fund with the World Bank as executing agency.

Procurement Procedures

Canadian engineering and construction firms and manufacturers of capital goods should all be aware of opportunities presented by projects financed by the World Bank. It disburses on the average over \$500 million a year in loans for projects. Contracts for engineering and equipment for these are open to international competitive bidding.

The letting of contracts in every instance is the responsibility of the borrowing authority in the country receiving the loan and not of the Bank officials at headquarters. The World Bank issues press releases describing projects which it has agreed to finance and interested Canadian firms should write to the Bank in Washington and ask to have their names put on its mailing list. It then becomes the responsi-

bility of any company interested in a project to get in touch with the proper authority in the borrowing country and obtain tender documents. This is not the whole story. In many cases tenders are called in the country getting the loan before Bank financing has received final approval. Canadian firms anxious to obtain foreign contracts should keep continuously alert to projects being planned around the world and should indicate interest in them early. The Canadian Trade Commissioners in the various countries are glad to keep Canadians aware of the inception and progress of particular projects.

Consulting Engineering Services

Unfortunately for consulting engineers, the World Bank press releases are issued far too late to be of any value to them. Their only course is to visit the borrowing countries themselves to gain information on future projects while they are still in the initial stage of planning and often before a loan is requested from the World Bank. This can prove both expensive and time-consuming but it is the only way that consulting firms can be part of the early negotiations that lead to contracts.

In contrast to its procurement policies, the Bank does not approve of competitive bidding on consulting engineering contracts but prefers that consultants be selected by negotiation. These contracts usually are awarded on the basis of a firm's experience, its capacity to handle the job, qualified personnel on its staff, and so on. For this reason, consulting engineering firms should make sure that their credentials are on file at World Bank headquarters and include full details of their past experience and information on current world loans. This information should be sent direct to Brigadier-General Vogel, Chief Technical Consultant, International Bank for Reconstruction and Development, 1818 H Street N.W., Washington, D.C.

▶ A case in point



Water runs into the São Simão gorge on the Paranaíba River from both sides. This river eventually flows into the Rio Grande and the two into the Parana, one of the main river systems in south central Brazil, the region in which a great study of the hydro power resources of six states is going forward.

Big Power Study in Brazil

TWO Canadian firms—Montreal Engineering Co. Ltd. of Montreal and G. E. Crippen & Associates of Vancouver—in association with Gibbs & Hill Inc. of New York, are today working on one of the biggest power studies ever undertaken. It covers six states in south central Brazil, the most extensive industrial complex in Latin America and equal in area to the provinces of Quebec and Ontario combined.

The project has two phases: first, the preparation of a complete inventory of hydro potential, and second, the formulation of a program of economic development of power generation facilities and transmission lines for the entire region.

The money for carrying out this study is being provided by a grant of U.S.\$2.5 million from the United Nations Special Fund and of about U.S.\$3.5 million in Brazilian funds supplied by the Government of Brazil. The World Bank is acting as the executing agency.

How did this contract come to Canada? A Montreal Engineering executive points out that his company has its qualifications on file with the World Bank and continues to bring these to the attention of senior Bank officials. As a result, it was asked to visit Brazil, assess the work, and submit a proposal. Because of the scope of the study, the Bank asked several groups to work together and Montreal Engineering formed a consortium under the name of Canambra Engineering Consultants Limited, in association with G. E. Crippen & Associates of Vancouver and Gibbs & Hill Inc. of New York. At the time that this Canadian-American group submitted its proposal, other proposals came from a combined American-English group, an American-German group, and a French group. Each proposal included the method of carrying out the work, the organization of it, and the qualifications of the staff to be assigned. It did not include any estimate of costs.

The various proposals went to a steering committee made up of representatives of the Brazilian states and power companies for which the study is being made and of the World Bank. The committee studied them and the Bank also conducted an independent appraisal. On the basis of these appraisals, the Canadian-American group was awarded the contract. Work has been going forward for about six months and it will take a further three years to complete it. All the work is being done in Brazil by Brazilians, under the supervision and guidance of the Canambra staff. The Brazilian power companies are providing the large numbers of local engineers and technicians needed.

The study consists of three phases.

1. Planning the integrated multi-purpose development of water resources of the six main rivers and tributaries in the state of Minas Gerais, to develop long-range priorities for building hydroelectric plants on these rivers, to prepare preliminary designs detailed enough to establish economic justification and estimates of the cost of their construction, and to set up a long-range program for the continued collection of hydrological, stream flow and ground water data within Minas Gerais.

2. Integrating the results of the first phase into a similar study of water resources in the states of Guanabara, São Paulo, and Rio de Janeiro, as well as northern Parana and southern Mato Grosso. An over-all economic review of these hydro sites will then be carried out, and also of those previously investigated, of possible thermal and nuclear power developments, and of the interconnecting transmission-line grid systems.

3. Preparing a power market study, including a 15-year forecast on a year-to-year basis for the consumer areas served by the grid system covering the entire south central region of Brazil. An over-all economic development program for power generation and transmission in the region will then be formulated. ●

Except in a few special cases, the Bank does not let engineering contracts itself. But it does keep a watchful eye on the proceedings and has the authority to veto an unsuitable choice. The Bank itself only lets engineering contracts when it is financing a feasibility study from

its own resources or in some instances when the money is coming from the UN Special Fund.

Canadian engineering firms and capital goods manufacturers can obtain more information about opportunities through the World Bank by getting in touch with the En-

gineering and Equipment Division of Trade and Commerce in Ottawa, or with the Commercial Division of the Canadian Embassy in Washington.

—S. G. HARRIS,
*Assistant Commercial Secretary,
Washington.*

The Inter-American Development Bank

Function	To contribute to the acceleration of the process of economic development of its member countries (19 countries of Central and South America and the U.S.).
Capital	\$850 million; increase of \$1,000 million now being sought.
Loans Made	For technical assistance and for capital projects. Loans are of three types.
Opportunities for Canadians	Canadians can seek business under two of the three types of loans.

THE establishment of the Inter-American Development Bank in 1959 was motivated by the need for additional financing for the development of the Latin American countries. From the time it granted its first loan in February 1961 to the end of 1962, the Bank had granted loans totalling over \$600 million to 18 of its 20 member countries. Last year for the first time the Bank used its powers to raise funds in the international money market with the sale of a \$24 million bond issue to a consortium of Italian banks and another \$75 million issue to a group of United States banks.

As an indication of its success and plans for the future, the Bank has now asked for an increase of \$1,000 million in its capital to augment the initial \$850 million subscription. The IADB is undoubtedly an active addition to the number of international lending agencies.

As evidenced by its name, the IADB is an outgrowth of the Organization of American States and its members are the 19 countries of Central and Latin America (excluding Cuba) and the United States.

Purpose of the IADB

The Bank was founded for the primary purpose of contributing "to the acceleration of the process of economic development" of its member countries. To do this, the Bank makes financial aid available in two forms: technical assistance and project loans to the developing countries.

Technical assistance services constitute an important part of the Bank's operations. These may be in the form of a loan or grant for a feasibility study or to provide specialists to advise on such matters as management, administration,

agriculture, mining, etc. Technical assistance may also be part of a project loan.

Three Types of Loans

The IADB may be considered as having three separate funds and it is essential to comprehend the operations of these three funds in order to understand the IADB's activities. The three funds differ mainly in the type of projects that each will finance, the different lending terms, and the currency in which the loans are repaid.

● Ordinary Capital Resources—

This is the fund from which loans most closely resembling those of private financial institutions can be made. Projects seeking financing from this fund are considered on their commercial merits as revenue-producing enterprises. Normal commercial interest rates are charged and terms vary from 8 to 20 years. Repayment is in the currency lent—which in effect usually means U.S. dollars.

Procurement contracts and consulting services are obtained by world-wide competition. Loans from this fund are made in the following categories:

1. Direct private loans to private enterprise.
2. Development loans to industrial development banks for relending to private enterprise.



A case in point



At the Hunauni tin mine in Bolivia (note town in background) Bolivian women are breaking down large chunks of rock into smaller ones before extraction of the tin. A Canadian firm is hard at work studying and reporting on all the mines operated by the nationally-owned *Corporacion Minera de Bolivia*.

Toronto Firm Has IADB Contract

THREE years ago, in November 1960, the Inter-American Development Bank requested C. C. Huston and Associates, mining and geological consultants in Toronto, to set up a mission to examine and report on the operations of the three largest mines of the *Corporacion Minera de Bolivia*.

This mission was completed in record time and in June 1961, the firm was asked to send a second mission to Bolivia to report on the operations of all the other mines of the *Corporacion Minera*.

These two assignments brought C. C. Huston and Associates a third contract with IADB and the *Corporacion*. Under this, the firm is performing assigned exploration projects in

Bolivia, is acting as agent for recruiting foreign technical personnel, and is directing a program of metallurgical research on Bolivian ores outside the country. This contract is now in its second year.

How did C. C. Huston and Associates get the opportunity to take on this IADB work? The head of the firm, Charles C. Huston, was a member of the Canadian Trade Mission of consulting engineers sponsored by the Department of Trade and Commerce that visited South America in September 1960. Apparently, this journey made the Canadian company and its capabilities better known in Latin America and led to the approach from the IADB. ●

3. Loans to governments and government authorities.

● **Fund for Special Operations**—The Fund for Special Operations is similar in its operation to the World Bank's International Development

Association. By using it, the IADB can make allowances for balance-of-payments difficulties in the borrowing country and thus grant more flexible terms of repayment, lower interest rates, and longer repayment periods. Interest rates normally run

from 2 to 4 per cent and in special cases provision may be made for repayment in the currency of the borrowing country. External procurement under these loans is also open to international competition. Loans are generally made in the following categories:

1. Development loans for re-lending.
2. Loans to governments or government authorities.
3. Technical assistance loans.

● **Social Progress Trust Fund**—The IADB also administers a \$394 million appropriation from the United States Congress under the *Alliance for Progress*. This fund makes loans primarily for non-revenue producing social welfare projects, such as land settlement and improvement, low-income housing, water supply and sanitation, and education.

The interest rates are very low and the terms of repayment may be as long as 40 years. Procurement under these loans, however, is restricted to the United States or to suppliers within the borrowing countries.

Interest to Canada

Canada is not a member of the IADB. Nevertheless, Canadians have benefited from business obtained under IADB-financed projects. In fact, the first technical assistance loan ever made by the IADB went to a Canadian mining engineer who obtained a contract in Bolivia. (See box feature.)

Canadians have recently been obtaining contracts for the supply of various items of equipment for a paper mill in Chile, for which financing is being provided both by the IADB and by the long-term financing facilities of the Export Credits Insurance Corporation.

Obviously the IADB, although it is a relatively young and new institution, has rapidly become an important one in whose operations

Canadian consulting engineering firms and capital equipment suppliers should take a keen interest.

Registration

Canadian firms that wish to register their qualifications with the IADB should write to William A.

Carter, Senior Engineering Consultant, Inter-American Development Bank, 808 17th Street N.W., Washington, D.C. Since the IADB has not yet devised its own engineering questionnaire, it would appreciate receiving a copy of the registration forms which the Cana-

dian company has filed with the World Bank, the UN Special Fund, or with our own External Aid Office.

—S. G. HARRIS,
*Assistant Commercial Secretary,
Washington.*

The United Nations Special Fund

Function	To assist governments in low-income countries to make pre-investment surveys of their natural resources and to establish and strengthen national training, educational, and research programs.
Capital	Governments of 102 member countries make voluntary pledges; \$250 million committed since January 1959. Contributions of recipient governments now total \$590 million.
Projects	286 approved to date.
Opportunities for Canadians	Canada can bid on Special Fund projects; several Canadian companies have won contracts.

AFTER the end of the Second World War, international lending organizations such as the World Bank were set up to finance re-development in Europe and subsequently projects in the less developed countries. Individual governments set up supplementary facilities through which financing of projects was carried out bilaterally. Later, through the initiative of the World Bank, the Inter-American Development Bank and the OECD, multilateral financing operations were introduced.

In the initial stages, the developing countries had sufficient foreign exchange earnings to meet the foreign costs of pre-engineering or feasibility studies—a prerequisite for all applications for financing of the projects themselves. However, as the development programs gained impetus, sufficient funds were not

forthcoming to cover the cost of all pre-engineering studies, including the broader and basic requirement for resources surveys. It then became necessary to find a supplementary source of financing and member countries of the United Nations in consultation decided that this could best be provided by the industrialized countries contributing to a central fund for this purpose. Thus the United Nations Special Fund was born.

Fund's Working Principles

The essential working principles of the United Nations Special Fund are:

- Full partnership between the industrialized and the developing countries in mobilizing money, men and equipment for approved projects.

- Co-ordinated use of the experience and facilities of organizations in the United Nations family concerned with economic and social development; as executing agencies for the Special Fund, they have substantial responsibilities.

- A high degree of selectivity in projects to ensure that they are part of a consistent national economic policy, will contribute substantially to economic growth, and are harmonized with both multilateral and bilateral assistance programs.

- A large contribution by the recipient Government for the implementation of projects. This demonstrates readiness of the country to help itself to a maximum degree, establishes its priority interest in the project, and spreads among more projects the "seed" effects of the skills and equipment provided by international funds.

Procedure Followed

The procedure for administration of a project from implementation through to final objective is as follows.

1. The first step in the operation is the preparation of a request for assistance by the government of the developing country. This request must be presented in a specified form, providing information as outlined by the UN Special Fund Directorate. The Director of Special

Fund programs in any country or area of the world can help in preparing this request and it can be supplemented by employment of individual specialists or consulting engineering firm.

2. All requests for assistance received by the UN Special Fund in New York are first evaluated by the managing director and his staff and, provided they meet all the requirements, are then submitted to the Consultative Board for further examination. The Consultative Board consists of the Managing Director of the Special Fund, the Secretary General of the United Nations, the President of the World Bank, and the Executive Chairman of the United Nations Technical Assistance Board.

3. When the projects have been examined and approved by these authorities, the Managing Director of the Special Fund, Paul G. Hoffman, can recommend them to the Governing Council for approval. (The Council consists of representatives from 18 countries at one time. Representation on the Council is allocated in two categories: one, representatives from the industrialized countries who provide the majority of the funds, and two, representatives from the less developed countries. Because all member countries cannot be represented on Council at the same time, the membership alternates from year to year. The major donating countries retain permanent seats on Council and all other countries are represented on an area basis.)

The Governing Council of the UN Special Fund normally meets twice each year, usually in January and June. It has three major functions: one, to consider and agree on guidelines for Special Fund policy; two, to supervise the administration of Special Fund activities; and three, to approve earmarkings for projects.

► A case in point

Canadians Won These

Guatemala—Power and Irrigation Study

FOR the power and irrigation study in Guatemala financed by the UN Special Fund, the World Bank acted as executing agency. This agency alone has more than 850 engineering firms vying for its work. This, says the Niagara Falls firm of H. G. Acres & Company Limited, is one reason why competition for UN Special Fund projects is "tough, tough, tough".

The World Bank selected five firms from which to solicit proposals for this power and irrigation project in Central America. In submitting its proposal, Acres joined forces with the Dutch firm, Koninklijke Nederlandsche Heidemaatschappij (KNHM), a well established and able agricultural consulting firm. After studying the proposals submitted, the World Bank selected Acres/KNHM, on the basis of their qualifications.

In carrying out the contract, Acres concentrated on the power aspects of the study—a study that covered the entire country. Included in it were:

1. A power market study.
2. Study of existing power facilities.
3. Investigation of the hydroelectric potential of some thirty rivers.
4. Preparation of a phased power development plan over a 15-year period.
5. Tariff study.
6. Study of the technical and administrative aspects of the collection of hydrological records.
7. Study of the organization of the power industry and regulations governing it.
8. Administration of fellowships for the training of Guatemalan staff.

The Dutch experts carried out most of the agricultural aspects of the study.

Work on the project started at the beginning of August 1961 and it is now virtually completed. Well before it was finished, Acres was engaged by the Guatemalan Government to carry out design work needed to implement the power development program. ●

Kenya—Tana River Project

THE same winning combination—Acres and KNHM—this summer obtained a second assignment from the UN Special Fund. The locale shifted to Kenya in East Africa and this time the executing agency was the Food and Agriculture Organization of the United Nations.

The project was to study the irrigation potential of the lower Tana River Basin and the competition came mainly from well-established and highly experienced British firms. Yet Acres/KNHM won the contract on the basis of qualifications.

The work consists of hydrology studies and planning of water management in the entire river basin, the surveying of irrigation potential in the lower basin area, the drawing up of a preliminary plan for development of this area, and the preparation of a detailed plan for a portion

of it. Included are plans and cost estimates for dams, canals and other structures, comprehensive soil survey, agricultural economic assessment, an agricultural experimental work. The project will take three years to complete.

How has Acres been able to obtain these contracts? A member of the firm lists four reasons.

1. Reputation and long years of experience in the field.
2. A large staff of experts built up over the years.
3. Strenuous efforts put forth to keep up-to-date with development of world resources and constant scouting for prospects throughout the world.
4. Maintaining the lead in development of new engineering techniques. ●

Special Fund Contracts

Ecuador—Hydrological Resources Survey

A TEAM of Canadian engineers is today hard at work in the province of Manabi in Ecuador on the initial stages of a project to assess the hydrological resources of the area. It's a project financed by the UN Special Fund and the contract was won by Ingledow Kidd & Associates Limited of Vancouver. Associated with it in the venture is Hunting Survey Corporation of Toronto which is undertaking the mapping work.

Ingledow Kidd first heard of this proposed undertaking through a circular sent out to Canadian firms by the Department of Trade and Commerce. Its interest was at once aroused because it had experience in this field, was already working on a similar project in another part of Ecuador, and had a group of Spanish-speaking engineers ready to take on the job. The firm advised appropriate officials of the United Nations and the Trade Commissioner in New York of its interest and qualifications. The Ingledow Kidd representative in Ecuador made a similar approach to the Ecuadorian Government.

As a result of these contacts, the firm was one of several international consulting firms invited to submit a proposal covering engineering services for the project. A technical team was quickly dispatched to Ecuador to visit the Manabi area and obtain the data needed for the proposal. When the proposal was submitted, it included a detailed description of how the work would be undertaken, plus resumés of the professional staff who would be assigned to the project. The number of man-months needed both in Ecuador and at the Vancouver head office and cost schedules for each section of the work were given in detail. The need for adequate field investigations as an essential part of the engineering work was pointed out.

When Ingledow Kidd's proposal was accepted, the company set up an office in Manta, Ecuador, immediately and dispatched resident Canadian staff to the area. They will supervise field operations, making maximum use of local labour for ground surveys and inspection of work such as site drill-

ing to be performed by contractors. The survey will take two years and will include field investigations, air photography, and engineering studies in the firm's Vancouver office. Other engineers will be sent down to Ecuador as needed to co-ordinate and direct the program.

The Province of Manabi in which the survey is going forward sits astride the Equator in the coastal region of Ecuador. Water for domestic and industrial use is critically short and new supplies must be found as soon as possible. Extension of agriculture depends on crop irrigation and the amount of water that can be used for this must be determined before plans move forward. In addition, the shortage of electric power is acute and industrial progress depends on a greater supply. The engineering studies are expected to confirm that the province has substantial water resources that can be developed economically.

The first stage of the project will consist of a pre-investment survey on the Portoviejo River for the building of a storage reservoir and treatment plant. These facilities are urgently needed to ensure domestic and industrial water supplies in towns and villages in the area that have a total population of about 100,000. Following hard on the survey will come the preparation of a financial feasibility report in support of applications for loans to international lending agencies to cover construction of the works.

The second stage will consist of reconnaissance surveys and engineering studies to make possible preliminary evaluation reports of hydroelectric, irrigation, domestic and industrial water supply potentials of all the principal river systems of the province. Included will be a comprehensive survey of the province's present and future power needs and the formulation of an over-all plan for power development. Further feasibility studies needed for specific development projects will be recommended. The schedule calls for the entire survey to be completed by April 1965. ●

4. Once the Governing Council has approved the projects, an agreement on plan of operation can then be signed by the recipient government, the executing agency and the Special Fund. This agreement outlines the responsibility of each signing member, and when and how the project is to be carried out. It thus provides a standard against which progress can be measured.

Implementing a Project

The implementation of the project then becomes the joint responsibility of the executing agency and the recipient government. The executing agency is that agency of the United Nations directly concerned with furthering development in the specific commercial or social service field. The United Nations agencies which are involved in administering the United Nations Special Fund projects are listed at the end of this article, with an indication of the types of projects for which each assumes responsibility.

As previously indicated, the United Nations Special Fund is financed mainly by voluntary pledges of the governments of the member countries. Voluntary pledges are provided by 102 governments and to date these have amounted to \$250 million; 286 projects have been approved. This averages out to a cost of \$880,000 per project and in addition the recipient governments have contributed an average of almost \$1.2 million per project. This adds up to a total cost for this program to date of \$590 million.

No set procedure is laid down for administering and implementing all the projects approved by the Governing Council. Many factors must be considered in arriving at a decision on the method of operation in each case. Sometimes requirements dictate the employment of a consulting engineering firm to assume responsibility for major surveys under the supervision of the executing agency and working in close co-operation with the recipient govern-

ment's appointed representative. In other instances, the project could be better implemented and the necessary investigation carried out by appointing individual experts and forming them into a team to report on the various conditions in the recipient country. Occasionally

a single expert is sufficient because he can obtain the necessary local labour required to carry out the investigation.

In addition to the need for experts for projects in the survey category, there is, of course, opportunity for consultants as well with the tech-

nical ability to establish training schools and university faculties. Within this field, there is also opportunity for manufacturers to provide the equipment required for laboratories and training centres. (Canadian firms should not overlook the fact that in addition to the UN Special Fund projects for which the various agencies assume administrative responsibility, there is also a separate fund for establishment of similar-type projects in countries throughout the world.)

Executing Agencies for UN Special Fund

The following United Nations agencies act as executing agencies for United Nations Special Fund projects. Attached are examples of the types of project administered by each.

United Nations (UN)
United Nations Building
New York City, New York

groundwater investigation
pilot mineral survey
technological research institute
survey rock salt deposits
hydraulic development
institute of public administration

International Labour Organization (ILO)
154, rue de Lausanne
Geneva, Switzerland

management development and training of specialists
small industry service institute
instructor and foreman training centre
national productivity centre
regional labour institutes

Food and Agriculture Organization of the United Nations (FAO)
Viale delle Terme di Caracalla
Rome, Italy

survey of land and water resources
study of nutritional diseases and deficiencies in cattle
forestry and watershed management training institute
study of land reclamation
agricultural training
survey of river basins
forest research institute
fisheries development institute
soil survey

United Nations Educational, Scientific and Cultural Organization (UNESCO)

UNESCO House
9 Place de Fontenoy
Paris, France

petroleum institute
secondary teacher training institute
faculty of engineering
industrial university
central scientific instruments organization
international institute of seismology and earthquake engineering

World Health Organization (WHO)
Palais des Nations
Geneva, Switzerland

institute of occupational health and air pollution research
preparation of master plan for water supply and sewerage
central public health engineering institute
survey of water supply resources for large cities

International Bank for Reconstruction and Development (IBRD or World Bank)
1818 H Street
Washington, D.C.

power and irrigation studies
transportation studies
survey of hydroelectric resources
improvement of oil-handling facilities
survey of coal deposits
iron ore transport survey
study of port siltation and feasibility

International Civil Aviation Organization (ICAO)

International Aviation Building
1080 University Street
Montreal, Quebec

national aeronautical laboratory
civil aviation safety centre
international civil aviation training centre
meteorology training centre

International Telecommunication Union (ITU)

Palais Wilson
Geneva, Switzerland

training and research centre for telecommunications and electronics
institute of radio and telecommunications

World Meteorological Organization (WMO)
41 Avenue Giuseppe Motta
Geneva, Switzerland

meteorological and hydrological services
hydrometric and hydrometeorological stations

International Atomic Energy Agency (IAEA)
Karntnering 11-13
Vienna 1, Austria

nuclear research and training in agriculture
pre-investment study on power, including nuclear power

Registering Interest

Through the facilities of the Department of Trade and Commerce every endeavour is made to alert Canadian firms to opportunities within the UN Special Fund program. The direct responsibility for the distribution of information rests with the Engineering and Equipment Division of the Commodities Branch and the Trade Commissioners in our New York office. The procedure which has been followed in recent years is as follows. A complete set of the Managing Director's recommendations for the projects to be submitted to the Governing Council are received by the Department in Ottawa approximately one month before the scheduled meetings of the Council. A resumé of these projects is then prepared and distributed to all firms in Canada which have expressed interest in foreign work and in the UN Special Fund operations in particular. This resumé includes directions on the procedure to be followed in obtaining copies of the complete recommendations on a project; these are only available for distribution after approval by the Governing Council.

Any firm interested in having its name placed on the distribution list to receive a resumé of these projects should advise the Chief, Engineering and Equipment Division, Department of Trade and Commerce, Ottawa. He would be pleased to discuss with any individual or firm the best method of approach in

offering its facilities to the various executing agencies.

In general, however, the following steps are recommended for registering your interest in participating in specific projects.

1. After receipt and study of the resumé of the Special Fund projects, write at once to B. I. Rankin, Deputy Consul General (Commercial), Canadian Consulate General, 680 Fifth Avenue, New York City 19, New York, listing the projects on which you require additional information. (Copies of the Managing Director's recommendations are made available by the United Nations only after they have been approved by the Governing Council.)
2. Advise the Trade Commissioner in the country concerned and the

Trade Commissioner responsible for direct liaison with the executing agency that will administer the project immediately of your interest. If your firm is not already registered with the agency, complete details of your past experience and area of interest also should be forwarded to the Trade Commissioners for onward transmission to the responsible authority in the country concerned and to the executing agency when Governing Council approval has been granted. (Until the Governing Council has approved all projects, officials of the United Nations Special Fund and the executing agencies are not in a position to discuss any project with interested firms.)

3. When you receive copies of the Managing Director's recommenda-

tions from our New York office, you will know that the project has been approved by the Governing Council. It will then be in order for you to make a direct approach both to the executing agency and to the responsible authority in the country concerned. The Trade Commissioners with whom you will have been in contact will be able to provide you with the names and addresses of the responsible officials.

4. In order that officers of the Department in Ottawa and the Trade Commissioners abroad can help you as much as possible, you should provide them with copies of all your correspondence about the project.

—R. C. WALLACE,
*Chief, Engineering and Equipment
Division.*

UNESCO: Two Types of Opportunities

For its own needs, UNESCO purchases goods worth some \$2 million a year. It also serves as executing agency for UN Special Fund projects in its field. Getting business in these two areas therefore calls for two different approaches, outlined here.

THE United Nations Educational, Scientific and Cultural Organization (UNESCO) offers business opportunities to Canadian firms in two ways. First, it operates a large purchasing program for meeting its own requirements and second, it acts as executing agency in certain fields for projects financed under the UN Special Fund.

In 1961, the budget for purchases for UNESCO's own needs totalled \$1 million. It rose to \$1.5 million last year and in 1963 is expected to reach over \$2 million.

Although these UNESCO purchases are made up of thousands of orders (over 2,000 last year), some single orders may be worth \$50,000

or over. Among the products on which it solicits bids are office furniture, stationery, and office reproduction machinery.

The Trade Commissioner's office in Paris receives copies of all UNESCO calls for tender. It passes this information on to the Department in Ottawa, and the Department arranges for bids from Canadian firms. Companies interested should send their bids directly to the Chief, Field Equipment Purchases, UNESCO, Paris, France.

As Executing Agency

UNESCO is also one of the several agencies that execute projects approved and financed by the

UN Special Fund. (See article on page 9.) From May 1959 to March 1963, UNESCO carried major responsibility for the recruitment of staff and the procurement of equipment and services for 48 UN Special Fund projects in its particular field. (The types of projects that UNESCO administers are set out on page 12; in general, these have as their main objectives education and training. UNESCO also contributes to the establishment of applied research institutes.)

The following examples of economic development projects executed by UNESCO on behalf of the Special Fund last year will suggest the types of opportunities that these

projects offer to interested Canadian firms.

JAPAN: a project aiming at the establishment of an institute to train scientists and engineers in the prevention of earthquake damage and in the field of seismology and earthquake engineering.

TUNISIA: special training of engineers and technicians in irrigation with saline water of various concentrations and investigation of systems of managing irrigation and draining.

UGANDA: expansion of facilities at the Kampala Technical Institute in order to train more technicians.

TURKEY: establishment of schools of engineering and architecture at the Middle East Technical University in Ankara.

Canadian Participation

How can Canadian businessmen find out about these activities? Because several agencies are involved in any one project, it is advisable for interested firms to contact initially the Engineering and Equipment Division of the Department of Trade and Commerce for general information. If UNESCO is acting as executing agency for a specific project, offers of services and equipment should be directed to the

Liaison Officer, Special Fund Projects, UNESCO, Place de Fontenoy, Paris. 7e, France. The Trade Commissioner's office in Paris should be advised of the submission of a bid.

There is no doubt that Canadian firms can supply equipment and technical knowhow for many projects undertaken by UNESCO. Canadian survey firms, consultants and manufacturers may find meeting the requirements of Special Fund projects a worthwhile challenge to their abilities.

—YVON JAURON,
*Assistant Commercial Secretary,
Paris.*

How to Sell to NATO and SHAPE

Contracts to supply products and services to NATO and to SHAPE are open to international bidding. How does a Canadian company learn about these opportunities and take advantage of them?

SOME \$560 million has been allocated for commonly financed NATO programs from 1962 to 1964. Products and services needed under this program are open to international bidding, and Canadian companies have a chance to secure substantial contracts. Yet up to now, very few of them have seized the opportunity to investigate this potential market. Perhaps an explanation of what the procedures are in selling to NATO and to SHAPE will encourage exporters to go after this business.

Infrastructure Program

The NATO Common Infrastructure Program provides airfields, communications and radar facilities, naval bases, petroleum pipelines and storage facilities, war headquarters and military training installations for the use of military forces

committed to NATO—all jointly financed.

The formulation of the infrastructure program is a co-operative effort of the international military authorities (Supreme Headquarters Allied Powers Europe, and Supreme Allied Command Atlantic), the host country (where projects will be located) and the international staff of NATO. Each year's program is called a Slice. Slice I covered the program in 1950 and Slice XIV covers the program for 1963. Until recently, much of the infrastructure budget was devoted to civil engineering projects, including 170 airfields and the installation of over 5,600 miles of pipeline and 27,000 miles of signal networks.

The breakdown of expenditures up to 1961 provides a detailed picture of work undertaken:

	Millions of dollars
Airfields	920
Communication equipment	434
Fuel supply systems	378
Naval facilities	241
Missile sites	184
Radar warning installations	74
Special ammunition sites	68
Miscellaneous	146

Infrastructure requirements within NATO are changing and new projects include special ammunition storage facilities, sites for missile systems, an adequate system for air defence ground environment, and new and improved communication and navigation devices. Future infrastructure projects will include extension of the pipeline system, additional naval bases, and various training facilities.

How Bidding Proceeds

Proposed projects are screened to ascertain whether they are essential to NATO and whether they serve the whole complex and not just one or two countries.

Once an infrastructure project has been approved and construction estimates are cleared, the host country invites firms in all NATO member countries to bid for the contract. The host country issues an official notice of its intention to call for International Competitive Bids (ICB) and for the listing of firms considered qualified by any NATO country to receive the opportunity to bid. This document is either forwarded by the Ministry in the host country to the Canadian Trade Commissioner stationed there or is sent to the host country infrastructure delegate at NATO headquarters, Paris, for distribution to other NATO delegates. In the first instance, the documents are sent to Canada by the Trade Commissioner in the host country and in the second, the documents are sent to Canada by the Trade Commissioner in Paris.

Copies of the intention to call for bids are sent direct to the Overseas Requirement Division of the Department of Defence Production/Canadian Commercial Corporation and the Commodities Branch of the Department of Trade and Commerce. The Overseas Requirement Division of DDP/CCC and the Commodities Branch, Department of Trade and Commerce, Ottawa, work closely together in the selection of a list of suitable and qualified firms to be approached by the Overseas Requirement Division, DDP/CCC to find out if they wish to be included in the eligible list.

The Overseas Requirement Division is responsible for the submission of the final list of eligible firms in accordance with the instructions issued by the host country in the call for listing. It is also responsible for keeping the Canadian Trade Commissioner in the host country and the Commodities Branch of Trade and Commerce advised of the action taken. The final list submitted by the Overseas Requirement Division will include a certificate of eligibility for each firm named and an eligible list of inter-

ested firms. The certificate of eligibility includes a guarantee by the Canadian Government of the financial and technical capabilities of the companies and a certificate of military security classification.

The government of the host country forwards detailed specifications to the Canadian companies on the eligibility list, indicating the date by which the bids must be submitted. These specifications may be mailed direct if a contract is unclassified or will be sent by diplomatic bag if a contract is classified. Infrastructure rules require that contracts be awarded by the government of the host country to the lowest eligible bidder who meets the specifications.

Canadian companies interested in infrastructure projects must always keep in mind that there is no similarity between NATO infrastructure and the Defence Production Sharing arrangement that Canada enjoys with the United States.

SHAPE Requirements

Supreme Headquarters Allied Powers Europe (SHAPE) in Paris issues a number of tenders each year. These tenders are divided into two sections: one covers technical procurements and the other general supplies ranging from pencils to automobiles. A source list of Canadian producers is maintained at SHAPE and tenders are sent directly to Canadian companies. Extra copies of tenders go to the Commodities Branch of the Department for distribution to potential suppliers whom SHAPE purchasing authorities may have missed. Canadian companies wishing to have their names listed as suppliers with SHAPE should inform the Commodities Branch of the Department of Trade and Commerce of their interest. The Branch will then send them the application form to be filled in and submitted by the Department to SHAPE. Several Canadian companies have been successful in supplying SHAPE with technical requirements, including single

side-band communication and tropospheric links.

Maintenance Supply Services

This agency was established in 1958 to provide a system of centralized supply management. NMSSA initially selected five aircraft, 17 Army vehicles and two missile systems for supply management. Although Canada is not a member of NMSSA, Canadian companies are eligible to bid on equal terms with member nations for specific systems: the NATO Forward Scatter System (ACE HIGH) and the Early Warning Radar System. Canadian firms are on occasion invited to bid on other NMSSA projects when they are the sole sources of supply or when, in NMSSA's view, they enjoy substantial competitive advantages. Canadian firms interested in supplying NMSSA should contact the Overseas Requirement Division of the Department of Defence Production/Canadian Commercial Corporation.

Canadian equipment and know-how are respected in Europe and an active and well-thought-out promotion campaign could bring Canadian companies substantial returns. North American manufacturers generally can meet tighter delivery schedules than their European counterparts. The Paris office, in co-operation with other Canadian Government officials and the other Canadian Trade Commissioner posts in Europe, is ready to give you active support in obtaining contracts.

—DOUGLAS BRANION,
*Assistant Commercial Secretary,
Paris.*

Picture Credits

Page two, Richard Harrington; p. 6, Montreal Engineering; p. 8, C. C. Huston & Associates; p. 16, Bob Acciaro; p. 17, H. A. Simons (International) Ltd., Sandwell & Company; p. 20, Richard Harrington; p. 22, Hunting Survey Corp.; p. 25, Overseas Developments (Canada) Ltd.; p. 27, Richard Harrington; p. 30, Empresas Eléctricas Asociadas, Lima.

ECIC Offers Long-Term Export Financing

Canadian exporters of capital goods can now meet credit competition from foreign suppliers, thanks to new ECIC financing facilities. What types of transactions are eligible for this support? Are Canadian companies taking full advantage of this export aid?

NEARLY three years ago the Government announced that new export financing facilities were being established. It was stated that the Government would henceforth be giving support to the financing of capital goods exports involving credit terms of over five years. These new facilities were provided to enable Canadian exporters in this field to meet credit competition from foreign suppliers. It remained for these exporters to be competitive and to find credit-worthy buyers.

Many Agreements Signed

The Export Credits Insurance Corporation was charged with the responsibility of administering the long-term export financing facilities under the authority of Section 21A of the Export Credits Insurance Act. The first financing agreement was signed on August 8, 1961. Since that date and up to August 31, 1963, a total of 15 financing agreements covering transactions to a total value of \$127.7 million in seven countries have been signed. Firm commitments have been given by the Export Credits Insurance Corporation and are outstanding covering seven additional transactions to a value of \$28 million and agreements for these are expected to be signed in the next few months. In addition, preliminary commitments have been made on other business under negotiation to a value of \$56.5 million. Of total available resources of \$300 million under the Act, \$212.2 million has been committed in support of export transactions.

This summary of experience under the long-term financing arrangements indicates the success of the



This diesel electric locomotive is the first of 80 to be completed for the National Railways of Mexico by Montreal Locomotive Works and its sub-suppliers. The \$16.1 million order was obtained last January with the assistance of ECIC's long-term financing facilities.

program. But although some companies have obtained major foreign business as a result, more Canadian firms could exploit the new opportunity for export trade promotion. Perhaps some producers of capital equipment are failing to take advantage of the program because they are not sufficiently well informed on the export financing facilities. This article is directed principally to them.

Criteria for Eligibility

The guiding rules, or criteria, that determine the eligibility of transactions for long-term export financing are listed in the booklet entitled *Export Credits Insurance Corpora-*

tion—What It Is and How It Operates, and in the folder bearing the title *Government Export Financing*. These criteria are repeated below with a brief explanation of the way in which they are interpreted in relation to applications for financing.

1. Only capital goods of a sophisticated nature are eligible. Generally speaking, this means the type of producers' equipment required for major projects such as power plants, paper mills, oil refineries, ore smelters, telecommunications systems, or projects of a similar nature. Heavy capital equipment not required for specific projects, such as diesel electric locomotives, also qualifies. Although feasibility studies, resources surveys, and pre-engineering do not qualify for long-term financing, project engineering associated with the sale of a substantial amount of Canadian capital equipment may be covered with the equipment under long-term financing.

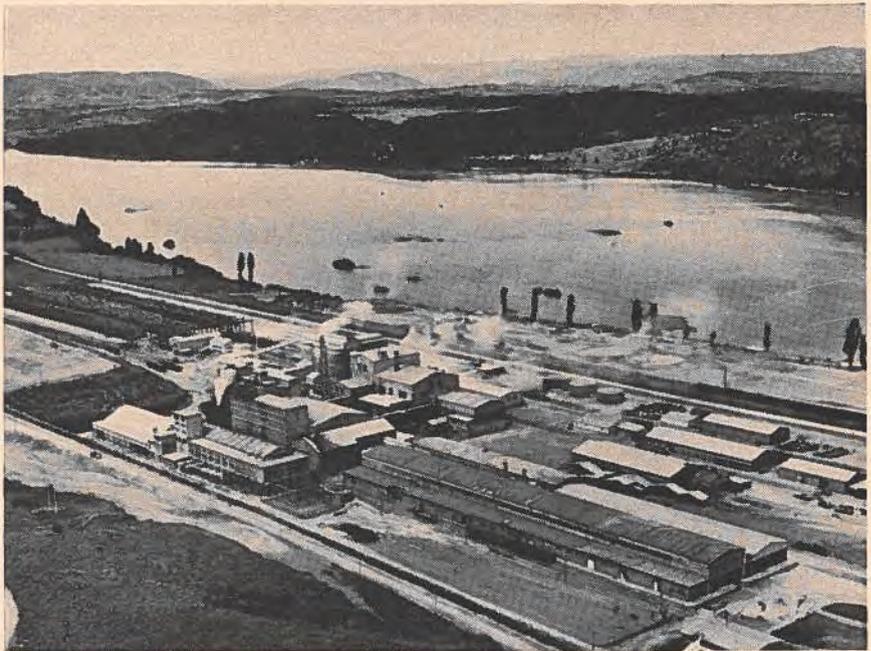
2. Long-term financing is available for export transactions of substantial value. In practice this means that ECIC generally will consider applications covering the export of Canadian equipment and related services only when \$2 million or more is involved.

3. The transactions proposed must be with foreign buyers who have a satisfactory credit standing in credit-worthy countries. In effect, this means that ECIC must be satisfied that the foreign buyer will be able to meet his repayment obligations and that the buying country is economically and politically stable enough to meet its foreign debt obligations in dollars.

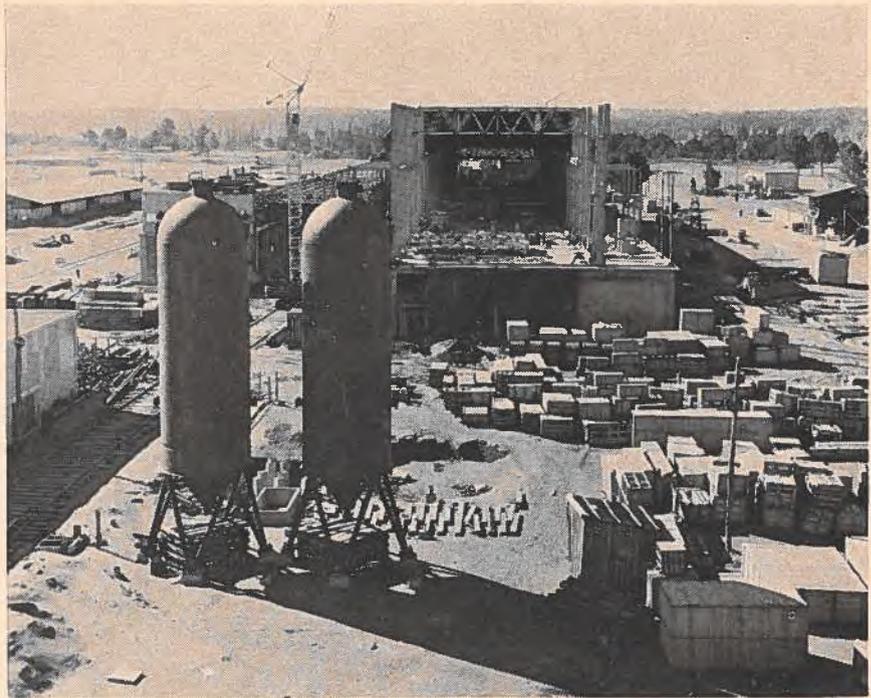
4. The project itself must be a sound one. The applicant for the credit is required to submit information sufficiently complete to establish the technical and economic soundness of the project. In most instances this means that evidence must be offered to establish the ability of the project to pay for itself. When the transactions involved are in newly developing countries, it is customary to require evidence of the priority given the project, whether within the scope of a formal development plan or outside it.

5. There must be convincing evidence that the extended credit terms requested are clearly necessary and justifiable. The long-term export financing is offered to assist Canadian exporters to match the credit terms offered by their foreign competitors, but there is no intention that the facilities should be used to initiate a disastrous international credit race by allowing Canadian exporters to capture orders by out-bidding foreign competitors on credit terms. An assessment of what terms are necessary and justifiable is based on the earning and amortization possibilities of the project, the ability of the buyer and of the buying country to pay, the amount of credit involved, the durability of the equipment being sold, and the terms offered by international lenders on similar projects.

6. The Canadian material-labour content must be the maximum attainable under the procurement possibilities for the equipment, materials, and services required, but in no case may the over-all Canadian content be less than 80 per cent. It must be emphasized that only goods and services exported from Canada are eligible for export financing. This fact will make it clear that the margin of 20 per cent or less of non-Canadian content may not be used for financing local costs in the borrowing country nor for offshore procurement generally, but only for the purchase of those materials and



(Above) This pulp and paper mill in Laja, Chile, largest in South America, is being expanded, thanks to foreign aid. Canadian engineering services (H. A. Simons, Vancouver) and some capital equipment are being provided through an ECIC \$5.7 million loan. (Below) An ECIC \$14.2 million financing agreement is providing the money for engineering services (Sandwell & Co.) and equipment like these big digesters (John Inglis Co.) at a pulp mill now going up near Nacimiento, Chile.



items of equipment not procurable in Canada that are necessary components of the capital equipment being supplied from Canada.

7. Any transaction, to be eligible, must give promise of continuing export trade. Thus one-shot deals that offer no continuing commercial ad-

▶ A case in point

Long-Term Financing Made These Sales Possible

Engineering Services, Pulp and Paper Machinery, Chile—To help expand the plant of South America's biggest pulp and paper manufacturer, *Compania Manufacturera de Papeles y Cartones, S.A.*, in Laja, Chile. The \$5.7 million will finance cost of engineering services and purchases of equipment.

Power Systems, East Pakistan—Engineering services and capital equipment for four power generation and distribution systems to be built to serve nine isolated towns in East Pakistan (\$6 million). This is the first stage of a projected \$15.4 million power development.

Hydroelectric Plant, Ceylon—Engineering services, mechanical and electrical equipment for hydroelectric plant in the Maskeliya Oya watershed of Ceylon, first stage of three-stage power project. Value, \$10.8 million.

Road Graders and Spare Parts, Argentina—Sale of 100 Canadian road graders and spare parts worth \$1.85 million to provincial highway administration in the Province of Santa Fe, Argentina.

Diesel Electric Locomotives, Brazil—Fifteen diesel locomotives for *Compania Vale de Rio Doce, S.A.*, of Rio de Janeiro, worth \$2.4 million.

Steel Rails and Accessories, Mexico—Steel rails and accessories worth \$26.9 million to be supplied to the National Railways of Mexico.

Diesel Electric Locomotives, Mexico—Eighty diesel electric locomotives to be manufactured for the National Railways of Mexico at a cost of \$16.1 million.

Paper Mill Machinery, Pakistan—Paper mill machinery worth \$6.3 million to be used in expanded newsprint mill at Khulna, East Pakistan, designed and managed by a Canadian company.

Pulp and Paper Machinery Engineering Services, Chile—All equipment and engineering services for a \$21 million pulp and paper mill being built near Nacimiento, Chile, by *Industrias Forestales, S.A.*, of Santiago. Contract worth \$14.2 million.

vantages to Canada but which might be possible if long-term financing were provided are not acceptable. The greater the export trade promotion consequences of a particular transaction appear to be in demand generated for raw materials, spare parts, and subsequent orders for equipment from the same or neighbouring countries, the more attractive it becomes for long-term financing. Obviously there is a strong preference for transactions offering these continuing trade possibilities on commercial credit terms not requiring continuous commitments of Section 21A financing.

8. The transaction must give rise to significant employment and industrial benefits in Canada. Transactions that should result in increasing diversification and Canadianization

of industrial production receive particularly favourable consideration.

Promotion and Special Credits

Initially the long-term export financing facilities under Section 21A were intended to be used almost exclusively as an instrument for promotion of export trade in capital equipment. This policy of giving the maximum encouragement and assistance to enterprising Canadian exporters who seek out and develop significant export opportunities has not become diluted over time. Under the Canadian financing plan, for example, the application for credit is submitted to ECIC by the Canadian exporter and not the foreign borrower.

Changing international circumstances, however, have also led to a growth under Section 21A of

credit commitments of a somewhat different type. In several countries Canada has joined a consortium of creditor countries which jointly pledge foreign capital assistance to a particular newly developing country. In some, the Section 21A type of financing comprises the whole of the commitment and in others it supplements our Colombo Plan contribution. In all cases, long-term export financing provides the recipient country with a form of foreign aid but under these so-called Special Credits extended under consortium arrangements, the aid effects of Section 21A loans are given greater prominence. Canada has to the present made Special Credits commitments of Section 21A financing to Greece, India, Nigeria, Pakistan and Turkey.

The technique of administering the financing facilities under Special Credits does not differ radically from export promotion credits, except that the amount of financing to be made available to the country receiving these Special Credits is established in advance and committed to it. The recipient country normally selects the project for which it desires to purchase Canadian equipment and once this project is approved by ECIC, the way is clear for the foreign buyer to enter into commercial negotiations with the appropriate Canadian suppliers. The course of dealing between the Canadian suppliers and ECIC under Special Credits is exactly the same as under export trade promotion credits.

Conclusions from Experience

A few of the significant conclusions reached by ECIC as a result of its experience with long-term credits are:

- That Canadian industry is much more competitive than most people recognized or even yet appreciate. Numerous examples have come to light of Canadian suppliers of capital goods bidding for foreign business against strong world-wide competition and winning out on a

straight price basis. This competitiveness has sometimes influenced United States parent companies to permit their Canadian subsidiaries a greater degree of freedom in export policy.

- That there are substantial export opportunities for Canadian capital equipment all over the world but skill and persistence are needed in developing them.

- That there is a demand in the under-developed areas for all types of financing, both hard and soft. Notwithstanding soft loans from other institutions (such as the United States Agency for International Development and the

International Development Association), there is still an important place for Canadian commercial loans at 6 per cent interest under Section 21A. This is demonstrated by the fact that a country which secures one credit under ECIC is almost always anxious to receive another.

- That Canadian manufacturers of capital goods are capable of increasing significantly the Canadian content of their products. Exporters and their sub-suppliers have shown both resourcefulness and efficiency in co-operating to reduce reliance on components traditionally imported by developing Canadian sources of supply.

The first two and a half years' experience with the long-term export financing program under Section 21A of the Export Credits Insurance Act have been successful ones. Canadian industry has responded vigorously to the challenge of new opportunities to establish Canadian capital equipment in world markets. In doing so, industry has gained strength and provided improved employment opportunities. The financing program has proved its value and will continue to expand in a manner suited to its basic objectives.

—D. C. TAYLOR, *Manager, Export Finance Division, Export Credits Insurance Corporation.*

Canada's Program of Grant Aid to Developing Countries

The \$455 million Canada devoted from 1950 to 1963 to aiding developing countries meant orders for engineering services, equipment, raw materials and foodstuffs placed with hundreds of Canadian firms. Grant aid also brings long-term benefits not only to the recipients but also to engineers and industry here.

CANADA, as one of the founding members of the Colombo Plan in 1950, was one of the advanced countries of the West to establish very early a program of economic assistance for the developing countries. Today Canadian grant aid flows to many parts of the developing world and Canadian aid programs are part of a broad international effort, undertaken collectively by all the main industrialized Western nations, to promote the long-term growth of less advanced countries.

Although Canadian bilateral grant aid programs are designed primarily to improve the economic and social welfare of peoples in less fortunate countries, they also benefit the Ca-

nadian economy both directly and indirectly. This point is not always recognized or understood. Some persons believe that aid programs consist of gifts of Canadian dollars abroad, placing strains on the balance-of-payments position and involving no advantages to Canadian industry. In fact, the carrying out of these programs demands the participation of various segments of the Canadian economy and various sections of the population and helps to create employment and industry.

Benefits Canadian Economy

Nearly all of the \$48.5 million which is the figure for Canadian bilateral grant aid for the current

year, or of the \$445 million which was the total of bilateral assistance appropriations before 1963, will be or has been paid out in Canada in the form of orders placed with Canadian manufacturers, contracts with Canadian consulting engineering firms, purchases from Canadian producers of raw materials or foodstuffs, salaries to Canadian personnel abroad, or allowances to overseas personnel temporarily in Canada. It is impossible to estimate how many Canadian manufacturers have benefited but the number is large. It has been calculated, for example, that for a single Canadian aid project undertaken in South India, the Kundah hydroelectric dam, component parts and materials have been purchased from some 300 different Canadian suppliers.

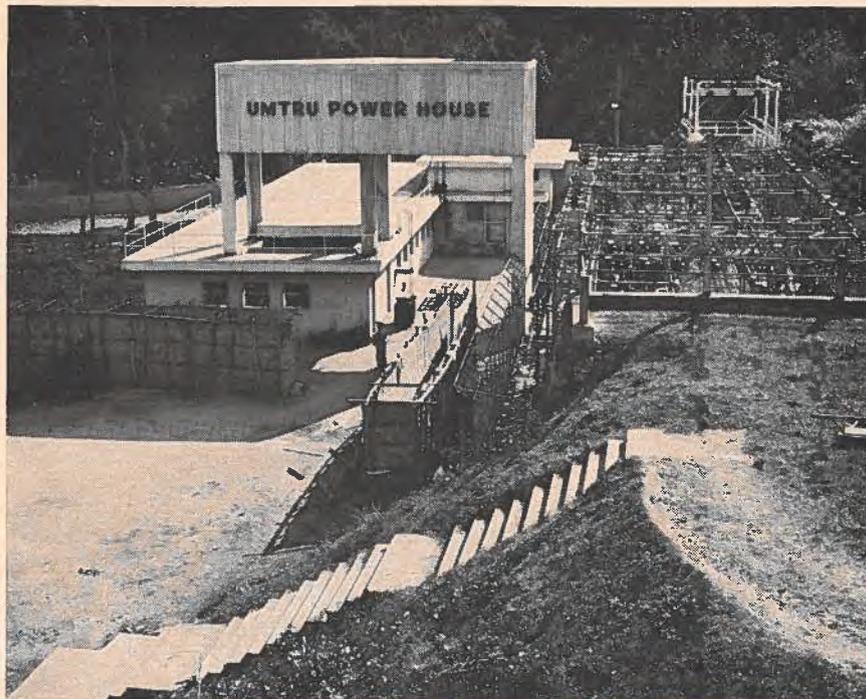
In other ways as well, the aid programs bring benefits. Through the introduction of Canadian products and services into overseas markets, local buyers become familiar with

some of the things Canada can offer. This has sometimes led to commercial orders outside the aid programs. For example, nearly 40 Canadian firms providing engineering services of one type or another have received aid contracts. A large number of these have so impressed local authorities with their abilities that they have been offered other contracts in the country. Moreover, overseas markets are highly competitive today and experience counts for much. Any firm with experience in the developing areas abroad stands a better chance of competing for contracts awarded and financed by these countries from their own resources or through loans from international organizations such as the World Bank.

In the long run, it must also be kept in mind that Canada is a trading nation and that Canadian prosperity, more than that of many other nations, depends on a healthy world trading community. In this sense, therefore, it is in the Canadian interest to join with other industrially advanced nations of the West in seeking, through a common aid effort, to help the newly developing countries to expand their economies more rapidly and achieve higher standards of living. The more quickly they attain the stage of self-sustaining growth, the greater will be their import capacity; the sooner they become self-supporting members of an enlarged world trading community, the broader will be the scope for Canadian export sales.

Bilateral Aid Programs

Canada's participation in this international assistance effort has consisted to date mainly of its bilateral aid programs. The oldest and largest of these programs is the Colombo Plan for South and Southeast Asia, under which Canada has since 1951 contributed some \$423 million. Most of this has gone to assist development in our fellow Commonwealth countries of India, Pakistan, Ceylon and Malaya. But Canadian aid has not been limited



The small powerhouse at Umtru, Assam, India, was built and equipped by Canada as part of its Colombo Plan aid to India. It was completed five years ago.

to South and Southeast Asia and in recent years new programs have been introduced. In 1958, when the West Indies Federation was being formed, Canada introduced a \$10 million, five-year program for the area. This is being continued as a Commonwealth Caribbean Program for the former units of the Federation and for British Guiana and British Honduras at a level of \$2.1 million in 1963-64.

By the end of the last decade the tide of African national independence movements was running strongly and a program called SCAAP—the Special Commonwealth Africa Aid Program—was launched as a Commonwealth initiative. Canada agreed to contribute \$10.5 million over a three-year period commencing in 1961; the main recipients of Canadian aid have been Nigeria, Ghana, Sierra Leone, Tanganyika, Uganda and Kenya. At about the same time Canada also introduced a program of educational assistance to the independent French-speaking states

of Africa at an annual level of \$300,000.

Two other programs complete the present roster—the Commonwealth Technical Assistance Program under which small amounts are made available for other Commonwealth territories, and the Commonwealth Scholarship Plan under which scholarships are provided for up to 250 Commonwealth students to study in Canada each year.

Basic Principles of Grant Aid

This brief account of the above programs shows that they are restricted to certain areas of the world and that funds are limited in each. Monies appropriated by Parliament for the Colombo Plan, for example, cannot be used in Africa or *vice versa*. They are all, however, based on and operated on certain common principles.

- They are all grant aid programs and assistance provided under them imposes no debt charges on recipients.

● They are all bilateral programs (in contrast to Canadian contributions to the multilateral programs of the United Nations) and arrangements for the use of funds are worked out directly between the Canadian Government and the recipient government.

● Funds under each program are used to provide only Canadian goods and services in a manner mutually agreed upon between Canada and the receiving country.

Commodity and Capital Programs

The main types of goods and services provided by Canada are summarized in Table I. It shows that capital project assistance—which includes the construction of power stations, transmission lines and industrial plants, the supply of machinery and equipment, and the carrying out of surveys and feasi-

TABLE I

ALLOCATION OF \$445 MILLION UNDER BILATERAL GRANT AID PROGRAMS 1950 TO MARCH 31, 1963

Type of Assistance	Per cent
Construction	
Power plants—transmission lines	27.19
Industrial and research plants	5.55
Roads—bridges—harbours	.58
Equipment	
Locomotives—road transport	7.22
Aircraft—water vessels	1.72
Agriculture—forestry	.33
Fisheries—ports	1.11
Telecommunications—electronics	.32
Miscellaneous	.02
Surveys	
Ground—aerial	2.52
Institutions	
Schools—workshops	1.01
Hospitals—laboratories	.22
Commodities	
Wheat—flour	18.36
Metals—asbestos	19.32
Fertilizers—pesticides	4.53
Pulp—paper—railway ties	3.44
Miscellaneous	.03
Technical Assistance	4.41
Unallocated to specific projects	2.12
Total	100.00

bility studies—accounts for nearly half of Canadian aid expenditures. Commodity assistance, or the supply of raw materials and foodstuffs, makes up only a slightly smaller proportion of the total effort and technical assistance, which includes the cost of sending individual Canadian teachers or advisers abroad and the bringing of students to Canada, accounts for less than 5 per cent.

These proportions, however, are not similar in individual programs. Commodity assistance, for example, has been concentrated on the more advanced Colombo Plan countries. Countries such as India and Pakistan have already achieved a certain degree of industrial development and urgently require foreign raw materials to feed existing industry as well as project assistance to create new industry. The African countries, on the other hand, have not yet generally reached this stage of development and their urgent need is for technical assistance, including educational, to help them create a pool of skilled manpower without which industrial development is impossible. Technical assistance, therefore, has formed a much higher proportion (about 60 per cent) of the Canadian aid effort in Africa and the capital assistance provided has been limited chiefly to building schools or carrying out basic surveys of resources.

How Aid Is Channelled

In brief, an attempt is made in the administration of Canadian grant aid programs to ensure that the type of assistance we provide is the type the recipient countries need. Several techniques or procedures are employed for this purpose. In the first place, Canada relies on the recipient governments to establish their own priorities of how they wish available funds to be used and Canada acts only in response to specific requests from them.

The External Aid Office does, however, examine carefully any requests submitted to it. Many of the

developing countries have prepared long-term development plans that have the approval of international economic experts, such as those in the World Bank. By examining requests for aid against this background of approved development plans, and by joining with representatives of other donor countries in international consortia to examine the aid requirements of developing countries, Canada is in a better position to ensure that its own contribution is being channelled as effectively as possible.

The External Aid Office also applies other criteria in examining requests for assistance. It is obviously in the interests of both Canada and the recipients to ensure that the maximum value is obtained from each aid dollar. Moreover, a request for an aid project will not normally be approved unless the asking government is itself prepared to contribute to the project. The development of any recipient country must be largely a self-help process if it is to be effective. Aid projects are therefore usually undertaken jointly, with Canada supplying equipment, materials and skilled personnel and the recipient country supplying at its expense all necessary local materials and personnel who can be trained both to help build the projects and later to operate them.

Although this review emphasizes the economic aspects of Canadian bilateral aid, both in relation to the administration of the programs and their benefits to Canada, there are important social, political and international factors that also influence the direction and content of Canadian aid. Nevertheless, whatever these influences may be, Canadian bilateral grant aid programs will undoubtedly continue to provide an opportunity for Canadian business organizations, producers and individuals to participate in the vital task of assisting the developing countries.

—External Aid Office, Ottawa.



One of the big contracts in which Hunting played a part was a survey for the Mekong River project financed by the Colombo Plan and AID funds. It called for precise levelling over 1,600 miles from the sea to the Burma border; here a ground control party is taking levels on the bank of a stream in northern Laos.

Hunting Surveys the World

This 17-year-old Toronto firm has carried out natural resources surveys on every continent; worked in 31 different countries at one time. In an interview its president discussed the problems of competing for and executing contracts—and how to minimize these.

“YOU have to be able to do the job technically, but you also have to be able to sell it.” Douglas N. Kendall, president of Hunting Survey Corporation, Toronto, natural resources engineers, puts neatly the dual problem that confronts the engineering firm in research of foreign contracts—finding out where projects are planned and then convincing potential clients that you have the qualifications to carry them out.

Hunting Survey Corp. was established in Canada, under Kendall's direction, in 1946 and immediately he began looking for assignments both at home and abroad. Before the year was out he had won a \$200,000 contract from International Petroleum to explore for oil in Colombia, working through the IP office in Toronto. In 1947 Hunting was chosen to undertake a geological investigation, also for oil, in Venezuela. Today a steady 50

per cent of the firm's business comes to it from foreign clients; about half represents contracts under various foreign aid schemes and half are for private enterprise. In one recent twelve-month period, Hunting was working in 31 different countries, and it makes the claim that it is the only commercial company to have done jobs on every continent, including Antarctica. In August, when I interviewed Mr. Kendall, his firm was engaged in projects in the United States, Greenland, Argentina, Chile, Nicaragua, Italy, Thailand, Timor, Somalia, and Uganda, and had about 100 of a staff of over 700 (150 professionals) working outside Canada.

Man on the Spot

Selling Hunting's services throughout the world, mainly by going where the business is, makes up a big part of the president's job. For many years he spent about 70 per cent of his time on the road (or, more literally, up in the air). His associates tell with some amusement and a bit of awe about the time he got off a plane from London at Malton, was met by some of his colleagues and apprised of a problem, climbed on another plane, and was off to Europe again.

Kendall emphasizes the amount of time and money that engineering firms must spend in following up leads—and adds that this means only the bigger jobs are worth going after. He also makes clear that it's the man on the spot who gets the business—and produces a classic example. His firm won a contract for a big minerals survey for six oil companies in Bolivia. Why? Because on the crucial day when the contract was to be awarded he had a man posted in the head office of each of the six. This meant one man in The Hague, one in London, one in Havana, and one in each of three U.S. cities.

Occasionally business results from merely knocking on doors—provided that they are the right doors. The Venezuela contract of

1947 was obtained because Kendall called on the oil companies down there, purely on spec.

Get There Early

Canadians must not only be on the spot to get contracts but they must be there in the early stages of developing a project. Capital projects normally go through five phases: feasibility survey, engineering and design, construction, equipping, and management. Canadians must normally be in on the feasibility and engineering and design stages if they are to share fully in the resulting business. And usually it is not only the consulting engineers who benefit. Take Chile, for example. Hunting undertook a survey of its forest resources and demonstrated Canadian abilities. Sandwell and Company of Vancouver then designed a pulp and paper mill and a Canadian manufacturer supplied the equipment for it. Often a Canadian firm that has worked on a project is retained to manage it for a period or as a consultant, so the benefits continue.

It is Kendall's experience (and that of other engineers as well) that Canadians succeed best in fields in which they have acquired an international reputation. Good examples are forestry (as in Chile, mentioned above), the development of hydroelectric power, mineral prospecting, and work in the North. The assignment in Antarctica, for example—a geodetic and mapping survey for the British Government—came to it because its British associate knew Hunting had the right type of aircraft and crews experienced in flying in the North. (According to the president, the most difficult assignment the firm has taken on was prospecting for minerals in Bolivia, where survey aircraft had to be operated at the high altitudes of the Bolivian plateau.)

Local Associations Useful

Like other Canadian engineering firms, Hunting has discovered the

practical value when working in foreign countries of tying in with a local firm, possibly by acquiring an interest in it. These arrangements prove useful not only in carrying out a contract but in obtaining it in the first place. Hunting is able to supplement the local firm's resources by providing more sophisticated equipment, highly trained personnel, and sometimes additional capital. Thus bolstered, the foreign company can take on contracts clearly beyond its unaided capacity and its Canadian associate benefits also. Occasionally, when the volume of business in a country warrants it, Hunting opens an office there—in New York, for example. It also employs permanent staff (nationals) in Bolivia, Peru, Chile, and Argentina.

Kendall does not favour entering into a permanent consortium with other Canadian and foreign firms for undertaking work overseas. He does see some merit in the forming of an ad hoc consortium to handle a particular project—for example, a temporary arrangement as the need arises with a construction firm and an equipment supplier.

Meeting Competition

Competition for foreign contracts in the resources survey field comes principally from the United States, Germany, Britain, France, Italy and Japan. Canadian firms have certain advantages in this competitive struggle. One (already mentioned) is their wealth of experience in hydroelectric, mining and forestry surveys. Another is their ability to operate effectively under field conditions and push ahead with the job quicker and with less "fuss and feathers" than anyone else. Just as vital is the talent Canadian engineers show for getting along with native peoples without adopting the paternal approach. As for costs, it is Kendall's opinion that his firm is competitive because Canadians can turn out in an hour more productive work than most. This cost factor sometimes brings the firm subcon-

tracts from engineers in other countries.

On-Site Problems

Executing an overseas assignment technically, Kendall finds, is usually the easiest part of it; the problems arise in other areas. There's the thorny one, already discussed, of finding out about opportunities in the first place. Actually getting started on the job can be time-consuming and frustrating. Imported equipment has to be cleared through Customs, foreign personnel have to be cleared for work in the country, local labour must be recruited and necessary licences obtained. Often Canadian engineers sit in a hotel and fume while the red tape is slowly unwound. If this process takes too long, the company may lose a whole operating season in the field and costs will mount. For this reason, Hunting finds it advisable to guard in the contract against delays that are not its fault. It's equally important before signing a contract to look into the matter of foreign taxes, except when undertaking projects financed by foreign aid, which are tax-exempt. The contract should also provide penalties if payment is not forthcoming by an agreed date.

Are personnel problems particularly difficult on a foreign job? Not if you choose your people carefully in the first instance, says the Hunting president, who considers the ability to get along with nationals in the country in which the engineer is working even more important than his technical qualifications. On most jobs, large numbers of local workers are employed and some of them must be trained to take over when the foreign firm has finished its work. This creation of skilled personnel is possibly one of the most vital contributions that Canadian engineers can make to the advancement of the less developed countries. One problem that sometimes crops up is the stress that these countries put on purely academic qualifications when it comes to

choosing project managers, rather than on the ability to cope with on-site difficulties. A client once refused to accept Hunting's recommendation for manager and insisted on having a major academic "name". The result was complete chaos until he was replaced by the firm's original choice.

When a foreign assignment lasts longer than six months, Canadian engineers are accompanied by their families who live with them on location. About 60 Canadians, for example, went to Pakistan when Hunting was carrying out a geological and land-use survey there. Kendall adds that one of the most worthwhile investments a firm can make is in the comfort of its employees sent to a foreign country for varying periods. As project manager he always chooses an experienced engineer and new staff work under his supervision and direction. Wherever possible, Hunting employees chosen for jobs abroad speak the local language—French, Spanish, German, etc.

Assignments Widespread

Has Hunting evolved the correct approach to foreign work and the proper techniques for carrying it out? In answer, its president merely details some of the contracts it has successfully completed or is working on today. One of these is the Mekong River survey. This survey, needed to lay the groundwork for the great Mekong power and irrigation project, was financed by Canadian Colombo Plan funds and by a U.S. AID grant. It involved doing, in six months, precise levelling over 1,600 miles from the sea to the Burma border (about the same distance as from St. John's, Newfoundland, to Chicago). For this project, Hunting had as many as 240 people working on the ground at one time, plus one aircraft. The job was so large that it was undertaken by the Canadian survey industry jointly under Hunting management.

In the arid country of Somalia, 14 Hunting employees are engaged

on a project financed by the UN Special Fund, with the Food and Agriculture Organization as the executing agency. The Somalias hope to build up a livestock industry but the prerequisite is adequate supplies of water. Hunting is doing a four-year hydrological and agricultural survey to establish water sources.

The firm's first overseas work was undertaken in Latin America and it is the site of one of its most far-reaching surveys. Two years ago, Chile suffered a devastating earthquake. The Government faced the task of patching up the damage and restoring people to their homes. Hunting suggested to government officials there that they take the broader view, evaluate the natural resources of the area afresh, and resettle the displaced families where the resources warranted. This proposal was accepted and Hunting

is participating jointly in the survey with three U.S. engineering firms under the sponsorship of the Organization of American States.

Many of the projects that Hunting has undertaken are, in a sense, self-perpetuating. A resources survey usually leads to continuing business because the data collected must be up-dated periodically. Forestry data, for example, are outdated within ten years and some facts and figures are only valuable when they are obtained over a long period—50 years for rainfall.

With new customers to seek out and old customers to supply with continuing service, the Hunting firm, with seventeen years of experience behind it, looks forward to an equally active and successful future.

—O. MARY HILL,
Editor, "Foreign Trade".

Power Development for Malaya

THE WORLD BANK several weeks ago made a loan equivalent to U.S.\$51.9 million to the Central Electricity Board of Malaya. It will help to finance the building of hydroelectric and thermal power plants with a combined capacity of 162,800 kilowatts and to extend transmission facilities. These projects will provide power needed to keep pace with demand and will make more efficient use of generating capacity by interconnecting all current transmission systems on the western side of the country.

The cost of these projects is estimated at the equivalent of U.S.\$70 million and the IBRD loan, representing 70 per cent of total cost, will cover the foreign exchange component. It is for a term of 25 years and bears interest at 5½ per cent, with amortization beginning in May 1968. CEB, a government-established public utility, now operates a power network with an installed generating capacity of 210,000 kilowatts and an extensive transmission system. To supplement its own power supplies, CEB now brings in power in bulk from other utility companies.

The largest project undertaken by the Board is the Cameron Highlands scheme for developing the hydroelectric power potential of groups of streams on the

Cameron Highlands plateau, about 100 miles north of Kuala Lumpur. Construction of the first stage of this scheme, being financed by a Bank loan of U.S. \$28.6 million made in 1958, is well advanced and will be completed in 1965.

The present loan will assist in financing the second stage of the Cameron Highlands scheme—the Batang Padang project. This project will provide two more power plants, one at Woh and the other at Odak, with initial capacities of 100,000 kilowatts and 2,800 kilowatts respectively. It will also help to finance construction of the Prai thermal power station on the coast of Wellesley Province in northern Malaya. The initial capacity will be 60,000 kilowatts but the plan is to increase this.

Transmission facilities are an important feature of the project. They will not only connect the new power plants with existing facilities, but will also interconnect all major power plants and supply systems operated by the CEB and other facilities on the western side of Malaya. The interconnection will produce immediate benefits: firm generating capacity will be increased by 45,000 kilowatts and it will be possible to use both hydroelectric and thermal plants to the best advantage. ●



The sketch map above gives some idea of the wide-ranging development projects going forward in one field alone, electric power. It shows the fifty power projects throughout the world on which North American or European engineers are engaged.

Seeking Out Engineering Opportunities

A Canadian engineer takes a hard look at the problem of finding out about engineering and construction projects overseas early enough to assess and bid on them—without incurring heavy costs.

A NUMBER of Canadian firms have suffered wounds in battles for overseas engineering construction assignments. Some firms have given up and others have withdrawn to search for new weapons or for fields where the odds seem better. Are there any lessons to be learned from this, either for the new recruit or for those with the determination to see the fight through?

It is sometimes claimed that Canadians are handicapped by high costs and by the lack of long-term financing and of suitable government support. And yet Canadian engineering and construction firms are at work in Britain, the Caribbean, South America, Africa, the Far East—literally in all parts of the world. These contracts, plus the

standing of Canadian proposals in other competitions, show that apparently we can compete abroad. Although we are excluded from some projects (such as those financed with United States aid funds), a large and rapidly increasing number of opportunities are open to us overseas. It has been estimated, for instance, that the yearly value of construction in the developing countries (excluding Australia, Japan, and the Communist sphere) amounts to some \$10 billion.

Why then have some Canadians who attempted to enter the international field suffered disappointment? The main reason was the expense and effort involved in getting started and the slowness of

the results. The task does seem forbidding. Most Canadians are relative newcomers to foreign work, while many of their competitors from the U.S., Britain, and Western Europe have had years or decades of experience. They have contacts, local knowledge and advance information not available to Canadians. In addition, some have substantial resources and sizable income from overseas work and thus are able to exploit the advantages of a head start. It is both difficult and expensive to match their efforts in going after overseas work.

The problem, it seems, is having well-prepared, confident and timely proposals submitted from Canada, without incurring excessive costs in the process. It is this problem which has discouraged some and has put others in the position of the old lady who was hurrying to finish her knitting before the wool ran out. Finding and bidding on overseas

work is expensive and time-consuming. Last minute proposals, or those with unreasonable contingencies, have slight chance of success. At the same time, there is little doubt that well-prepared proposals by Canadians will result in challenging and profitable assignments. Careful selection and a concentration of effort on the most promising opportunities seem to be the way to achieve results.

Choose Best Opportunities

One approach might be to limit interest to one or two countries or at least to a small geographic region, say Central America. Unfortunately, it is questionable whether this approach can be successful. In all countries there are local firms with varying degrees of competence and resources ready to take on work, and they will be given preference over foreign competitors. Proposals from outside the country will only be seriously considered when the required resources and experience are not available locally. The number of such instances, as a rule, is not sufficient to provide a continuing market for Canadians in any of the less developed countries.

The most promising approach seems to be to look for suitable opportunities, whether they be in Africa, Asia, South America or elsewhere. The interested firm should investigate as many of these as possible without spending too much money, to locate the promising ones where chances are that competition will not be overly severe, that the contract will be awarded and administered fairly, financing and prompt payment assured, and technical aspects and working conditions favourable. On such projects, Canadian proposals will be well received and will stand a good chance of success.

Selection Tools

Many tools are available in this critical process of survey and selection. The Canadian Trade Commis-

sioner Service is excellent and often is not used to best advantage. All too frequently the Trade Commissioners are either left out entirely or else asked to perform functions of a senior company executive. No matter how dedicated they are, they cannot become specialists in the problems of engineering and construction. Names of firms or individuals willing to act as overseas correspondents are easy to come by but their help is often less than might be expected. If they receive no salary they will do correspondingly little. To pay them well and to train them is expensive, especially if several countries are to be covered in this manner. Commission arrangements may lead to misunderstandings and recriminations and tend to produce much correspondence, cabling and telephoning on unsuitable projects. It is also relatively easy to strike up correspondence with local firms or agents who are interested in co-operating as partners or suppliers. They can help considerably in preparing proposals, but they normally contribute little to the finding and evaluation of prospects.

An increasing number of trade papers, periodicals, and news releases carry information on overseas engineering projects, but this information is frequently incomplete, inaccurate, and not timely. It can seldom be relied upon as more than a starting point for further inquiries. Economic plans and other material published by governments overseas are as a rule too general to be of much assistance. Embassies, consulates and trade commissions in Canada can be helpful from time to time. Because Canadian interest is relatively new, however, foreign representatives in this country are not as well informed on engineering matters as those in the United States and Europe. International banks and agencies have a wealth of useful information at their disposal but are reluctant to make it available. As a matter of fact, one can frequently learn as much about

overseas projects in Washington, London and Paris as in the country involved. To do this, however, requires familiarity with a bewildering array of agencies and their personnel.

The above comments seem to suggest that none of the available sources of information are practical or reliable. In fact, although they might individually be misleading, a continuous and careful use of all of them together will go a long way towards a preliminary assessment of existing opportunities.

Special mention should be made of promoters and those with claims to connections and influence abroad. Lately Canada has become one of their favourite targets. Most of us have had approaches along these lines but probably none has produced any satisfactory results. If there are any short-cuts to obtaining overseas work, these people are certainly not one of them.

Timing Is Important

It may be tempting to conclude at this point that it is best to wait for public bid invitations before attempting to take any other steps. This approach, often tried, is possibly the surest way to ensure disappointment. The time provided for preparation of proposals is as a rule barely sufficient to produce the necessary estimates and calculations and to collect information from abroad. There is almost never time to engage in correspondence, discussions, and meetings about the desirability of submitting a proposal. Unless these decisions have been taken in advance, the result may be either a hasty bid or a passing-up of the opportunity.

Timing, on the whole, is one of the most frustrating aspects of looking for overseas work. It always seems to be either too early or too late. Some projects will not materialize for another ten years; on others, proposals are due the day after tomorrow in Kuala Lumpur. Only a regular and systematic checking of prospects over an ex-

tended period can provide some relief in this respect.

All preliminary investigations will in the end leave a number of questions unanswered. Given a promising opportunity which is real, reasonably immediate and suitable, will the proposals be treated fairly? Are there financial and legal restrictions? Do some competitors have special advantages? Will there be further work involved in the future?

Personal Investigation Vital

Ultimately, someone must go abroad to investigate. Although travel to any part of the world is an easy matter, the task involved is not a simple one. The right person must be found and he must be available for long enough to do a thorough job.

Assume, for an illustration, that an engineering firm in Belgium were to get interested in the Columbia River power development on the west coast of Canada. Someone is sent over to look into the project. The qualifications required of the man chosen and the assignment facing him are formidable. He should speak English, have the right personality, and be intimately familiar with his own firm's experience and abilities. He should know about Canada, the United States, political problems in British Columbia, and the relationship between the various provincial and federal agencies involved. He should be familiar with the history of the project itself and with related undertakings such as the Peace River development. At the same time, he should know enough about Canadian engineering practices and methods and about probable competitors to be able to assess whether his firm is justified in pursuing the matter.

This illustration may appear extreme. And yet it is not entirely dissimilar from the case of some Canadians who have gone abroad. The projects they were to look at were often of great complexity and scope and of exceptional importance to the local economy. Still,

in more than one instance the visitor from Canada came largely unprepared and for an unreasonably short length of time. Conclusions from such trips are likely to be badly misleading.

Finally, what about keeping things secret? Contrary to domestic situations, there seems to be little to be gained from trying to keep information from competitors. Not only is it impossible to keep a major project confidential but in addition, news travels fast and wide in the more close-knit communities of the developing countries. Chances are that potential competitors both at home and abroad will be aware of the interest of the Canadian firm in any event.

Sharing the Burden

The entire process of keeping track of and investigating overseas engineering opportunities is expensive, lengthy, and demanding of the

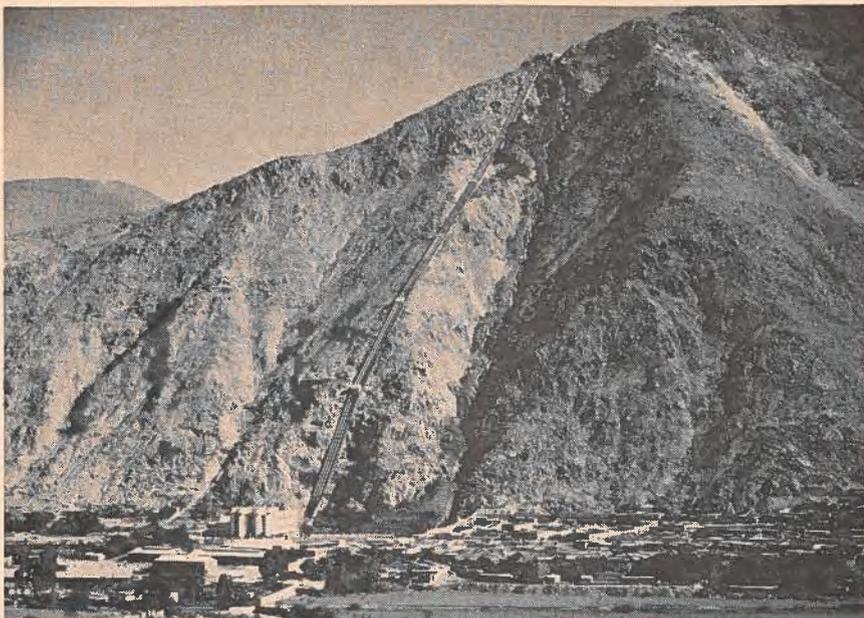
time and talents of senior personnel. One solution used with great success in European countries is the sharing of this burden among a number of firms. In fact, not only have highly successful groupings, sharing their overseas interests to varying degrees, operated for some time from Britain, Germany, France, Italy, Belgium, and the Netherlands, but similar groupings are being established in Brazil, Mexico, Peru, and elsewhere.

There are discussions under way in Canada about the merits of such arrangements. It may well be that the economies and increased effectiveness resulting from such cooperation will prove to be the way to achieve greater Canadian participation in development projects overseas. The rewards, both to the participants and to the economy as a whole, will surely justify the effort and risk involved.

—P. G. OPLER, *P.Eng., M.E.I.C.*



Women workers on part of the great Kundah hydroelectric project in South India homeward bound, with the containers in which they carry small stones and mortar on their heads perched upside down like tin hats. Kundah, begun in 1956, will be finished about 1965; is the biggest Colombo Plan project Canada has undertaken.



The run-off from the 15,000-foot Andean watershed is brought through a network of 45 miles of underground tunnels to a series of stations producing electric power for the city of Lima. The end of one of these tunnels leads to the head of these penstocks, situated high up on the side of a barren Peruvian mountain.

Peru Plans Hydroelectric Projects

Here is a summary of the Peruvian program to expand hydroelectric power, with an outline of the projects, foreign participation, stage of development, financing. Canadian companies may be able to share in these projects if they make a determined approach.

D. J. McEACHRAN, *Assistant Commercial Secretary, Lima.*

HYDROELECTRIC projects that will nearly double total generating capacity and cost an estimated U.S. \$300 million are now under way in Peru or in the planning stages. Although prospects for participation by Canadian companies should not be exaggerated, a determined approach may, in certain instances, uncover opportunities. This report outlines the extent of international participation in Peru's electrification and points up what other companies

in this field have done to expand their Peruvian business. The days of simple sale of equipment, engineering or contracting services are over. A much more involved relationship between supplier and customer is necessary which, almost without exception, involves either long-term financing or equity participation.

Current Power Production

Peruvian production of electricity has until recently been among the

lowest in the world. At last count, total generating capacity was approximately 800 megawatts (23,000 megawatts in Canada), produced by over a thousand individual plants, of which the majority are hydroelectric. Private industrial plants account for approximately two thirds of the total number of installations and the remainder are owned by public service companies. Of the industrial plants, those owned by Cerro de Pasco (140 mw.), Santa Corporation (50), Southern Peru Mining (45) and by various companies in Lima (40) are the most important. Public service companies (privately owned), whose tariff rates are regulated by an independent commission, produce approximately 350 mw., of which 200 is consumed in the Lima-Callao area. The rest of the country is served by small facilities owned by both government and private interests. It is obvious, therefore, that little power is available to serve Peru's growing needs and this explains the present far-reaching expansion plans.

Hydro Projects Stressed

Peru is well endowed with hydro resources and the majority of new developments are concentrated on harnessing lakes and rivers rather than expanding thermal installations. The existing array of small thermal and diesel units may in fact be replaced by hydro power as present projects are completed. Further, hydroelectric developments are favoured because they contribute to the greater irrigation so necessary to Peruvian agricultural development. Determined to lessen its traditional dependence on raw materials by expanding and diversifying its industrial base, this country is rapidly developing new electric power facilities. There is scope for Canadian companies to take part in this rapid growth.

Developments and Prospects

The following paragraphs discuss the projects summarized in the accompanying table; further details

are available from the Commercial Division of the Embassy in Lima.

● **Empresas Eléctricas S.A.**—The Marapomacocha and Huinco developments are the core of the expansion plans of Lima's power company. They involve the diversion of water from the Atlantic to the Pacific drainage basin and the establishment of generating facilities to harness the potential produced. The first stage began in 1957 with the aid of a U.S.\$24 million World Bank (IBRD) loan. The second and final stage is due to begin when a further loan from the Bank is approved. The total generating capacity of these works (240 mw.) is expected to be available by 1967 and will bring the company's total capacity to 470 mw. Linked to these works are a U.S.\$22 million expansion and modernization of the Greater Lima distribution system and the possible construction of a U.S.\$10.4 million hydro station at Matucana. The latter project, if undertaken, would involve the harnessing of the Rimac River east of Lima to produce an additional 60 mw. The total investment planned by Empresas Eléctricas is approximately U.S.\$90 million.

Although World Bank loans will play an important rôle, a large part of the funds will come from the Empresas Eléctricas itself and from new issues of bonds and shares in Peru and abroad. This will include the participation of a Swiss financial group that holds approximately 60 per cent of the Empresas stock. The engineering firm Motor Columbus and Brown Boveri are both members of this group. Prospects for participation in these projects by Canadian companies are thus limited by the direct connection with Motor Columbus for consulting engineering and Brown Boveri for equipment. On the construction side, the company has established its own local organization that undertakes the civil works. Tenders for the supply of ancillary electro-mechanical equipment (turbines, valves, traps, transformers, etc.) are issued

by Motor Columbus and circulated widely. Canadian firms that have not yet done so might well investigate prospects with this company in Baden, Switzerland, against the time when future tenders will be called.

● **Mantaro**—Preliminary work on this vast hydroelectric project, with a total estimated potential of some 3,000 mw., is now under way. Extensive studies have been made and sights are set for the first stage, estimated to cost approximately U.S.\$155 million and produce 330 mw. Total foreign costs (U.S.\$85 million) are to be financed by 15-year loans from Lazard Bros., London, and Kreditanstalt für Wiederaufbau, (German Development Bank), Frankfurt. The local costs (U.S.\$70 million) are to be covered by the Peruvian Government. The engineering studies were undertaken by Electroconsult (Italy), and the supply of equipment, installation and construction work are being undertaken by a consortium of English Electric (Britain), G. Wimpey (Britain), and Siemens Schuckertwerke (West Germany), called Consorcio del Mantaro. Although these companies will be able to supply a large percentage of the equipment and material, there are bound to be opportunities for suppliers of a wide variety of complementary electrical and mechanical equipment. Tenders will be called but because they may not be too widely publicized, Canadian manufacturers are urged to contact the head offices of the companies named above, as well as the consortium's Peruvian office:

Consorcio del Mantaro
2° piso
Abancay 1176
Lima, Peru

● **Pativilca**—Hidrandina S.A., a company closely associated with Empresas Eléctricas, is expected to undertake shortly the first stage of the Pativilca River project, designed to produce an initial 20 mw., 80 per cent of which will be consumed by the Paramonga sugar and paper

factories owned by W. R. Grace and Company. The plans for the financing of this project are particularly interesting and include loans from the U.S. Agency for International Development (AID), W. R. Grace and Company (in part repayable with Hidrandina shares), and from Empresas Eléctricas. In addition, major suppliers will be required to extend five-year terms, local contractors will have to accept shares of Hidrandina in part payment, and the consulting engineers will withhold billing until the project is completed. Prospects for Canadian participation are again limited by the fact that Hidrandina, as a close affiliate of Empresas Eléctricas, has direct connections with Motor Columbus for engineering and Boveri for equipment. And, as AID funds will be involved, preference will be given to U.S. companies for the supply of related materials, a preference that is strengthened by the fact that W. R. Grace is a U.S. company.

● **Macchu Picchu**—Currently under construction for the Corporación de Reconstrucción y Fomento del Cuzco (a government entity), this project is being undertaken in three stages, leading to a final capacity of 120 mw. The first stage (20 mw.) was nearing completion in July. Electricité de France was retained as consulting engineers and construction is being undertaken by a Peruvian affiliate of Italian Edison. La Turbina (Italy) and Escher-Wyss Oerlikon (Switzerland) are supplying the major equipment. The financing, arranged between the Peruvian Banco Industrial and the project contractors and equipment suppliers, involves amortization of the total cost over eight years.

● **Cánón del Pato**—Designed to increase present capacity from 50 to 100 mw., this project will satisfy the growing needs of the Chimbote steel mill operated by the Santa Corporation (owned 50 per cent by the Peruvian Government and 50 per cent by private French capital) and,

Peruvian Hydroelectric Projects

Marcapomacocha I, 1957-1962

Purpose: Water collection and diversion
Estimated cost: U.S.\$9.5 million
Owner: Empresas Eléctricas S.A.
Funds: World Bank loan (1960) and company funds
Consultants: Motor Columbus
Principal Equipment Suppliers: Brown Boveri, Switzerland

Huinco I, 1960-1964

Purpose: Hydroelectric station
Capacity: 120,000 kw.
Estimated cost: U.S.\$33 million
Owner: Empresas Electricas S.A.
Funds: World Bank loan (1960) and company funds
Consultants: Motor Columbus
Principal Equipment Suppliers: Brown Boveri, Switzerland

Marcapomacocha II, 1963-1965

Purpose: Expansion of Marca I
Estimated cost: U.S.\$5.65 million
Owner: Empresas Electricas S.A.
Source of funds: Proposed World Bank loan and company funds
Consultants: Motor Columbus
Principal Equipment Suppliers: Brown Boveri, Switzerland

Huinco II, 1964-1967

Purpose: Expansion of Huinco I
Capacity: 120,000 kw.
Estimated cost: U.S.\$9.5 million
Owner: Empresas Electricas S.A.
Funds: Proposed World Bank loan and company funds
Consultants: Motor Columbus
Principal Equipment Suppliers: Brown Boveri, Switzerland

Matucana, 1964-1969

Purpose: Water diversion and hydroelectric station
Capacity: 60,000 kw.

Estimated cost: U.S.\$10.5 million
Owner: Empresas Electricas S.A.
Funds: Proposed World Bank loan and company funds
Consultants: Motor Columbus
Principal Equipment Suppliers: Brown Boveri, Switzerland

Lima Distribution System, 1963-1967

Purpose: Expansion and modernization
Capacity: 220/60 kw.
 60/10 kw.
Estimated cost: U.S.\$22 million
Owner: Empresas Electricas S.A.
Funds: Proposed World Bank loan and company funds
Consultants: Motor Columbus

Macchu Picchu

Purpose: Integrated hydro project
 1960-1963: 20,000 kw.
 1964-00: increase to 40,000 kw.
 1975-1980: final 120,000 kw.
Estimated cost: U.S.\$12 million
Owner: Government (Corporacion de Reconstrucción y Fomento del Cuzco)
Funds: Government
Consultants: Electricité de France
Principal Equipment Suppliers: La Turbina, Italy; Escher-Wyss Oerlikon, Switzerland

Pativilca, 1963-1966

Purpose: Integrated hydro project
Capacity: 20,000 kw. increase to 40,000
Owner: Hidrandina S.A. W. R. Grace
Funds: Proposed AID loan, W. R. Grace, suppliers credits, company funds
Consultants: Motor Columbus
Principal Equipment Suppliers: Brown Boveri, Switzerland

Mantaro, 1963-1969

Purpose: Integrated hydro project
Capacity: 330,000 kw. Provision for total of 2,850,000 kw.
Estimated cost: U.S.\$155 million

Owner: Government (Corporación del Mantaro)
Funds: Lazard Bros.—Kreditanstalt für Wiederaufbau—Peruvian Government
Consultants: Electroconsult (Contractors G. Wimpey)
Principal Equipment Suppliers: English Electric Siemens-Schuckertwerke

Cánón del Pato, 1963-1965

Purpose: Expansion of existing facility
Capacity: 50,000 kw.
Estimated cost: U.S.\$12.5 million
Owner: Santa Corporation
Funds: company funds, Ex-Im Bank, AID, suppliers credits
Consultants: Sogei and Westinghouse International
Principal Equipment Suppliers: Westinghouse International

Tacna

Purpose: Proposed integrated hydro project
Capacity: 65,000 kw., provision for 250,000 kw. total
Estimated cost: U.S.\$40 million
Owner: Government
Funds: Japanese Consortium via Japanese Government
Consultants: Electric Power Development Company
Principal Equipment Suppliers: Mitsui

Huaura

Purpose: Proposed hydro-irrigation project
Capacity: 330,000 kw.
Estimated cost: U.S.\$70 million

Rural Services, 1961-1964

Purpose: 24 small hydro/thermal units
Capacity: Total 87,000 kw.
Estimated cost: U.S.\$8 million
Owner: Government
Funds: Le Banque de L'Union Européenne Industrielle et Financiere de France
Consultants: La Societe Anonyme Impex de Paris

in addition, will provide electricity to adjacent regions. The original consulting work was undertaken by SOGIE (France). Internationally called tenders were opened in 1962, with the result that the equipment will be supplied by Westinghouse International; the construction work will be undertaken by local contractors. Funds for the U.S.\$12.5 million expansion will be obtained from AID \$2.2 million, Ex-Im

Bank \$4.7 million, Santa Corporation \$4.6 million, and Westinghouse \$1 million.

• **Rural Services**—A program, based on the Plan de Electrificación Nacional del Peru (evolved primarily from an Electricité de France study undertaken in 1957), is under way to extend electric services to some twenty provincial areas by means of small installations. The

capacities of the individual installations vary from 200 kw. to 4,000 kw. with a combined total of 87 mw. As a result of tenders called in 1960, the firm La Societé Anonyme Impex de Paris (related to M. M. Schneider et Cie) and its Peruvian affiliate, Impex Peruana S.A., were selected to undertake this project. Financing of both foreign (U.S.\$4.6 million) and local (U.S.\$3.4 million) costs were in-

cluded in the contract; the sources of funds were La Banque de L'Union Parisienne and La Banque de L'Union Européenne Industrielle et Financiere de France. Work on the program is well advanced, with twelve stations nearing completion and eight more under detailed study.

● **Tacna**—A contract for the development of an integrated hydroelectric and irrigation project was signed in 1962 between the Peruvian Government, the Government of Japan and a consortium of Japanese firms, comprised of Mitsui Company Limited for equipment and material and the Electric Power Development Company Limited (EPDC), for consulting and supervision work. Under the contract, Mitsui was to invest U.S.\$36.5 million and EPDC U.S.\$3.5 million under 17-year loans facilitated by the Export-Import Bank of Japan and the International Economic Co-

operative Fund, also of Japan. Difficulties have arisen, however, and the project has not yet been started.

● **Huaura**—This project, a proposed Empresas Eléctricas development which would be capable of producing 330 mw. at an estimated cost of U.S.\$70 million, is conceived as a possible way in which Greater Lima's power demands beyond 1969 could be filled. It is thought that this project, when and if tackled, would be undertaken by an autonomous entity composed of both state and private capital. Interested Canadian companies should approach the Dirección de Industrias y Electricidad, Ministerio de Fomento y Obras Públicas (Industries and Electricity Division, Ministry of Development and Public Works) and the Empresas Eléctricas Asociadas S.A. in Lima.

● **Pongo de Manseriche**—The development of the potential of this area has been recommended to the

Instituto de Planificación Peruano as a source of power that would stimulate the industrial growth of the northern area of Peru. Japanese, French, and German missions have submitted to the Government studies of the hydroelectric potential of the area. Here again, the best approach is to the Ministry of Development and Public Works.

International participation in this phase of Peru's development is clearly well advanced and while opportunities for Canadian companies may appear restricted, they should not be overlooked. Our experience in developing hydroelectric facilities certainly qualifies us to take part in this expanding and profitable field. But experience alone is not enough. The evident success of European, American and Japanese consultants, contractors and equipment suppliers indicates that they are providing facilities that we are not matching. There is no reason we cannot do so. ●

Plants and Projects

Australia

OIL REFINERIES—A \$40-million oil refinery built by Petroleum Refineries (Australia) Pty. Ltd. has been opened at Port Stanvac, South Australia, (15 miles south of Adelaide).

Two years in the building, the refinery has crude oil berths to accommodate tankers of up to 100,000 tons deadweight. It has a capacity of 42,000 barrels a day compared with 48,500 barrels a day at the company's other refinery in Altona, Victoria. Petroleum Refineries is owned 74 per cent by Mobil Oil Australia Ltd. and 26 per cent by Esso Standard Oil (Australia) Ltd.

A second refinery costing \$36.5 million is to be built at Crib Point, Victoria, by British Petroleum Australia Ltd. BP's second in Australia, it is expected to be operating within two years and will process about 1.5 million tons of crude oil in its first stage. The Victorian State Government will spend \$7.3 million to develop port facilities for the new refinery. The Crib Point site was chosen for its deepwater facilities that permit oceangoing tankers of 70,000 tons to berth.

Refined products will be shipped from the refinery by tanker to other eastern Australian ports. Pipelines will be built to carry some refined products, such as petrol, kerosene and gas, to Melbourne, 45 miles away—Melbourne.

SULPHURIC ACID PLANT—The largest single sulphuric acid plant south of the equator will be built by Imperial Chemical Industries Australia and New Zealand Ltd. at its Yarraville, Victoria, works. The contact-type plant will cost \$3 million and will have a capacity of 500 tons a day of concentrated sulphuric acid and oleum. It will also generate by-products, electric power and steam. The acid will be used in the manufacture of fertilizer by Commonwealth Fertilisers and Chemicals Ltd. and by other members of the ICIANZ group and will also be sold—Melbourne.

WEATHER RADAR UNITS—The Commonwealth Bureau of Meteorology is installing a weather radar system at the Coffs Harbour (N.S.W.) aerodrome, as

part of a £1 million chain of weather forecasting stations from the Antarctic to New Guinea. A similar unit has already been established at Mildra, Victoria, and others will be built at Ceduna and Oodnadatta, South Australia—Sydney.

Brazil

CHEMICAL PLANT—Caustic soda, chlorine, sodium hypochlorite, hydrochloric acid and BHC (insecticide) will be produced at a plant to be built in Labatao, state of Bahia. Part of the total investment of approximately Cr.\$2.5 billion will be put up by West Indian Chemicals Limited of the Bahamas, a subsidiary of Morton Salt Co. of Chicago, in conjunction with local chemical companies—Rio de Janeiro.

Ceylon

TELEX AVAILABLE—Colombo was linked to the radio network of the International Telex Services on July 1. Subscribers in Colombo will soon be able to communicate with subscribers overseas by teleprinters that can be installed in any office. The office of the High Commissioner for Canada has subscribed to this service and will be using it later in the year when land lines are available—Colombo.

RIVER PROJECTS—The Government has authorized the start of work on the Rs.135 million Uda Walawe reservoir project; Rs.19 million will be released from the funds of the Gal-Oya Development Board to meet costs during the first year. International tenders will be called for construction of the concrete gravity dam, the spillway, power plants, turbine generators, river outlets, power waterways, canal headings and other specialized phases of the project that the Gal-Oya Development Board will not be able to handle. The entire project is designed to irrigate over 50,000 acres of new paddy and 33,000 acres of high land, and to supply hydroelectric power throughout the southern section of the island—Colombo.

Ecuador

ECONOMIC AND ENGINEERING STUDIES—A series of economic and engineering studies will be undertaken in Ecuador, financed by a loan of U.S.\$2 million provided under the *Alliance for Progress* program. Projects to be studied include development of transportation, irrigation, electric power, agriculture, livestock and food processing. Industries that use Ecuadorian raw materials and meet domestic demand will receive particular attention. Under consideration are products like lumber, pulp and paper, wallboard, small appliances, agricultural implements, and molasses and also storage silos for crops, and certain road and port improvements that will facilitate the opening up of underdeveloped areas—Bogotá.

Ghana

SURVEY AND MAPPING GRANT—According to a recent report, the British Government has granted £201,000 to the Ghana Government to cover aerial photography, field surveying and mapping in the country—Accra.

Hong Kong

WATERWORKS PLANNED—Because of the drastic water shortage, the Hong Kong Government has decided to convert Plover Cove, a 2,750-acre inlet in Tolo Harbour, into a major freshwater lake. It will provide a storage capacity of approximately 30,000 million gallons, three times the present capacity of Hong Kong's reservoirs. The mud-covered bottom of Plover Cove will be cleared so that a firm foundation can be made on the sea-bed for the dam. This project is not only the most costly to be carried out by the Hong Kong Government but also ranks among the world's major engineering works.

When completed, the reservoir will enable water supplies to be evened out over the year. Stage one of the project will include an intake and pumping station at Tai Po, tunnels and intake between Tai Po and Sha Tin, the lower Shing Mun dam, the Lion Rock tunnel, the first part of the treatment works at Sha Tin, and some service reservoirs and distribution pipelines. Construction of a dam across the inlet to form the reservoir will be under stage two. Salt water will be pumped out and replaced by fresh water.

Stages one and two of the scheme will cost an estimated HK\$500 million—Hong Kong.

India

STEEL—Tata Iron and Steel Company Ltd. is expected to participate in India's steel expansion program under the Fourth Five Year Plan, beginning April 1966. The company will step up its ingot production by one million tons; this is economically possible within the existing plant area. The cost of the expansion scheme is estimated at more than Rs.100 crores or roughly Can.\$220 million, half of which will be in foreign exchange. India's steel capacity for the Third and Fourth Plan periods has been fixed at 10 million and 18 million tons—Bombay.

Norway

EQUIPMENT LEASING COMPANY—The first Norwegian equipment leasing company was recently formed by five leading Norwegian insurance companies in co-operation with Hambros Bank and the U.S. firm Lease Plan International Inc. of New York. The company is called Norwegian Equipment Leasing Co. A/S (Nelco) and has its headquarters in Oslo. The majority of the capital has been put up by the Norwegian insur-

ance companies. Equipment or financial leasing, which was originally developed in the United States and has since spread to several European countries, is virtually unknown in Norway. During an initial period of three years, the Norwegian company will lease machinery and equipment for periods of five, seven and ten years—Oslo.

Spain

STEEL PLANT—A new steelworks has been opened at the industrial town of Sestao in northern Spain by Altos Hornos de Vizcaya. This plant (considered the third most important in Europe) is the first in Spain to use the new L.D. system of blowing 99.9 or 99.4 per cent oxygen, instead of the old Siemens system of blowing air. It has two 36-ton-capacity crucibles and will produce 360,000 tons of ingots a year. A third crucible will be installed later on—Madrid.

SULPHITE PULP PLANT—A new 36,000-ton sulphite pulp mill built by the government corporation,

Instituto Nacional de Industria (INI), at Pontevedra in northwest Spain was opened in September. The mill can be expanded in two stages—to a capacity of 60,000 tons, and to a capacity of 100,000 tons. The plant is using Galician pine, but it is expected that other regional species will also be used.

Although the large Spanish demand for sulphite pulp will take up most of the production, regular offshore shipments have begun and will continue—Madrid.

Uruguay

ELECTRIC CO-OPERATIVES—The President of the National Association of Electric Co-operatives of the United States, Mr. Roy Yarbrough, has visited Uruguay to study the possibility of electrifying rural co-operatives. The extensive new program of UTE, the state electricity and telephone organization, provides for power for agricultural colonies and groups in the interior of the country—Montevideo.

FOREIGN TARIFFS

AND TRADE REGULATIONS

Japan

TARIFF QUOTAS FOR NON-FERROUS METALS

—The Japanese Ministry of Finance has announced the tariff quotas for non-ferrous metals for the second half of the fiscal year 1963. The tariff quotas listed below have been in force since Oct. 1, 1963. All quantities are in metric tons.

Silica	99,000
Gypsum	143,500
Manganese ore	245,600
Antimony ore	4,190
Antimony trisulphide	310
Mercury (in flask)	512
Mercury soot (phonetic)	200
Copper ingots	40,000
Brass or bronze ingots	100
Molybdenum ore	3,123
Nickel ingots	600
Nickel powder	72
Nickel anode for electroplating	8
Copper alloy tubes	110

Details of these tariff quotas are available from the Asia and Middle East Division, International Trade Relations Branch, Department of Trade and Commerce, Ottawa.

Peru

TARIFF REVISIONS—Recent amendments have been made in 35 Peruvian tariff items. For eight of these the changes are in nomenclature only.

The specific duty has been lowered on:

aluminum hydroxide
plastic pipes from two to eight inches in diameter for agriculture
unrefillable ballpoint pencils

The specific duty has been raised on:

lard
sodium bisulphite, sulphite and metasilphite
calcium carbide
sponge rubber for furniture
glossed or satined cardboard
gummed draft paper in rolls
paper bands for strengthening packing
paper serviettes and towels
sanitary towels
nails, brads, staples, tacks, screws, bolts, rivets, washers and nuts
locks and locksets
aluminum building materials
aluminum tubing for scaffolds
plastic buoys and floats measuring 6 x 3½ x ¾ inches

Details are available from the Latin American Division, International Trade Relations Branch, Department of Trade and Commerce, Ottawa.

The following nominal quotations may prove useful in checking prices. Canadian traders should consult their banks before making any firm commitments.

Conversion into Canadian dollar equivalent and units of foreign currency per Canadian dollar have been made at cross rates with sterling or the United States dollar on the date shown.

Except when buying and selling rates are specified, the mid rates only are quoted. The buying rate is that at which banks purchase exchange from exporters. The selling rate is that at which banks sell exchange to importers.

When several rates are indicated, the rate applicable depends on the commodity traded. Information on the rate for any specific commodity may be obtained from the International Trade Relations Branch, Department of Trade and Commerce, Ottawa.

Rates used exclusively in non-merchandise trading are not included in the table.

For conversion to United States dollar equivalent multiply by .92699.

Foreign Exchange Rates

Country	Unit	Type of Exchange	Can. dollar equivalent Oct. 7	Units per Canadian dollar	Notes (see below)
Argentina	Peso	Free	.007314	136.72	
Australia	Pound		2.4148	.4141	
Austria	Schilling		.04180	23.92	
Bahamas	Pound		3.0185	.3313	
Belgium and Luxembourg	Franc		.02161	46.27	
Bermuda	Pound		3.0185	.3313	
Bolivia	Peso		.09169	10.91	
Brazil	Cruzeiro	Official Free	.001768	565.61	
		Special Category	†	†	
Britain	Pound		3.0185	.3313	
British Guiana	Dollar		.6289	1.59	
British Honduras	Dollar		.7546	1.33	
Burma	Kyat		.2265	4.42	
Ceylon	Rupee		.2264	4.42	
Chile	Escudo	Bank rate	.5565	1.80	
		Free	.3578	2.79	
Colombia	Peso	Certificate	.1199	8.34	
Congo, Republic of	Franc		.02161	46.27	
Costa Rica	Colon		.1628	6.14	
Cuba	Peso		†	†	
Czechoslovakia	Koruna		.1498	6.68	
Denmark	Krone		.1563	6.40	
Dominican Republic	Peso		1.07875	.9270	
Ecuador	Sucre	Official	.05993	16.69	
		Free	.05610	17.83	
El Salvador	Colon		.4315	2.32	
Fiji	Pound		2.7194	.3677	
Finland	Markka		.3371	2.97	
France, Monaco, etc.	Franc		.2201	4.54	(1)
Franco-African Republics, etc.	Franc		.004402	227.17	(2)
French Pacific	Franc		.01211	82.58	(3)
Germany	D Mark		.2711	3.69	
Ghana	Pound		3.0185	.3313	
Greece	Drachma		.03595	27.82	
Guatemala	Quetzal		1.07875	.9270	
Haiti	Gourde		.2158	4.63	
Honduras	Lempira		.5394	1.85	
Hong Kong	Dollar	Free	.1880	5.32	
		Official	.1887	5.30	

†Exchange auctions will be held each week for limited amounts of exchange.

‡There is no trading in Cuban pesos in U.S. or Canadian banks at present.

*Latest available date.

*Sept. 23

Country	Unit	Type of Exchange	Can. dollar equivalent Oct. 7	Units per Canadian dollar	Notes (see below)
Iceland	Krona	Official	.02509	39.86	(4)
India	Rupee		.2264	4.42	
Indonesia	Rupiah	Official	.02398	41.71	(4)
Iran	Rial		.01424	70.22	
Iraq	Dinar		3.0205	3311	
Ireland	Pound		3.0185	3313	
Israel	Pound		.3596	2.78	
Italy	Lira		.001733	577.03	
Japan	Yen		.002997	333.67	
Lebanon	Pound	Free	.3528	2.83	
Malaysia	Straits dollar		.3524	2.84	
Mexico	Peso		.08630	11.59	
Morocco	Dirham		.2264	4.42	
Netherlands	Florin		.2995	3.34	
Netherlands Antilles	Florin		.5720	1.75	
New Zealand	Pound		2.9979	3336	
Nicaragua	Cordoba		.1541	6.49	
Nigeria	Pound		3.0185	3313	
Norway	Krone		.1508	6.63	
Pakistan	Rupee		.2264	4.42	
Panama	Balboa		1.07875	.9270	
Paraguay	Guarani	Free	.009709	103.00	
Peru	Sol	Free	.04021	24.87	
Philippines	Peso	Free	.2767	3.61	
Portugal & Colonies	Escudo		.03752	26.65	(5)
South Africa	Rand		1.5093	.6626	
Spain and Dependencies	Peseta		.01798	55.62	
Sweden	Krona		.2077	4.81	
Switzerland	Franc		.2500	4.00	
Syria	Pound	Free	.2825	3.54	
Thailand	Baht	Free	.05178	19.31	(4)
Tunisia	Dinar		2.6106	3831	
Turkey	Lira		.1199	8.34	(4)
United Arab Republic	Pound	Official	2.4811	4030	
United States	Dollar		1.07875	.92699	
Uruguay	Peso	Free	.06112	16.36	
Venezuela	Bolivar	Controlled market rate	.3215	3.11	
		Official Free	.2376	4.21	
West Indies	Dollar		.6289	1.59	(6)
	Pound		3.0185	3313	(7)
Yugoslavia	Dinar	Official	.001438	695.41	

Notes

1. Franc is also used in Algeria, French Guiana, Guadeloupe and Martinique.
2. Chad, Central African Republic, Congo, Dahomey, Gabon, Ivory Coast, Mali, Islamic Republic of Mauritania, Niger, Senegal, Upper Volta, Camerouns, Togoland, and Malagasy. Also Reunion, Comoro Islands, St. Pierre and Miquelon.
3. New Caledonia, New Hebrides, French Polynesia.
4. Additional rates are in effect.
5. Portugal: approximately same rate for Portuguese territories in Africa.
6. Barbados, Trinidad and Tobago, Leeward and Windward Islands.
7. Jamaica.

TRANSPORTATION NOTES

Central America

INTER-AMERICAN HIGHWAY—Another vital link in the economic unification of Central America was achieved by the official inauguration in April of the Inter-American Highway which stretches 3,142 miles from Panama City in the Canal Zone to Laredo, Texas. This road is part of the Pan-American Highway that will eventually link the two continents from Alaska to Patagonia. Cloud-covered mountain passes 11,000 feet up, tropical jungles and isolated desert are all traversed by the highway. Although the Inter-American Highway has been officially opened for traffic, a great deal of work remains to be done. Widening, landslide and flood prevention measures, and the change of some sectors from gravel surface to pavement are the most pressing matters.

The linking of Panama to the United States was first envisaged in 1884 by the United States Congress which proposed a Pan-American railway. However, with the advent of the automobile, a road network became more feasible and by 1934 plans had been made for the construction of an Inter-American Highway. Since that date, the United States has contributed about \$173 million and the Central American Republics and Panama \$82 million. Generally, the financing of the highway in Central America has been achieved by each Republic contributing at least one third of the cost of construction in its country.

For Canadian exporters the development of the highway opens two promising avenues for the transportation of goods throughout this area. One is by ship from Montreal or Halifax to Puerto Barrios, Guatemala, via the Canada-Jamaica Line and then by truck to each country. Another is by truck to Miami and then "fishyback" from Miami to Puerto Matias de Gálvez by Co-ordinated Caribbean Transport. From this point the trailers are taken to the consignee by road. The highway route from Canada to Central America via Mexico has some disadvantages because of the requirement that Mexican-owned vehicles must haul freight and passengers through that country—Guatemala City.

United States

PORT TRAFFIC RECORDS—Significant gains were registered by Louisiana's three major ports during 1962, with the Port of New Orleans handling 71,569,913 tons—an unprecedented amount for any Gulf port—and making a major contribution to the combined total of 120,161,200 tons. Statistics compiled by the U.S. Army Corps of Engineers showed a 10.2 million ton or 16.7 per cent gain by the port over the 1961 total of 61.3 million tons.

Foreign traffic in and out of New Orleans in 1962 totalled 19 million tons, an increase of 3.7 million; exports accounted for 14 million, imports 4.7 million. Coastal traffic totalled 19 million tons, a gain of 4.2 million—almost three times the gain registered in 1961 over 1960. Barge receipts and shipments were 30.5 million tons, up 2.4 million; barge shipments totalled 12.2 million tons, and receipts were up 2 million tons for a total of 18.3 million. Intraport and local traffic totalled 3.3 million tons.

Principal exports were corn, wheat, soybeans, grain sorghums, animal feeds, lubricating oils and greases, and dry sulphur. Imports consisted mainly of fresh bananas, green or raw coffee, sugar, inedible molasses, crude petroleum, residual fuel oil, asphalt petroleum, gas oil and distillate fuel oil, gypsum or plaster rock, and pigments, paints, and varnishes. Canada is a major supplier of the last two—New Orleans

Trade Commissioners on Tour

In Territory

M. R. BELL, Assistant Commercial Secretary in Oslo, Norway, will visit Trondheim in mid-November.

W. GIBSON-SMITH, Commercial Counsellor in Cairo, United Arab Republic, will visit Ethiopia, October 21-31.

H. S. HAY, Assistant Commercial Secretary in Mexico City, will visit the states of Oaxaca, Chiapas and Tabasco, November 18-23.

J. P. LANCASTER, Commercial Secretary in Oslo, Norway, will visit Kristiansand, Stavanger and Bergen, October 30 to November 5.

V. G. LOTTO, Assistant Commercial Secretary in Beirut, Lebanon, will visit Jeddah, Saudi Arabia, October 20-25.

C. J. ST. PIERRE, Assistant Commercial Secretary in Port-of-Spain, Trinidad, will visit St. Kitts, Montserrat, Antigua, St. Lucia and Dominica, October 16-23.

R. K. THOMSON, Senior Trade Commissioner, and **J. M. T. THOMAS**, Trade Commissioner, in Hong Kong will visit Communist China early in November.

Businessmen who would like these officers to undertake assignments should get in touch with them at their posts as soon as possible. Write to Mr. Bell and Mr. Lancaster at Oslo, Mr. Gibson-Smith at Cairo, Mr. Hay at Mexico City, Mr. Lotto, at Beirut, Mr. St. Pierre at Port-of-Spain, and Mr. Thomson and Mr. Thomas at Hong Kong.

Roger Duhamel
QUEEN'S PRINTER

If undelivered return to:
The Queen's Printer, Ottawa, Canada

