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Sights Set on German Market

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Editorially speaking. . . .

A three-part section on Germany, compiled by personnel at our posts in Bonn, Duesseldorf and Hamburg, indicates the region is a good market for Canadians. It also shows there are areas for improvement.

Improvements, too, are being made in Canada's developing viable alternatives to the more traditional energy sources. Bob McDonell, in the second in his series on energy, takes a look at Biomass (page 9).

Another kind of energy — in the form of assistance under the ILAP umbrella — is being put into the region of Montmagny/L'Islet. This, together with the recent purchase of Admiral by Inglis, should see the area on the road to economic survival.

Surviving quite nicely are a number of individual Canadian companies. Three success stories can be found on pages 14, 16 and 18.

On a wider scale and of interest to a large number of Canadian companies, the Federal Business Development Bank offers tips (page 22) on managing successfully in difficult times, while the Economists' Corner examines developments in international wage compensation levels.

And there's more! Read on. . . .

D.E.W.

"The Canadian exporter with his eye on the German market ought not to take only the rifle approach. He should take long aim through a telescopic sight — if he wants to hit the relatively small market sector where his prospects lie." This and other useful insights are revealed in the following article.

Taking Aim at the German Market

by William Brett
Counsellor (Commercial), Canadian Embassy, Bonn

The Canadian/German trading relationship is a remarkably mature one. Our exports cover about 800 items as defined in the Canadian tariff classification schedule, the bulk of them in the area of finished products. The trading relationship too, is characterized by a free flow of information and businessmen in both countries are very much aware of the emerging conditions in the other's market.

The system is sensitive and quick to adjust to opportunities or closures. Also, in an industrially sophisticated country such as Germany, with well-established distribution channels, the Canadian trader can scarcely expect wholesale breakthroughs of a type to produce dramatic change in overall export performance. These are more the hallmark of countries in the latter stages of industrialization where various substantial intakes of capital goods and projects hulk rather large.

The Canadian exporter with his eye on the German market ought not to take only the rifle approach. He should take long aim through a telescopic sight — if he wants to hit the relatively small market sector where his prospects lie. Even a wall niche can lead to very substantial rewards once the market is penetrated.

To the casual observer, the performance of Canadian exports to the FRG in 1981 may have been disconcerting since our sales dropped 25 per cent in absolute terms and our market share declined 1.1 to 0.7 per cent. In contrast, American exporters maintained their traditional share.

Viewed in the long term however, the perspective is not quite so negative. Since 1972, Canadian exports have experienced consistent growth and even after the 1981 decline, still increased by a factor of four over the 10-year period.

Even in more recent times, performance has been impressive with exports more than doubling in the three years between 1978 and 1980.

In addition, there were a number of extenuating factors which coincided in 1981 but are unlikely to continue to represent a drag on exports as we move ahead into the 80s. Some of these are examined below.

In the edible agricultural sector — food and drink — our exports declined from $141 million to $114 million due, in considerable measure, to declining sales of rapeseed oil and cake ($18 million in 1980 — $6 million in 1981). This variation is in part due to reduced acreage in Canada.

There was significant gain in Durum wheat and dried vegetables but the whole sector, amounting to $114 million, constitutes less than 10 per cent of our trade. This is not of sufficient weight to have much effect in shifting the essential character of our trade with Germany.

In the crude materials category, inedible rapeseed, again reflecting reduced acreage, also dropped significantly, roughly from $28 million to $11 million. This was more than compensated for by increased sales of flaxseed from roughly $42 million to $69 million.

Among traditionally weighty items, asbestos sales declined from $89 million to roughly $34 million. Iron ores, which are included in the crude material sector of

statistics, dropped from $76 million to $59 million. In all, the whole statistical category dropped from $440 million to $357 million. Again, not a fact of commanding moment in an overall evaluation of the trade picture.

In the fabricated materials section — which includes lumber — both cedar and hemlock fell a combined amount of $20 million but the weightier item of wood pulp held at a high level of just more than $270 million. Gold, also included as a fabricated material, registered sales of $9 million over negligible sales in 10 months 1980. Over the statistical range of the category, exports fell from $612 million to $575 million.

In the section covering end products, significant gains are registered in metal working presses and autoparts in 1981.

It is interesting to note that the sector of manufactured and relatively sophisticated products registered a fairly high incidence of advances in individual products including "models for demonstration" (probably flight simulators) from under $1 million in 1980 to $13 million in 1981. Navigation instruments also advanced.

On the other hand, probably as a result of declining gold prices, gold sales fell dramatically from $229 million in 1980 to $13 million in 1981. Indeed, if gold coins were removed from the end product cate-

It is interesting to note that the sector of manufactured and relatively sophisticated products registered a fairly high incidence of advances in individual products including "models for demonstration" (probably flight simulators) from under $1 million in 1980 to $13 million in 1981.

gory, our sales of finished products would have increased in 1981 rather than declining from $440 million to $236 million.

The net effect of these sectoral fluctuations has been to produce total exports in the amount of $1.636 billion in 1980 against $1.28 billion in 1981.

The following table of export sales of tariff items selling in excess of $10 million brings out the relative importance of mineral raw materials and, to a lesser extent, finished capital goods. In total, these 19 items constitute more than half the value of overall sales in which some 800 items figure.

Export Sales 1981
$ Million

Herring fillets, frozen	13.9
Flaxseed	68.6
Iron ore concentrate	33.1
Iron ore agglomerate	25.7
Molybdenom	39.3
Coal	33.7
Asbestos milled fabrics	21.7
Asbestos short	13.2
Non-metallic minerals	27.9
Lumber hemlock	13.8
Wood pulp (various)	274.8
Newsprint	49.0
Radioactive elements & isotopes	40.1
Copper, refining shapes	68.6
Automotive parts	11.0
Aircraft engines and parts	15.6
Models for demonstration	13.7
Card punch sort tab computers & parts	16.0
Fur goods, apparel	15.5
Gold coins	12.8

Concerning the overall decline, it appears likely that exchange rate fluctuations (the Canadian dollar strengthened in 1981), general economic conditions in the FRG and the declining demand for gold coins account for most, if not all. Consequently, exports should not be discouraged by 1981 statistics. Particularly if one adopts a highly focussed approach, opportunities for further penetration are readily available.

In very general terms, the most promising target area appears to be in the high technology field where impressive gains were registered in 1981. In this sector, many opportunities have been created as a result of developments in primary equipment which, in turn, have stimulated demand for related accessories. Certainly, computer peripherals and industrial control and analysis apparatus fit into this category. Lucrative opportunities are by no means limited to these areas, however.

In a recent study, the three Canadian trade posts in Germany undertook an in-depth market analysis of numerous sectors and concluded that Canadian suppliers face excellent sales prospects in many areas. Automotive parts have already been cited in this article.

Rapid growth in this sector can be attributed to duty remission schemes negotiated with B.M.W., Daimler Benz and Volkswagen which have been directly responsible for increased sales in North America as well as Europe.

On the consumer side, musical instruments and sporting goods hold excellent promise. In the latter, Canadian products have made impressive in-roads with German consumers during the past decade and this trend is expected to continue. Significantly, the use of German trade fairs to promote Canadian sporting goods has had an impact not only in the FRG but in the balance of Europe and further afield.

Apparel also represents an area in which Canada has experienced impressive growth, particularly where outerwear and furs are con-

cerned, while the potential for selected grocery and fisheries products is similar.

Outside the consumer and automotive sectors, escalating building and building material costs have heightened consciousness of lower cost construction techniques or products. This development holds promise for finished wood products and timber frame housing.

In reflection of Germany's stature as the leading West European chemical market, and the high degree of industrialization, there are also excellent prospects for Canadian chemicals and industrial machinery — particularly for printing, packaging and book binding or for environmental and pollution control devices.

In some of these sectors the internal demand of the German market is not the limiting factor. Several Canadian manufacturers have learned through positive experience that a few German concerns active in large turnkey projects outside the FRG represent a good channel for sales into other markets. (See in this issue Canada/German Co-operation in Third Country Projects.)

Several of the products noted above — and a good many others — are particularly suited for exhibition at the appropriate German trade fairs.

These are a noteworthy feature of the sales scene in Germany and are almost invariably attended by considerable on-the-spot success and encouraging prospects. German trade fairs are of international importance in their respective fields, attracting buyers from several European and foreign countries. Indeed, many German trade fairs are identified world leaders in their field. (See in this issue Trade Fairs a Tradition.)

With reference to the easy availability of information concerning the market, aside from the Embassy and the Consulates General, several provinces and Canadian chartered banks have offices in Germany, centered mainly in Frankfurt. The trade flow is also serviced by the German Canadian Chamber of Commerce:

2015 Peel Street
Suite 1110
Montreal, Quebec H3A 1T8

480 University Ave.
Suite 1510
Toronto, Ontario M5G 1V6

Main Floor-Lobby
Hotel Macdonald
Edmonton, Alberta T5J 0N6.

There is, in addition, a German trade information office in Ottawa:

Herrn Witzel
Canadian Embassy
1 Waverley Street
Ottawa, Ontario K2P 0T8.

Several institutions of a quasi official character willingly disseminate trade enquiries. The Embassy or the Consulates can help channel these. The German equivalent of the Chambers of Commerce, Industrie- und Handelskammer (IHK), are somewhat different in nature than their Canadian counterparts. They are located in every major centre and some not so major. They have a legally-constituted standing and membership is compulsory under law. They represent a closer tie between traders and authorities than is the case in many other countries.

Germany will remain an attractive, challenging major market with special attraction to the Canadian businessman who can tailor his approach to the times.

The German market reflects a mature economic relationship. It is complicated, demanding and sometimes paradoxical.

These attributes, particularly when considered in relationship to the unemployment situation which has attained a degree of insistence not known in Germany for many years, call for consideration of means of participation other than intensified commodity trade efforts.

Canadian producers might find their prospects best pursued by setting up in Germany — a few long-sighted companies have. Then too, there are the advantages of licensing agreements. A good deal of mutual interest is expressed in this area.

The current set-back to the German economy and the fact that it is of longer duration than initially expected, should be seen in perspective. The fact is that Germany is and will remain an attractive, challenging major market with special attraction to the Canadian businessman who can tailor his approach to suit the times.

Canada/German Co-operation in Third Country Projects

German companies have traditionally been active in East Block and in Third World markets with a substantial volume of capital equipment exports. New orders have continued at a high rate in spite of fierce competition, particularly from Japan and the United States. And, over the past few years, major German firms have expressed strong interest in participation by Canadian partners.

Indeed, several major projects have been and are being sought in conjunction with Canadian companies.

Why should this be? Why would the (German) project leader be willing to complicate matters by inviting Canadians to go along?

There is, of course, the consideration that Canada has the ability to supply equipment or technical services of suitable standards and price. Beyond that, German financing being costly, there is the possible Canadian ability to provide financing at competitive rates and willingness to accept a share of the risk during the bidding process as well as in the execution of a project.

Another aspect of possible co-operation lies with projects financed by the German development agency, KREDITANSTALT FÜR WIEDERAUFBAU (KfW).

Since German aid is largely untied — with the exception of a few areas such as consulting services, shipbuilding and nuclear plants — Canadian suppliers, in the "permitted" sectors, can participate in bid packages tendered by German consultants working for KfW. Procurement for the untied development projects is made on the basis of international tenders, calls for which are published daily in the "Nachrichtern für den Aussenhandel," in Cologne.

The type of capital equipment installations that Germany has been successful with in export markets reflects that country's traditional industrial strengths. The value of orders signed in 1980, for example, is shown below in millions of Canadian dollars:

chemical plants	(980)
foundries and rolling mills	(1,110)
construction materials plants	(280)
primary resource exploitation plants and refineries	(630)
power plants	(1,820)
energy distribution and utilization	(65)

In some cases, the need to obtain unique Canadian technology played a role.

It is interesting to note that, although lacking proprietary technology in some of the above areas such as chemical plants, **Canada has the ability to supply a creditable selection of equipment in most of these sectors.**

Moreover on a political basis, Canada and FRG present a most compatible image for joint project activity in third countries. Both enjoy an excellent acceptance in the Third World. In Eastern Europe, including the USSR, the tradition of trading with Germany and the respect for German industrial capabilities transcends occasional ups and downs in other spheres, giving a stable and predictable environment for major project activities.

What Has Been Happening. . . .

Prior to 1979 only sporadic contacts were made with German companies to seek participation in third country projects. Then, in early 1979, the Canadian Consulate in Duesseldorf initiated a program of intensive calls on German companies active in foreign markets. As a result, several promising projects came to light and German firms were introduced to EDC and to potential Canadian partners.

Working closely with IT&C in Ottawa, the consulate quickly established itself as a credible intermediary with industry contacts both in Canada and Germany and an increased flow of inquiries came in from German industry wishing to explore the possibilities of incorporating Canadian participation in projects. The availability of competitive project financing was, in most cases, a prerequisite. In some cases, the need to obtain unique Canadian technology played a role.

Some examples:

- A Canadian firm was potential supplier of the water treatment plant for an integrated rolling mill. The possibility existed also to supply overhead cranes and finished heads.
- Supply of equipment and engineering services on a long distance gas pipeline project.
- Supply of a complete potassium chloride plant to an East Bloc country.
- Supply of a large wood pulp plant to a Latin American country.
- Supply of a non-ferrous refinery to a European client. Sale of licensing know-how is initially the commercial attraction, with an excellent opportunity for Canadian suppliers to bid later on the supply of equipment.

As those who are involved in this field know, major projects of this sort have a long cycle of conception, design, bidding, negotiations, selection and execution. The negotiation stage itself may take months or even years. It is not unusual, especially for large turnkey projects in developing countries, that the project is postponed, altered or dropped even after months of intensive negotiations. Nevertheless, even in the relatively short period since this initiative with German project packagers was opened, some **$40 million** of equipment has been sourced in Canada.

(This amount is modest compared to several situations in which the German prime contractor came close to being awarded the contract, with a significant component of Canada equipment bid in each instance. A number of other projects are currently in the throes of negotiations.)

Negative? No, Positive!

One last point which would weigh heavily in Canada's favour as a partner for Germany: Unlike other major developed countries, Canada would rarely be viewed as a threat to the whole project once this country was brought into the picture. Since, in most cases, Canada does not possess the full range of products and technology that must be furnished for a major project, there would be little incentive to try to take over the whole contract opportunity! A negative turned neatly into a positive.

Trade fairs take place the world over. At many, Canadian companies are avid — and often highly successful — participants. Just as there is great variance in the products, commodities and capabilities exhibited, so too are there differences in how trade fairs themselves are operated. Here we take a look at Germany where. . . .

Trade Fairs are a Tradition

Germany, both East and West, has been a centre for trade fairs for more than 800 years. Historically, trade fair centres developed at the various junctions of the numerous trading routes that crisscross the country. In times past, traders gathered at these junctions to show and sell their wares to the surrounding populace.

Initially, these fairs were relatively limited — both in the geographical area they served and in the commodities offered by the vendors. In the past 100 years, in Germany and elsewhere, the influence of trade fairs has increased enormously. Now trade fairs are held throughout the world, presenting a wide range of goods to international customers.

Today, because of historical traditions and its geographical location, trade fairs held in Germany serve both pan-European and world markets. The fairs, in a number of major German cities, provide outstanding facilities for exhibitors — who may be displaying anything from footwear, musical instruments and electronic equipment to shipbuilding equipment, food industry products and a multitude of other commodities.

As varied as the products being shown are the customers attending: any given fair might see potential buyers in flowing Arab robes; an agent in the native costume of Nigeria; Oriental gentlemen intent on buying and selling — all among the crowds of visitors and their bewildering array of languages.

German trade fairs vary also in the type of audience they attract — from those with limited admission and intended only for trade representatives to others where admission is open to the public, with vast crowds streaming through the exhibition halls to view and sometimes try the products being shown.

The nature of the products at a fair also determines the type of business being done.

For some products it is a reversion to the trade fairs of olden days where direct selling from an exhibitor's booth is expected and where many millions of dollars of business may be placed in the four or five days course of the show. Commodities such as textiles and food are examples of this "direct selling type" fair.

On the other hand, high technology exhibitions and those showing heavy equipment such as ships, power stations, offshore oil equipment and such major transportation equipment as locomotives, rarely make direct sales during the short course of the fair.

Such fairs, however, are vital in providing a forum for contact between potential buyers and vendors who will initiate negotiations leading to orders being placed — sometimes two, three or even five years down the road!

Sometimes overlooked at fairs is the extent of "inter-exhibitor" trade. For example, at the fair a Canadian exhibitor with a counter-clockwise gismo with a head on top, might meet a Dutch exhibitor with a clock-wise rotating gismo with a pan on the bottom. The two exhibitors are natural collaborators and, on viewing their respective products

Passage of overseas goods is made easy, thanks to the close liaison among fair authorities, shipping companies and agents.

and capabilities, it is quite possible they will form some sort of mutually beneficial alliance!

German trade fairs are extremely popular — as is evident in the difficulty often encountered in reserving both exhibitor space and hotel accommodation. Companies will often take space options for five successive fairs. It is common that, at a given fair, space reservation for its successor must be made 12 or more months in the future.

But experience gained over the years has made German fair organizing authorities generally very competent. They provide considerable assistance to potential and attending exhibitors.

Fair authorities provide the coordinator for allocating space in the industry sector at a fair most appropriate to the exhibitor. They also make arrangements for the facilities necessary to provide a fully satisfactory display stand.

These facilities would include an electricity supply, water and drain, sometimes compressed air, special ventilation and the like. At some of the newer and highly effective fair grounds, facilities are provided from underneath the exhibit hall floor through man-holes based on a grid of, say, 7.7 metres. This means that any exhibitor anywhere in the hall has the opportunity of accessing the supply services he needs.

Passage of overseas goods is made easy, thanks to the close liaison among fair authorities, shipping companies and agents. The passage of customs documentation is further facilitated with German customs authorities being located on the exhibition grounds.

In fact, in certain instances of the fair's duration, the fair grounds may become a customs-free area — admission to which is gained with minimal formality! (Naturally, if an overseas exhibitor sells products during the fair for export into Germany to surrounding countries, or even to another location in the world, then further customs activity is necessary).

The set-up at some of Germany's newer fair grounds is most impressive. In addition to providing facilities within the halls, some grounds have completely covered, air-conditioned walkways between exhibit halls. Whatever the weather, movement from one exhibit hall to another poses no problems.

It is also common that the exhibition's central administration building will have banks — not only for changing of money but for arranging all sorts of financing for international trade. As well, there will be a first-aid centre, shops, post office, telephone and telex facilities.

An added bonus: the German fair authorities work in close co-operation with international transport media (railways, airlines, road and, occasionally, sea transport) to ensure that a visitor to the fair arrives with the least possible inconvenience.

February to May and September to November are the busiest seasons for trade fairs in Germany.

During these periods at more than a dozen fair grounds in major cities in Germany, one can expect to see major exhibitions presented at the rate of one every two to three weeks. The organization necessary to keep such a massive activity functioning smoothly is based on many years of experience built up, frequently, from relatively modest beginnings.

Undoubtedly, Germany is one of the most important countries in the world for trade fair activity. It may be re-emphasized that many of the trade fairs provide forums for an exhibitor from any of 50 or more countries to present his wares and capabilities to world markets.

Canadians are regular exhibitors/visitors to German trade fairs. Many of the exhibits are organized and presented by the Department of Industry, Trade and Commerce and other government services for the benefit of Canadian industry.

The International Bureaux for Trade Development at the Department of External Affairs working in conjunction with other government departments and agencies such as the Canadian Government Expositions Centre, can provide a complete exhibition assistance service to Canadian exhibitors.

Naturally, budgetary and other considerations preclude having exhibits at every trade fair. That's why a most careful survey is done to determine which fairs provide the best opportunities for the promotion of Canadian goods and services.

Perhaps your next trade fair venture should be to Germany — where government-initiated presentations participate in some 40 trade fairs a year!

These days energy is a hotly debated subject. Traditional sources are depleting fairly rapidly and costs continue to escalate. To circumvent a potential dilemma, it has become both prudent and necessary to seek out sources of energy that are less than traditional. In the following article, the second in a series on energy and its alternate forms, Commerce's Bob McDonell takes a look at....

Biomass — A Viable Alternate Energy

Stoves that effectively use wood, inserts to make fireplaces more wood-efficient, wood-burning furnaces and even wood-fired steam-electric plants — all have become fashionable sources of heat and energy in many parts of Canada. They may be the main source of heat or used as back-ups for oil and hydro, coal or nuclear-produced electrical energy.

But direct burning of wood for energy is only one side of a multi-faceted search for new energy production methods — whether directly, as firewood, or through conversion to gas or liquid fuels such as methanol, methane or ethanol.

Since biomass is the volume of living matter, it includes not only wood but also agricultural crops and their residues. Even garbage is a form of biomass.

As with other types of energy, cost is the determining factor in the decision to use or not to use a particular method of converting biomass into energy.

By far, the most significant contribution of biomass to energy requirements is in the forestry industry where mill wastes and residues are used to produce energy required by the mills.

Previously these "hog fuels" were burned more as a method of waste disposal. But in the past few years, with the costs of other energy form skyrocketing, it has become necessary to make more efficient use of these fuels. A great deal of research, much of it government-assisted, has been undertaken in this field.

Two Canadian government programs which are supporting the search for greater biomass energy production are the $30 million Energy from the Forest (ENFOR) Research Program and the Forest Industry Renewable Energy (FIRE) Program.

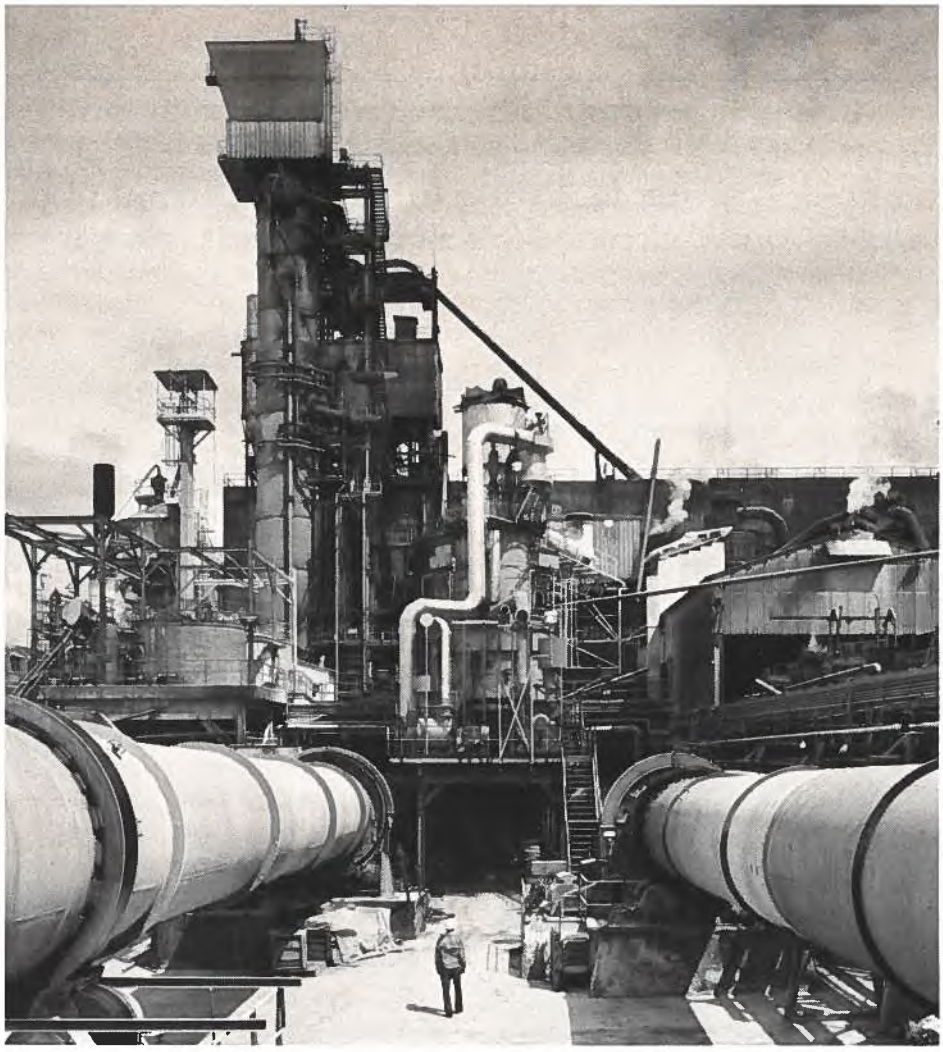
The first program's objective is to establish a basis which will see 10 per cent of Canada's current primary energy use replaced by biomass by the year 2000. The program is exclusively R&D oriented while FIRE is designed to assist in putting in place proven technologies.

While much of the early research of ENFOR was devoted to establishing a biomass inventory for Canada, last year's focus was aimed at harvesting methods, handling systems and the delivery of biomass to locations for its conversion to energy.

During the first three years of the ENFOR program, research was concentrated on direct combustion and gasification. Over the past year, greater emphasis has been placed on liquid fuels.

As announced in the National Energy Program, FIRE has been extended to the end of fiscal 1985-86 and includes, in addition to wood residues, such fuels as municipal and agricultural wastes, peat and other forms of biomass. Support is also being extended to cogeneration systems designed to generate two or more forms of energy, such as steam and electricity, simultaneously. Industrial, commercial, institutional or other organizations that use a significant amount of energy may qualify.

While Canada has some 340 million hectares or 37 per cent of the country's land area under forest and 143 million hectares or 15 per cent of its land assessed as agricultural, only 50 per cent of it is used for the production of field or forestry crops. The balance has severe limitations due to inaccessability, moisture, or soil limitations.



Lamb-Cargate lime kiln system at Port Alberni pulp mill

Thus while Canada may seem to have an inexhaustable supply of land, less than 25 per cent of it is available to produce biomass and its energy potential must compete with the production of food and forestry products — Canada's two largest industries both domestically and as earners of export dollars.

At the same time, the cross-country distribution of agricultural and forestry land is such that location has a great bearing on the type of biomass likely to be economical for energy.

For example in the larger urban areas, garbage is likely to be the most economical source of energy; in pulp and paper mill and lumber towns, forestry residue would be the most economical, while on the prairies and in other agricultural areas, specialized crops and plant and animal residues would get the nod.

Given this, it is not surprising that hardly a week goes by without an announcement of a new plant devoted to energy from biomass.

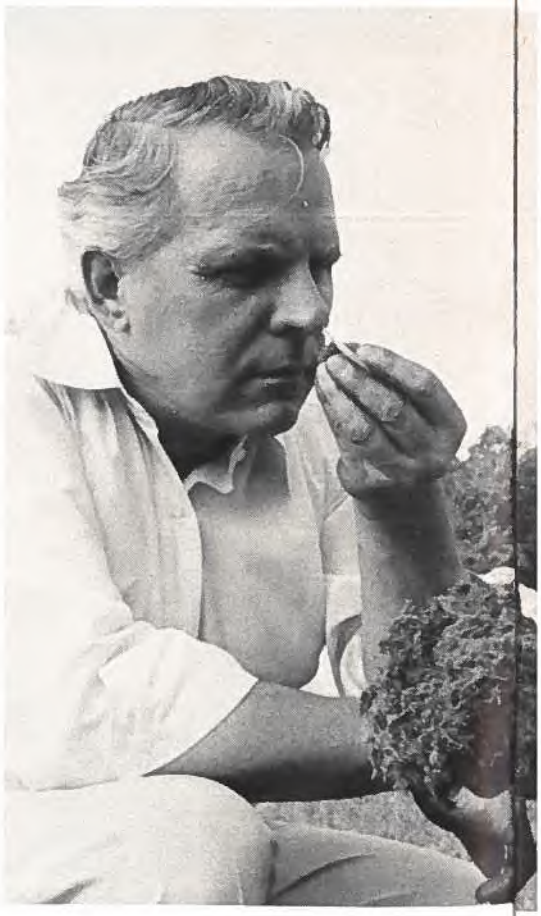
• A $7.1 million dollar pilot ethanol research plant to be built at Canora, Saskatchewan under an agreement between Federated Co-operatives and the Saskatchewan government. The plant will use 1.5 million bushels of barley and 68,000 cords of poplar wood. Under the agreement, the plant will produce ethanol for gasohol production to be marketed through Federated's commercial channels.

• The world's largest biomass gasifier is now in production at the Leveque Plywood Mill at Hearst, Ontario. Designed to replace 265 million cu. ft. of gas annually, the gasifier, developed by Omnifuel Gasifications Systems Ltd. of Toronto, will use up to 6.5 tons of wood waste an hour. Backed by a $309,000 grant from the provincial and federal governments, the $2.5 million plant will replace three-quarters of a million dollars worth of gas a year.

• P.E.I. is seriously studying the possibility of purchasing two wood gasifier engine generators to augment its peak power needs. The German type gasifiers which will produce one megawatt of power would be used to prove the feasibility of this type of power. Among the questions to be answered is one of availability of wood to operate the plant.

• Hearst, Ontario, is also the site of a Bioshell plant that converts wood waste into a highly concentrated pellet form that may be used in a number of space heating applications.

• Quebec's Societe Nouveler, the province's renewable energy corporation is expected to announce the start of a commercial scale



Biomass to cattle-fodder

Stand of prairie aspen

Omnifuel's fluidized bed gasifier at Hearst, Ontario

methanol plant for the Eastern Townships. The pilot plant is expected to use sawmill residues as feedstock and have a capacity of 10 tons an hour. While the first phase of the project will be the production of wood gas, the next step would be to convert the gas to methanol.

• MacMillan Bloedel has installed a wet cell wood burner at its Port Alberni, B.C. pulp mill. The double chamber wet cell is designed to gasify hog fuel at moisture levels up to 60 per cent with the least preparation possible. The solid bed starved combustion chamber gasifies the wood in the lower chamber and then burns that gas in the second chamber to complete combustion with minimum emissions. The unit at full production replaces some 330 gallons of fuel oil an hour in treating limestone for the pulping process.

• The conversion of a distillery in Manitoba to the production of ethanol.

Other developments in the biomass energy field include the development of energy farms such as one proposed for Eastern Ontario. In this scenario, marginal farm lands would be planted with fast growing poplar trees — plantation style — to supply a centrally located wood gas plant.

New varieties of poplar have been developed for the area that reach up to 25.4 cm (10 inches) and 18 m to 27 m (60 to 90 feet) in 10 years or less. Because these species produce new growth from the stump, it is expected that two to three cuts would be possible without replanting.

While tests are being conducted on the fertilizer needs of such plantations, other experiments in Quebec are proving that alders have special nitrogen-fixing properties. Mixed stands of the two trees are being considered since nitrogen is the most expensive nutrient in any fertilization program.

Other tests are being conducted into methane production from farm manures, which now pose serious disposal problems for large hog and poultry producers in close proximity to urban areas.

A new process in Great Britain is said to produce oil from garbage at a cost of some $20.00 a barrel (as compared to a world price of some $34.00). If commercial development proves feasible, it will revolutionize waste disposal methods.

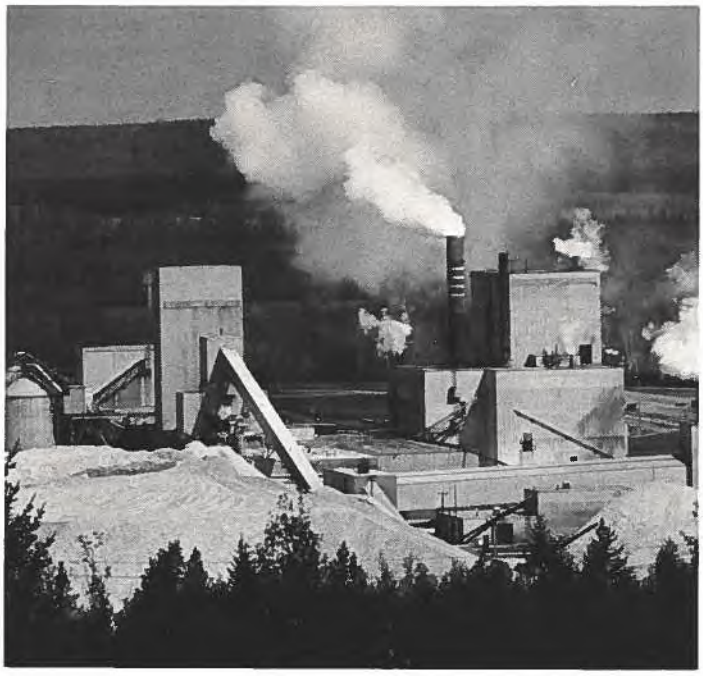
Other research is being devoted to the development of new energy crops such as Jerusalem artichoke, which thrives in cold weather, is virtually immune to pests and disease, and produces more than double the fuel alcohol sugar content of its nearest competitor.

While much of the research in biomass energy is relatively new, there is a vast amount of information being culled from old text books and technical journals — (until the great upsurge of the petroleum industry during the first third of the 20th century, by far the largest share of energy consumed in the world was biomass).

With the technical and financial resources now being poured into biomass research around the world, biomass might well regain its lead in the supply of energy by the early 21st century.

Although facing softening markets over the short term, increasing competition in its traditional markets and rapidly escalating costs — both at its mills and in transportation — the Canadian pulp and paper industry will continue its long term modernization program. Canada Commerce reports on. . .

Canada's Largest Single Export Dollar Earner



Economic conditions in major markets for Canadian pulp and paper producers in the U.S., Europe and Japan are expected to lead to a one per cent drop in shipments in 1982 according to forecasts announced at the 69th annual meeting of the Canadian Pulp and Paper Association held earlier this year in Montreal.

This follows a two per cent drop in shipments in 1981 when compared to the record year of 1980.

The principal cause for the projected drop, according to Dr. David A. Wilson, CPPA director of Economic and Statistical Services is an expected significant reduction in U.S. demand for Canadian newsprint.

Three factors will contribute to a level of demand approximately seven per cent lower than in 1981. The first is a reduction of newsprint consumption as a result of continued weakness in general business activity. The second is an expected reduction in publishers inventories (built up to a 50-day supply at the end of 1981 in anticipation of price increases and the threat of mill closures due to strike action). The third is further growth of the U.S. domestic newsprint industry.

Although newsprint shipments to Canadian customers are expected to increase by two to three per cent, the volume involved is relatively small and will not affect the overall performance of this sector. To complete the picture, shipments to offshore markets are expected to show little change.

In spite of the soft markets, Howard Hart, president of CPPA told delegates that modernization must continue if Canadian pulp and paper mills were to remain competitive with other nations and in our traditional markets in the U.S., Europe and Japan.

In spite of the soft markets, modernization must continue if Canadian pulp and paper mills were to remain competitive with other nations and in our traditional markets in the U.S., Europe and Japan.

As if emphasizing Mr. Hart's remarks, hundreds of suppliers to the industry were displaying the latest in mill and woodlands equipment for the 2,000 or more delegates attending the annual meeting and technical sessions.

Of particular concern to mill operators was energy conservation.

The Energy Committee of the Technical Section has compiled a booklet of — "Energy Conservation Opportunities" — containing numerous methods of conserving energy in all areas of the pulp and paper industry, from groundwood operations to heating and ventilating.

Other sessions examined the supply of wood for the mills and it was generally agreed that a great deal more attention would have to be paid to reforestration and the development of improved species.

While Canada is well endowed with forest resources, much of them are either inaccessible or too far from existing mills.

Since most of the forest land in Canada is owned by the provincial and federal governments, delegates emphasized that much more liaison was required so that the necessary resources would be committed to this phase of their operations.

As an indication of the importance of the pulp and paper industry to Canada, the latest figures released by CPPA for the year 1980 show that the industry employed more than 85,000 — exclusive of those engaged in wood operations. They also show that the industry's net export earnings were $8 billion; as compared to $5.6 billion for the next largest earner — metal ores and non-ferrous metals.

An indication of the impact the industry has on other sectors of the economy is the fact that in 1980 it expended $2.4 billion on plant and machinery.

"SHARING OUR TECHNOLOGY WITH YOU"

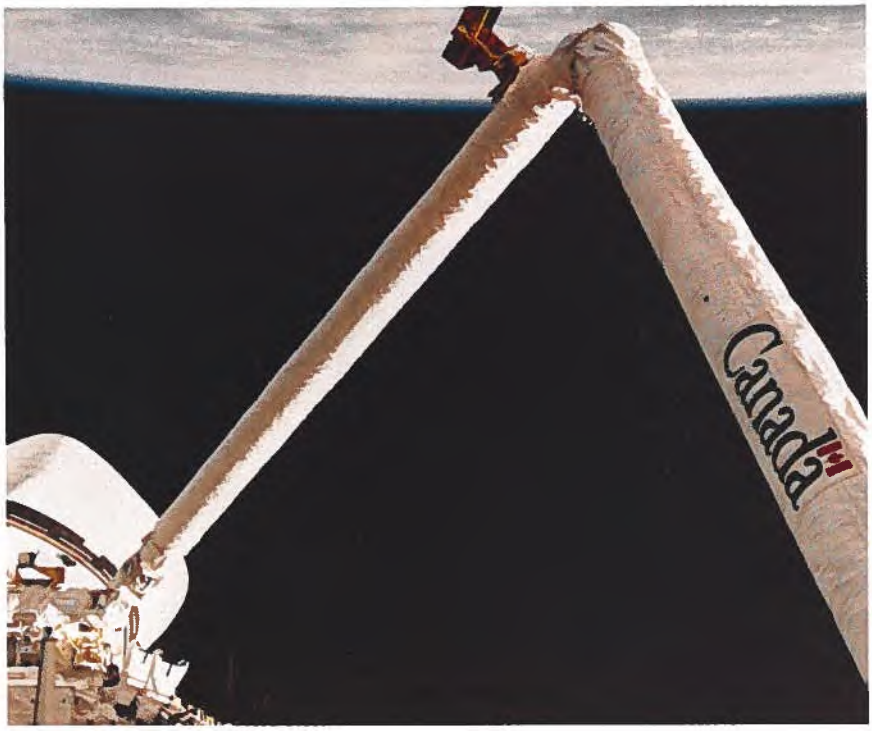
Theme of the Canadian Governments and Manufacturers' Participation in Major International Exhibitions to Increase Canada's High-Tech Exports

+HANOVER, GERMANY
International Defence Electronics Expo '82
Hanover Fair Grounds
May 15-18, 1982.
Contact:
Alan Rackow Tel. (613) 995-7304

+ WASHINGTON D.C. U.S.A.
Armed Forces Communications and Electronics Show
Sheraton Washington Hotel
June 15-17, 1982.
Contact: Michel Samson Tel. (613) 993-5467

+ While space at both these shows is sold out, a visit will be helpful in determining the state of the art around the world.

PHILADELPHIA PENN. U.S.A.
Canadian Solo High Technology Show for the Mid-Atlantic Region National Guard Armory
For Information on Participation contact:
Jutta Butcher
U.S. Market Development Bureau
235 Queen St., Ottawa, Ont. Tel. (613) 993-5467.



CANADA
has its arm in space
And an expert hand in the future
of computer technology.

From the Foundation — Up

by John A. McManman
U.S. Marketing Consultant

Time code generators, switchboards for secure communications, light auditors, "smart switches" and fibre optics — Foundation Electronic Instruments of Ottawa is building new products and systems that will contribute to Canada's electronics industry.

We were attending the Canadian High Technology show in Boston last fall. George Lehner of the Canadian Consulate, Boston, Bob Brown from the Atlanta office and myself were discussing exhibits when Bob remarked that we were being monitored on a television screen. Checking to make sure our ties were straight, we moved in for a closer look.

We were introduced to Menno Stoffels, vice-president of Foundation Instruments, who described many of the instruments displayed as well as their use with fibre optics. Most impressive was the transmission of our images from the camera to the monitor screen using fibre optic transmitter and receiver. After examining the thread of glass, more visible through the magnifier of the splicing equipment that the company markets, it could be seen that this tiny strand was indeed the link between camera and screen.

Having read an article in a recent Canada Commerce which described the future of fibre optics, I was curious to know more of the Canadian contribution to the subject.

I visited the Foundation operation in Ottawa and was impressed with the fact that in less than five years the company had grown from one employee to support 36 full-time persons as well as 10 part-time technicians and consultants.

Attila J. Szanto, who is the president and chief executive officer of the company (known to the staff as Tony), became the first employee in August 1977. He worked from the basement of his home with Menno Stoffels providing part-time assistance to give the company its start. And from these basement beginnings came the company name — Foundation. Fifty-six square metres (600 square feet) served as laboratory and office with activities confined to the development of video switchers that Tony designed and produced at low cost.

Audio logging systems were the first contracts to come along, followed by an invitation to design and build a secure switchboard for voice communication which was designated for use by the Department of National Defence.

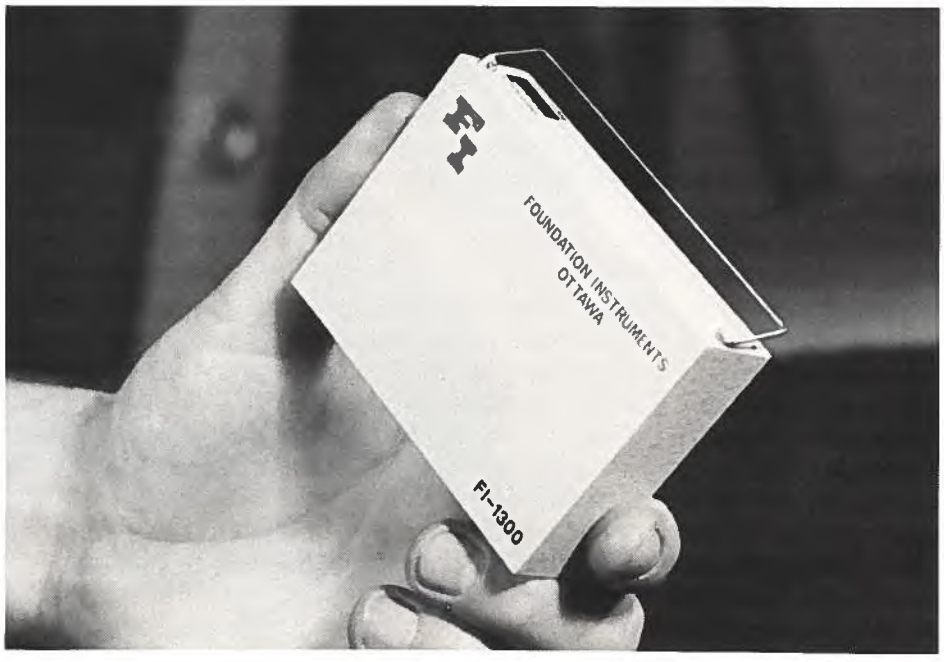
During this first year a contract with Bell Northern Research and Bell Canada provided the opportunity to produce 50 complete fibre optic sets to be used in the Yorkville-Toronto fibre optic trials.

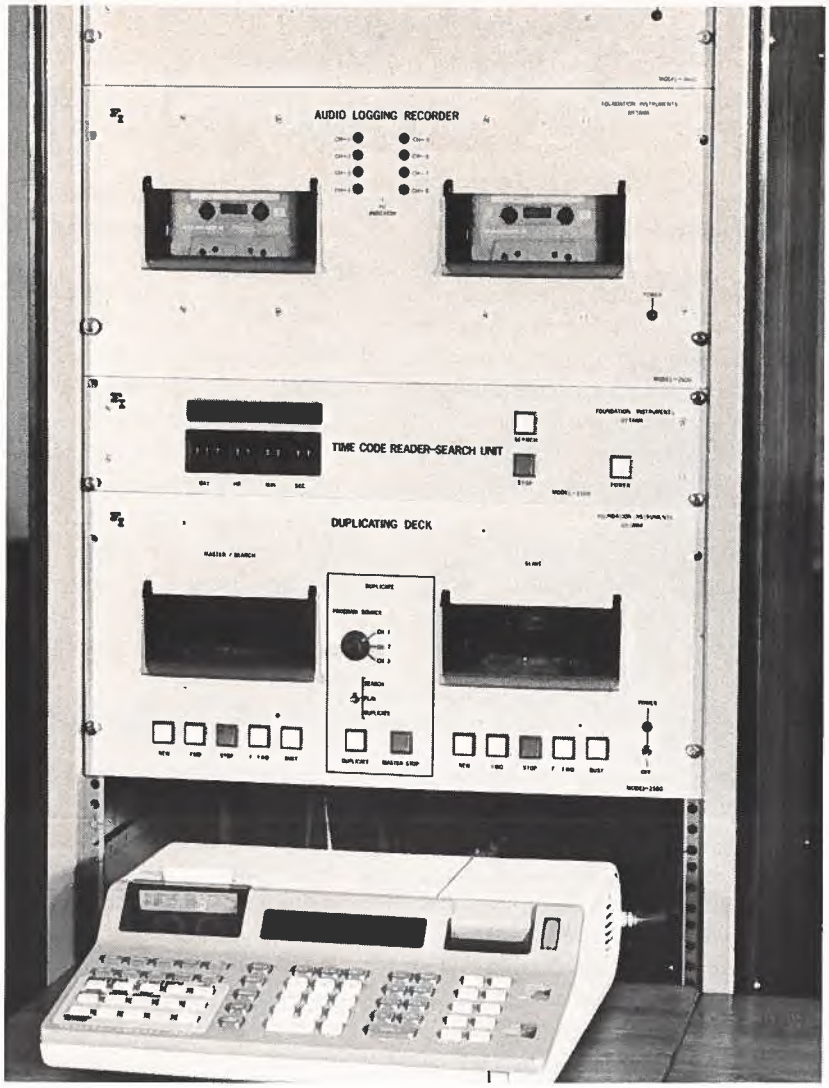
An eight-month period was the time available to complete the equipment — and the night prior to the opening ceremonies saw Tony and Menno still screwing down lids. Arriving in Toronto at dawn, they made the deadline. All systems proved "go."

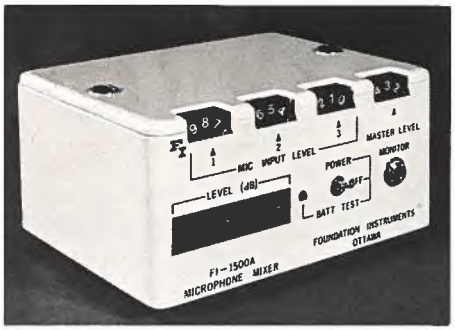
Areas of expertise are not limited to fibre optics. The company has developed a light auditor that can determine the amount of light usage by measuring the time that lights are left burning.

They have designed an air infiltration system, completely self-contained and automatic, that can measure the rate of air exchange in a building. The Gamma Radiation Moisture and Density Determination System, designed and built by Foundation, allows non-destructive testing of insulation and other solid materials.

Tony Szanto has designed, built and tested an experimental model to simulate shipboard data and control communications. This is a 35-channel fibre optic system now operating at the Halifax Training Centre, Nova Scotia. It is believed to be the first in operation and it prompted further developments with the use of fibre optics for the Department of National Defence. A secure fibre optic system containing fibre optic links, signal multiplexers and alarm systems is still in opera-







tion after a number of years. Further development has produced an 18 km fibre optic communication link featuring 10 channels of high speed digital data, guarded by a sophisticated alarm and monitoring feature.

Techniques for communication between aircraft and satellites have been developed leading to state of the art performance for aircraft antennas. This was accomplished as a direct result of the work done by James H. Chinnick, chief engineer of the company. With his direction, experiments requiring design and location of ground and airborne satellite terminals has allowed Canada to continue a competitive position in the field of mobile satellite communications.

Foundation's efforts, supported by IT&C's Defence Products Branch include their exposure at the Boston Hitech show where space was provided by the Department in this all-Canadian showplace. In addition to providing leads and introductions for the company, IT&C has sponsored Foundation executives on an outgoing mission to Mexico as this is being written, will include company officers in an upcoming mission to U.S. defence bases, and has provided space for a company exhibit in the Canadian booth at this spring's annual meeting of the Armed Forces Communications and Electronics Association.

The company is currently bidding on major American military R&D contracts for fibre optics.

I was introduced to Peter C. Wheeler, production manager at Foundation Instruments, who demonstrated two products that are of particular interest to him. One is the fibre optic wall switch and the other called the "smart switch." These items have excellent qualities to provide energy savings and safety.

The fibre optic switch is completely isolated from the power source, therefore safe from shock or arcing. It operates through the presence or absence of infrared light that is guided through an optical fibre. The "smart switch" times out light circuits. It is programmable and will blink a warning minutes before turning out the lights. Switching the lights off and then on, restarts the timing circuitry. It would be an experience to walk through a large building and as you move from one area to the next the lights are switched off. Then as you warm your car after a late night in the office, you see all but the security lights blink out.

The energy and enthusiasm of the people of Foundation reflect in the developments and products of the company. Though the language of electronics is foreign to the layman, Tony Szanto speaks plainly of the need to export these products. He is aware that Canada must sell these developments abroad and has begun researching the opportunities provided by the Canada-US defence programs.

Plans are under way for a new building, which is expected to be completed in late summer. These facilities are so designed that special test areas, including environmental rooms, will allow Foundation Instruments to offer their clients complete and most modern services.

There is little doubt that we are looking at yet another continuing Canadian success story — one that can be observed from the Foundation up.

Boon to Battery Manufacturers Could Open Door to New Canadian Industry

Several years of intensive research by Cominco Ltd. — backed by funding from Industry, Trade and Commerce — have resulted in the development of a unique process that is seen as a boon to battery manufacturers throughout the world.

Cominco's Cast Strip/Rotary Expansion Process already is in commercial use, having quickly gained an important measure of market acceptance.

A lead strip caster and two rotary expanders have been installed by Japan's Storage Battery of Kyoto; a caster has been installed at Dunlop Batteries in Sandringham, Australia; rotary expanders have also been sold to Yuasa Battery in Japan and to a major battery company in the United States. Several other battery companies in various parts of the world are seriously considering the purchase of the Cominco machines.

"These new installations," says A.M. Vincze, Cominco's Supervisor, Commercial Development, "mark the successful outcome of several years of intensive development work at the company's Product Research Centre (Sheridan Park)."

Vincze continues: "Cominco's substantial investment in engineering development and electrochemistry has yielded a remarkable new process — a process that offers unprecedented productivity, versatility and, most importantly, lower plate production costs."

Cominco's Cast Strip/Rotary Expansion Process basically converts molten metal into continuous expanded mesh in two processing stages. The first, the Lead Strip Caster, produces lead alloy strip. The second stage, the Rotary Expander, processes the cast strip into continuous expanded mesh ready for downstream processing or coil storage. Both units can be used independently.

And what of the advantages?

Cominco's lead strip caster is specifically designed to cast — directly to gauge — lead alloy strip which can be used in the fabrication of battery grids. The unique but simple operating features, combined with its ability to produce thin strip, significantly reduces grid manufacturing costs.

In fact, Cominco believes that with its machine, the cost of producing cast is by far the lowest of any lead alloy strip manufacturing process that is commercially available today.

The caster's high production capability — it can provide enough strip material in one shift to produce up to 750,000 SLI expanded grids — is very important if a manufacturer wishes to use the machine as a central supply for several plants, or if it is advantageous to void a multi-shift operation in one plant. Whatever the production volume, the caster provides the lowest unit production cost of all commercially available systems.

Despite this very high production capability, manpower required to run the caster is very low — two men are normally needed to start the machine but only part of one man's time is necessary when the machine is in operation!

In addition to very low scrap and dross rates — scrap material produced either from edge trimming or from downstream operations can be readily recycled — there is the machine's versatility.

Strip can be cast to any width up to a nominal 30.5 cm (12 inches) and to thicknesses ranging from 0.38 mm to 2.03 mm (0.015 inches to 0.080 inches). Thickness profile variations can be directly cast in strategic locations on the strip.

While the cast strip technology ideally complements the rotary expansion technology, each process can be used without the other. It is expected that as more experience is gained by the users of the more traditional reciprocating expanders, the low-cost as-cast strip will be used in this method of making battery mesh.

Similarly, battery manufacturers who have an established source of

The Cominco project was funded through much of its development by IT&C's Program for the Advancement of Industrial Technology (PAIT) which has since been absorbed by the department's Enterprise Development Program.

At control panel, Cominco engineer Ted Seymour, supervises installation of the Cominco Rotary Expander at a battery company in Japan.

rolled strip, can process this material using the new rotary expansion technology to make mesh.

And what of the Rotary Expander?

When the design criteria for the rotary expander were initially established, two performance specifications were of key importance: high speed and versatile operation. The result was a machine capable of speeds exceeding 61 m/minute (200 ft/minute) and one so versatile it could process cast strip, rolled strip, pure lead and very hard alloys — all equally well.

This versatility allows trouble-free processing of either cast or rolled strip over a broad range of alloys and strengths while, at the same time, achieving precise dimensions and weight in the final mesh product!

A major step forward in the development of high productivity battery manufacturing equipment, the rotary expander can produce as many as 800 single grids per minute — and this without sacrificing quality. It is also flexible: grid designs can be readily changed by simply exchanging sets of modular tooling.

But Project Leader Dr. Gordon H. Laurie knows best what the machine should — and can do.

"This project has been both a technical and commercial success." — Officer, IT&C.

Says Laurie: "The rotary expander technology was developed to meet two main objectives. These were to provide a less critical means of expanding battery mesh for a variety of alloys and to produce expanded mesh of good quality at high rates."

Fellow workers on the development of the rotary expander and, indeed, the end users themselves, agree when Dr. Laurie states:

"Both of these objectives have been fully met. The rotary expander is very tolerant. It can produce a precisely sized product, with respect to both width and thickness, using a wide range of input strip properties and characteristics. The expander can operate at speeds of more than 200 feet per minute — while still producing excellent qualify mesh with good dimensional control."

In this day and age, when virtually everything is so expensive, it's reassuring to know this system — especially for the end user — is easy on the pocketbook.

"The two Cominco developments together," says Laurie, "provides an inexpensive means by which most battery manufacturers can take advantage of the inprovements in production made possible by strip technology."

But the door to strip technology does not close here.

"Besides use in the manufacture of SLI batteries and the new sealed Pb-acid cells," says Laurie, "considerable opportunity exists for the processes to be used for economical production of electric vehicle batteries, industrial batteries of various types, float service batteries and perhaps even batteries employed for electric utility load levelling."

The Cominco project was funded through much of its development by IT&C's Program for the Advancement of Industrial Technology (PAIT) which has since been absorbed by the department's Enterprise Development Program: this means that similar assistance to industry is now available under EDP. **It has been a rewarding venture which may well give rise to a new industry in Canada — and worthwhile in other ways too.**

As an officer with IT&C's Non-Ferrous Metals Division noted: "The PAIT-supported battery equipment program, through its electrochemical research and development requirements, has helped Cominco establish a centre for battery research — at Sheridan Park."

Little Red Riding Hood doesn't have a franchise on visiting Grandma. Nowadays Canadians and Americans, Finns and Britons are knocking at her door — Grandma Lee's, that is. And if predictions prove correct, they will soon be joined by peoples of many other nationalities. . . . .

Beating a Path to Grandma's

by Shirley Plowman

The rosy apple-cheeked granny of our youth whose full kettle bubbled merrily on a wood-burning stove as she offered you hot tea biscuits fresh from the oven — this is a nostalgic vignette from the album of yesteryear. She created the warm homey atmosphere you wished you could bottle and take back to the city.

Now somebody has.

Allan Biggs and his then-partner, Gary Shaw, who together started Pop Shoppes International in 1969, chanced upon Grandma Lee's baked goods hidden away in small town IGA and Red & White grocery stores.

It was 1975. Biggs and Shaw had sold the highly successful Pop Shoppe line three years earlier and were looking for a new business venture. Grandma Lee's operating company, Thorough Bread Industries, was in a mood to sell. In the hassle of buying weekly groceries, family shoppers did not pause often enough to look at the tempting array of baked goodies.

Through Nocana Ltd., a company controlled by Biggs and Shaw, the two entrepreneurs acquired 10 per cent interest in Thorough Bread and a little later picked up the remaining shares. Then in 1977, the former chairman of Petro-Canada, Maurice Strong, and two other businessmen, invested half a million equity dollars in Nocana.

Biggs — and Shaw who has now retired — knew they had a good product but in its present state they couldn't visualize its bringing in big profits. The main problem, of

Watched or not, Grandma's goodies bake perfectly

Since 1980, Grandma Lee's has grown to more than 150 outlets in all provinces and in the Northwest Territories.

Tantalizing treats to tickle the palate

course, was that Grandma Lee's was confined to an in-bakery set-up in a few small town groceterias. It was time to bring her to the big city where she could not only sell her delicious bake goods but customers could sit in homey comfort while they rewarded their taste buds with tempting home-made soups, meat pies, chili, salad, choice meats, cheeses and assorted sandwiches made with freshly baked bread.

If anyone could appreciate this type of service, thought Biggs, it would be the city dweller, whose fast food palate was growing weary of the usual offering of chips, fried fish and hamburgers. And he was right. Grandma Lee's caught on faster than a springing cat up a curtain.

Like the famed non-existant Betty Crocker, Grandma's presence is felt, rather than seen. The air is filled with the heavenly fragrance of baking bread, and the cinnamony scent of homemade cookies, brownies and fresh fruit tarts. At Grandma's it's homemade and wholesome with no preservatives.

One granny that everyone loves to visit

Other successful Canadian franchise export stories include Popeye Burger of Quebec City which opened a restaurant in Paris in January. The first unit will be used as a training centre for subsequent expansion. . .Mister Roll Beef of Montreal opened units in Biarritz and Bordeaux. Equipment, bread and certain paper products are being sourced in Canada. . .A specialty meat processing plant was constructed in France under license from Greco Donair, a Moncton-based company, to supply the chain's operations in France. . .The Keg Restaurants of Vancouver are planning a third restaurant for New Zealand because of the popularity of the first two.

Commercially produced bread and rolls are generally made from a homogeneous mix with a large quantity of air beaten in. This results in the less than satisfactory fine texture and bland taste. Homemade bread is coarser, contains less air and tastes better.

Grandma Lee's secret of homemade bread is its remarkable kneading machines that allow each batch to be mixed slowly and gently, much like grandmother kneaded at home by hand. There is no damage to the gluten, the dough is stiffer and the air is not whipped into the dough.

The plusses to this baking method are that it does not require a skilled baker or a large area to accommodate the baking space. One person can comfortably produce more than 250 loaves in an eight-hour shift and production is easily increased with additional equipment. A resourceful Grandma Lee's shop owner has the flexibility to produce a variety of breads and a selection of other baked goods geared to local demand.

Grandma Lee's menu contains 93 various items including 10 kinds of delicious sandwiches. The two specialty features are the Breakfast Menu highlighted by an Egg on a Bun made from ham and eggs, cheddar cheese and dairy cream served on an oven fresh bun. Highlight of the luncheon menu is the Grandwich® made from ham, salami, mozzarella cheese, lettuce, tomato, mustard and mayonnaise. It is served on three quarter-inch-thick hand-sliced bread with a dill pickle.

As they eat, customers have the unique experience of watching and inhaling the comfortable homey and good smell of bread baking in a glass fronted oven.

Adding to the pleasure of eating is the sense of cleanliness and high baking standards emanating from the attendants in their crisp white mob-caps trimmed with lace and clean orange-checked gingham aprons over freshly laundered white uniforms.

Grandma Lee's is operated on a franchise basis that permits local business entrepreneurs to manufacture, sell and distribute products under its trademark and designs. The franchise system provides all the benefits of an owner-operated management. In some areas, Grandma Lee's operates on an area franchise system that permits regional business interests to acquire the rights to establish Grandma Lee's units in a defined geographic area. As part of the agreement, the area franchisee agrees to open a minimum number of Grandma Lee's units in the territory within a prescribed period of time. An area franchisee may choose

Two comprehensive seminar documentation kits titled, "Buying a Franchise Business" and "Expanding Your Business Through Franchising" are available from Jim Kelly, Department of Industry, Trade and Commerce, Distribution Services Branch (88), 235 Queen Street, Ottawa K1A 0H5 Tel: (613) 593-7981. Planning Charts for Developing Contractual Marketing Systems with application to: Dealership Systems, Distributorship Systems and Franchise Systems are also available from the same source.

to operate units directly, or sub-franchise individual locations.

Baking ovens, mixing equipment and raw materials are bought from the company and a continuing royalty — 8 per cent of gross sales — is paid.

The fee and royalty give the franchise operator the right to use all of Grandma Lee's recipes, trade marks, packaging, operating systems and patented kneading and baking systems. All major items are the same for all stores. The franchisee can buy the specially designed ovens and proofers but the kneading machine — developed with the help of an EDP (Enterprise Development Program) grant from IT&C — is leased to franchisees as it is unique and patented by the company.

Since 1980, Grandma Lee's has grown to more than 150 outlets in all provinces and in the Northwest Territories.

"The push is now on to expand in the United States," says IT&C's Jim Kelly. "There is expected to be another 30 outlets there by the end of this year and using the same concept as the one used in Canada, the U.S. outlets could grow to 1,000 by 1990."

IT&C grants through the Program for Export Market Development (PEMD) are helping the company to explore foreign markets. Grandma's has already participated in trade missions to France and Japan.

"The company has an excellent management team and is most aggressive in terms of international expansion. At the moment Grandma Lee's is also actively seeking expansion opportunities in Australia, New Zealand and Asian markets."

And, "as a matter of fact," added Joe Meyer, President of Grandma Lee's International, "we have just concluded a deal with a group of Asian businessmen in Singapore."

Grandma Lee's has signed a franchise agreement for Scandinavia with a large Helsinki-based hotel and restaurant chain. Two units have been opened in Britain — one is situated across from Big Ben in London and another in Victoria Station.

"At the moment," explained Kelly, "there are less than 1,000 Canadian-owned franchise systems, whereas there are more than 10,000 foreign-owned franchise systems in Canada. Hopefully Grandma Lee's will be in the vanguard of Canadian firms to redress the balance."

If, however, obtaining a Grandma Lee's franchise is not in your immediate future, you can still hitch your star to Grandma's home-baked breadwagon.

Reports BI Research, a New York publication of Bishop Investments: "Every now and again a stock comes rattling down the pipe that sets the heart to pounding. . .Such a stock is Grandma Lee's. . . If your idea of a dream stock is a small, aggressive company on the move with a demonstrated successful product, compounded annual sales and earnings growth rates ranging between 60 and 100 per cent, a profit margin of 23 per cent and a return on equity of 37 per cent — you've found it. . .

"This stock's BI rank is a whopping 9.9 (6.0 is a solid buy). Only one stock ever scored higher — that was Ocean Drilling, and it more than doubled in less than a year. We wouldn't be surprised to see Grandma Lee's pushing towards $20 (US) per share within two years. This is the most exciting stock yet uncovered by BIR. Don't pass it up without good reason!"

And while you're at it, don't pass up a chance to visit Grandma Lee's. It certainly lives up to the home-made image!

Franchise Directory Now Available

The 1982 Franchise Annual is now available. For more than a decade, the Annual has been the largest franchise directory in the world. It is now in its 13th year.

The new Annual is completely updated and lists 1,979 franchisors with a complete description, address, name and telephone number of persons to contact, number of company-owned and franchisee-owned units, required monthly royalty, as well as approximate initial and total investments. There are 1,569 U.S. listings, 313 Canadian listings and 69 overseas listings with 505 totally new listings this year.

There are 38 different categorical sections listing franchisors in areas as diverse as Accounting and Tax Services, Fast Food, Printing Centers, Real Estate and Transmission Repair. There are separate American, Canadian and overseas sections with a complete alphabetical index.

The 1982 Franchise Annual includes a complete "How To" Handbook section that is the definitive guide for the prospective franchisee. The Handbook section includes a chapter titled "The Franchise Mystery" that fully describes the franchise method of doing business.

Another chapter fully explains the recently enacted U.S. Federal Trade Commission's New Franchise Rule and there is a chapter titled "Preparing Your Own Disclosure Statement" that explains how to investigate the franchise opportunity. This year there is a new State Law Summary.

Also described in the Handbook section are Sample Franchise Contract Clauses including: Term and Renewal, Site Selection, Franchisor Approval of Lease, Exclusive Territory, Trademark Restriction, Training by Franchisor, Franchisor Help with Opening, Operating Manual, Advertising by Franchisor, Advertising by Franchisee, Royalty, Franchisor — Right to Inspect, Standard of Cleanliness, Standard Operations, Franchisor — Right to Audit, Noncompetition, Confidential Information, Permitted Incorporation of Franchisee, Termination by Franchisor, Termination by Franchisee, Right of First Refusal in Franchisor, Approval of Sale by Franchisor, Sale of Equipment to Franchisor.

The book's publisher, Info Press, offers a free copy of its award-winning Info Franchise Newsletter with each book order. Anyone interested only in the newsletter may simply write for a sample copy.

The directory is available for $19.95 (add $1.25 provincial sales tax) from Info Press Inc., 11 Bond Street, St. Catharines, Ontario L2R 4Z4, Tel: (416) 684-2923.

THE 8TH NATIONAL PETROLEUM SHOW

Stampede Park, Calgary, Alberta
June 8, 9, 10, 1982

The National Petroleum Show will attract energy decision-makers — active in exploration, production, processing, transmission and marketing of oil and gas — from Canada, the United States and overseas.

More than 40,000 potential customers and 800 exhibitors are expected to participate.

This year's exhibit area — with an additional 14,000 square metres of show space in the new Roundup Centre — is completely booked.

Canadian manufacturers will find the show an excellent means of assessing the potential of this sector for future business.

The following article by the Federal Business Development Bank appeared previously in the Bank's publication, "Profits".

Successful Managing in Difficult Times

Alvin Toffler in his book "Future Shock" has said that today's problems are because "the future isn't what it used to be". And Peter Drucker in a book "Managing in Turbulent Times" has observed that, for managers, planning has always assumed a kind of continuity, i.e. starting with yesterday's trends and projecting them into the future. In difficult times this may not work anymore because now life can be full of the unexpected, and the unexpected can hardly be planned for. All that can be hoped for is that some of these events may be foreseen. This needs strategies to take advantage of the new realities as opportunities.

In difficult times, a business has to be kept lean and muscular so that it can take strain but also be capable of moving fast to take advantage of an opportunity.

In order to ensure survival and success in uncertain times it is important to return to some basic thinking about what kind of a survival kit is suitable for these rough seas. The basic ingredients for such a kit are liquidity, productivity and innovation.

Sometimes liquidity can be more important than earnings. Since survival is crucial, a business can survive periods of low earnings or even moderate losses if it has adequate cash flow and financial strength to stay afloat. Working capital has to be watched because liquidity is a first order need for survival. Here interim financial statements showing changes in financial position tell whether working capital has increased or decreased.

Next in importance is improving the productivity of resources such as capital, physical assets and the skilled worker. Making capital productive is to know where all the money in the business really is and what it's doing. This may be either in receivables, in inventory or in fixed assets. Managing the productivity of people means knowing the jobs these people do, their qualifications and the required results.

What matters most is the overall productivity in using all the resources of a business. High costs of staying in business together with high interest rates on borrowed money make this a must. In difficult times, a business has to be kept lean and muscular so that it can take strain but also be capable of moving fast to take advantage of an opportunity. Since resources are limited, this means concentrating them where the results are actual or potential. It may mean abandoning non-productive activities and using their resources for new opportunities. Products or services that no longer contribute should be abandoned.

Being opportunity-minded is best accomplished by identifying needs and wants of the market, not just for the present but also in the next few years. The small business can be easily more productive because all its activities are highly visible. For the small business, healthy growth is that growth which results in an increase in productivity of its resources. Any activity which does not show increasing productivity in the use of its resources must be eliminated.

Innovation for the small business means getting rid of non-productive activity and searching systematically for new opportunities such as a gap in the market or a process. Sometimes this may mean specializing in a narrower range of products or services to be able to better serve these needs of the market. In such a case the small market does not attract the large company.

The small business must know what its specific strengths are in order to base its strategy on them. It is important to know how well it performs in its chosen area. Next is the question whether the strengths are being used in the proper areas where opportunities are greater. In times of rapid change it is urgent to know whether new performance capacities can be developed to take advantage of the opportunities born in difficult and changing times. One small business learned that buying parts from all over and assembling was more productive than buying finished products for resale.

Asking basic questions is a simple way to get started in finding out what ought to be done. A good place to begin is with objectives. It is hardly enough to say, "My objective is to make a profit." But making a profit means asking other questions such as:

- What business am I in?
- What is my place in the industry?
- Where is my market?
- How do my customers regard me?
- What are my specific goals to increase my profit?
- Should I improve my product(s)?
- What are my strengths?
- What are my problems? How can I solve some of them?
- How can I increase my sales?
- How can I finance growth?

Thinking about these questions and answers, or decisions about them, can have important

results. It can well be the beginning of a new awareness of the importance of strategic planning for improved performance.

Realizing a need for help especially in difficult times is highly important. It can be extremely useful for the independent businessman to avail himself of the Federal Business Development Bank Counselling Assistance to Small Enterprises (CASE). This service is both economical and effective when a business finds itself in need of management aid.

CASE supplies seasoned retired executives who have been there and back with a lot of know-how and from whom one can learn from their extensive experience. In 1980 alone CASE assisted nearly 14,000 small businesses in ironing out problems and improving managerial practices. More and more business owners are asking for counselling assistance and the experience gained has led to an accumulation of data and information about the practices and problems of small business.

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This FBDB service, which caters to the needs of small business, may well suggest improved management practices in the future with a decrease in the risk factor. In addition, FBDB offers numerous seminars geared to help the independent businessman avoid the pitfalls that often result in failure during difficult times.

It is extremely important to keep proper records and make timely use of them. Poor record keeping can seriously impair a business for any number of reasons: financial, marketing, sales, costs, etc.

For many businesses the biggest single fault is failure to maintain records. It's an easy trap in which to fall. But poor maintenance is a symptom of a far more serious problem — not paying attention and not knowing what's going on. Records that are not maintained can't be read or analyzed if they don't exist and are the easiest things to procrastinate about.

Since success depends upon ability to make right decisions, and since more accurate information means better decisions, it becomes urgent that records be as current and as complete as possible. From them we can extract the important ratios such as working capital, inventory turnover, accounts receivable, collection data and aging. Most important is that proper record-keeping and using the information provided creates an atmosphere of greater awareness and alertness needed in difficult times.

If a business is to survive in difficult times the owner must supplement entrepreneurial enthusiasm with managerial skills to act as mediator between what he wants to do and what can actually be done. To be successful both of these aspects must be present since one complements the other. If planning is not always possible, at least contingencies or upsets must be foreseen and strategies developed both to absorb and to take advantage of such happenings. In Chinese pictograph writing, the symbols for crisis and opportunity are almost similar. The opportunity can most often be greater than the problem.

To operate in difficult times the ability and willingness to make decisions is an absolute necessity. This may seem a quite obvious and simple suggestion yet few individuals have both the ability and willingness to make decisions. The reason is, of course, that almost all of the important decisions, especially those that deal with the future, have one major problem. There is never enough information. It is imperative to devise strategies to handle contingencies which can merely be foreseen such as credit tightening, markets disappearing, new products, older ones becoming obsolete.

Since success depends upon ability to make right decisions, and since more accurate information means better decisions, it becomes urgent that records be as current and as complete as possible.

Serendipity is a happy, unexpected and lucky accidental happening. It is a kind of luck which is most likely to happen to the small businessman who is opportunity-minded. To the person who in difficult times sees problems not as obstacles but as opportunities, that special kind of lucky event can happen — and it can ensure not only survival but success.

A very effective advice to the small businessman facing a problem has been "Surprise yourself — do the unexpected". The implication, of course, is that he has all the resources and strategies within himself to solve his problem provided his attitude is one of positive commitment. It happens often enough that, once there is definite commitment, it seems as though Providence itself lends a hand and opportunities, possibilities and all sorts of things occur to help one that would never otherwise have occurred. A whole stream of favourable events can arrive such as meetings and material assistance which no one would dream could come his way.

To paraphrase Charles Dickens, "It can be the worst of times, or it can be the best of times." Concentrating on the important fundamentals already mentioned makes possible successful survival in difficult times.

The federal government's decision to provide assistance to the municipalities of Montmagny and L'Islet and to certain categories of their workers as part of the Industry and Labour Adjustment Program (ILAP) could, in time, lead the Montmagny - L'Islet region out of the economic doldrums.

Montmagny-L'Islet: In Search of Economic Revival

by André Fortier

Already there is a glimmer of hope, with the official announcement that Inglis took over Admiral Corp., including buildings and equipment in Montmagny.

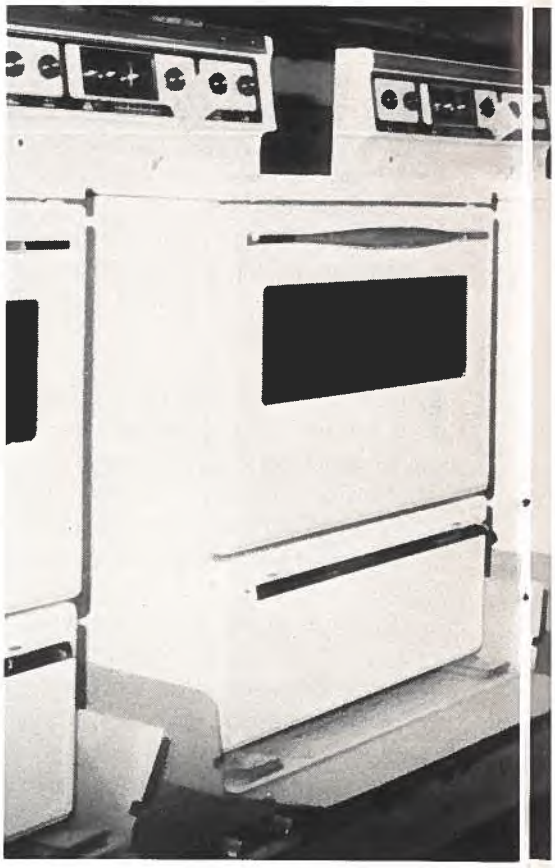
One of the main employers in this city, Admiral had laid off 400 employees when the company shut down. From now on, Inglis will continue the operations, so hundreds of employees are waiting to be called back to work. Clearly, there should be economic benefits for the region with the factory again being operational. (The Montmagny plant's peak employment was up to 465 employees).

The Inglis purchase of the Admiral Corp. was made possible by the federal government in the form of a repayable contribution of $3,000,000 and grants through the Industry and Labour Adjustment Program (ILAP) and the Regional Development Incentives Program. The ILAP contribution was made through both the Industry Specific Restructuring Program (ISRP) and the Community Based Industrial Adjustment Program. (See Canada Commerce, March 1982).

The choice of Montmagny-L'Islet as a "designated" zone suggests that much remains to be done to revive its economic situation and to help it resume the essential role it has played for so many years in Eastern Quebec.

Among this region's disadvantages are its relatively unfavourable geographical location, (its distance from major markets and its proximity to Quebec City, which works against it statistically), its relatively nonspecialized labour force, its lack of adequate natural resources (e.g., forestry resources), and an economy based on traditional industries.

The region does, however, have several positive features to offer, some of which help to attract new investments. These include: a modern 240,000 square-metres industrial park served by Canadian National and located along the Trans-Canada Highway, the long-standing vitality of regional entrepreneurship, and the availability of a reliable workforce with a good record of productivity, both in L'Islet and in Montmagny. In addition, it has a wide range of professional, commercial and public services and is relatively close to certain markets, particularly Quebec City with its population of half a million. Also, the present industrial park in Montmagny could be very quickly enlarged by an extra 24,500 square metres if economic circumstances so warranted. Some infrastructures are already in place in anticipation of such an eventuality.



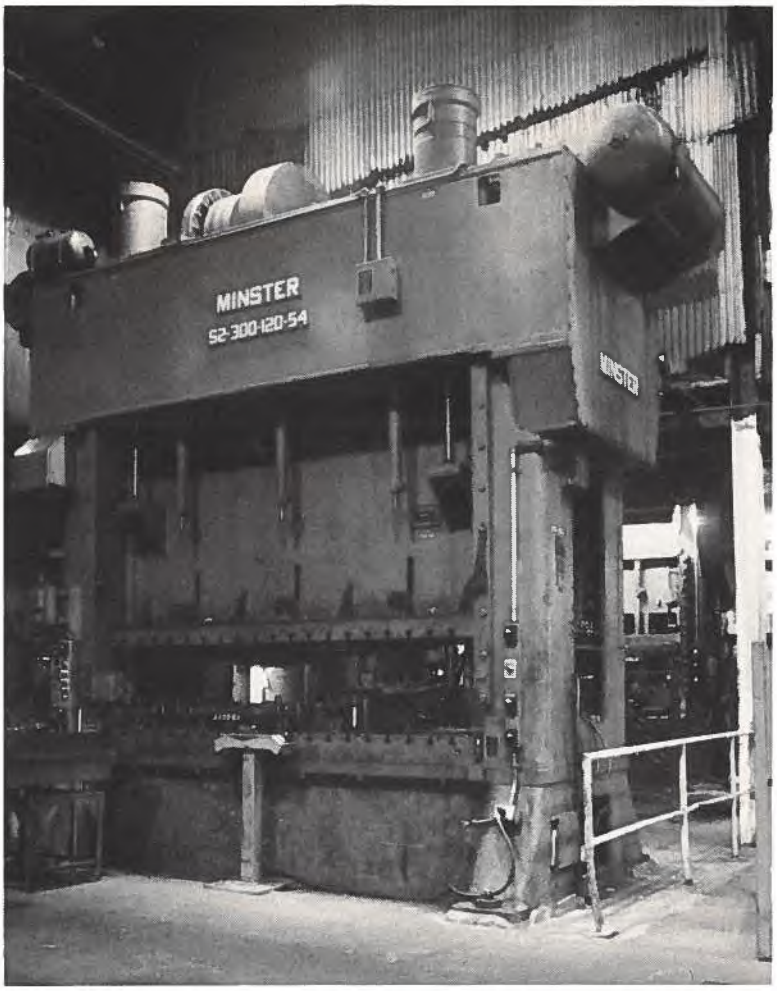
The municipality of L'Islet has submitted a loan application for the establishment of a 9,000 square metres industrial park for small and medium-size businesses. In addition, industrial zones already exist within the town boundaries, and L'Islet is able to provide all the infrastructure required for the establishment of new industries. Finally, the town has $300,000 in industrial funding.

It should be noted that Montmagny – L'Islet is basically an area of small and medium-size businesses, which implies that it has very diversified manpower with an equally outstanding reputation for stability.

In 1980, 13 firms in the forestry, electrical products, textiles, furniture, tool-making, metal products and machine production sectors each employed a staff of more than 100; the largest of these sectors employed less than 500 people.

Twelve others employed a staff of between 50 and 99, mostly in the same sectors, and 13 employed between 25 and 49, notably in the clothing, plastic, and heating equipment sectors. Finally, 34 employers had between 5 and 24 employees in sectors which, for the most part, are included in the above.

These figures and features apply to the Montmagny-L'Islet county as a whole, but also reflect the situation of the designated zone of Montmagny and L'Islet. For example, 33 of the firms polled are located in Montmagny or in L'Islet in all or almost all of the sectors mentioned and in all job-number categories.



Geographical Characteristics

The region in which the municipalities of Montmagny and L'Islet are located is known as Côte-du-Sud, which lies directly east of the metropolitan region of Quebec City and encompasses the entire federal constituency of Bellechasse.

Bordered on the west by Lévis County and to the east by Kamouraska County, the Côte-du-Sud region extends to the St-Lawrence River in the north and to the United States border in the south. This 90-km-long region takes in the valley where the major villages and towns of Berthier, Montmagny, L'Islet and St-Jean-Port-Joli are located, and a mountainous region covering seven-eights of the territory.

The Côte-du-Sud region is traversed, from west to east, by three major arteries: Highways 20, 132 and 204, the last of which goes from St-Jean-Port-Joli to St-Georges de Beauce. In addition Highways 279, 281, 283 and 285 cut across country from the St. Lawrence to the U.S. border. There are also two major rail lines, one along the river; the other further south, serving the area inland.

Working Paper Profiles Women as Owner/Managers

More and more women are becoming part of the paid labour force as owner/managers. Their commitment is as strong as that of their male counterparts and business ownership is not a part-time female occupation.

"Canadian Women Owner/Managers", a Small Business Secretariat Working Paper, indicates that the number of women becoming business proprietors is increasing more quickly than that of men, although women-owned businesses tend to be less profitable on average than men-owned businesses. The Working Paper contains both Canadian and American statistical data as well as conclusions from a survey of some 275 women owner/managers in Southern Ontario contracted by the Small Business Secretariat to Queen's University in Kingston.

Among the major motivating forces cited by the self-employed woman were the need to achieve, the desire to be independent, the search for job satisfaction and economic necessity.

"Challenge" emerged as the most important motivational factor and once the business was established, most felt that the problems faced by women business owners were no different from those faced by their male counterparts.

About two-thirds of the Canadian owners surveyed felt that businesswomen do not face problems that are any different from those of small businesses in general. In the U.S., the initial and major barrier experienced was felt to be credit discrimination during the capital formation stage. This problem is common to both male and female entrepreneurs but appears to be a greater problem to women.

Although most women entrepreneurs started their businesses in recent years, they had been in the workforce for several years before launching out on their own. Most created — not inherited — their business, starting them alone without benefit of partner or spouse. Typically they were able to maintain a family along with their business.

Most entrepreneurs in both Canada and the U.S. had acquired start-up capital from personal savings with a smaller proportion obtaining it from commercial banks. In the U.S. about 65 per cent had applied for bank credit (more than half for $10,000 or less) and credit was extended in most cases. The number of women applying to a financial institution in Canada for funds, according to a study contracted by the Small Business Secretariat, was lower, but of these, only about 6 per cent were turned down and full documentation on the business was generally supplied.

Once firmly established, the female-operated business tends to grow and the woman manager becomes a relatively large employer, particularly of other women. This could in part be due to the nature of the sectors where women business owners tend to be concentrated — retail and service.

Many of the women came from entrepreneurial families — a characteristic typical of men and women entrepreneurs alike, both in Canada and the United States.

This research is regarded as only a beginning in this relatively uncharted area. The Secretariat hopes that more research and other efforts will be started to continue the effort. **For copies of the report, please contact:**

Department of Industry, Trade and Commerce
Small Business Secretariat
235 Queen Street, 8th Floor East — (63)
Ottawa K1A 0H5

Economists' Corner

Developments in International Wage Compensation Levels

In dealing with the competitive position of Canadian manufacturing in international markets one is often confronted with data dealing with the **rate** of change in wages, exchange rates, unit labour costs and the like. It is often difficult, however, to get a useful bearing on the relative **levels** involved. The latter should be a key element in making international comparisons of competitive positions in industrial countries.

The United States Department of Labor for some time has compiled data from the major industrial countries on wage compensation **levels** of production workers in manufacturing. The data are especially useful when converted to a common base, i.e. U.S. dollars, which reflects major currency re-alignments.

It should be noted that the term "wage compensation" is much broader than the usual concept of hourly earnings in manufacturing. It includes not only the **direct** payments made by the employer to the worker but also includes employer expenditures for pensions, insurance programs, etc. Compensation here also includes other significant taxes on payrolls that are regarded as labour costs.

The tables which follow attempt to highlight the major trends in wage compensation levels in the 10 major industrial countries in the period 1960 to mid-1981.

As may be noted in **Table 1**, Canadian hourly wage compensation for production workers in manufacturing in 1980 was seventh lowest among 10 major industrial countries when expressed on the basis of a common currency, i.e. the U.S. dollar. This represented a marked departure from the earlier experience when Canadian wage compensation levels were second only to those in the United States; the significant shift came about because of major currency appreciations in Belgium, Sweden, The Netherlands and Germany during 1978 and 1979 which pushed the level of earnings in terms of U.S. dollars far higher than that paid in Canada.

More recently, however, because of several cases of currency depreciation, wage compensation levels in most of the major Western European countries have once again come much more closely into line with those of Canada and the United States. As is indicated in **Table 1**, Canada at mid-1981 still ranked sixth among the 10 major industrial countries in terms of hourly wage compensation levels in manufacturing. However, the gap in the absolute wage differentials in 1981 had narrowed considerably, leaving Sweden as the only country where wage compensation levels were still as much as one-fifth higher than in Canada. At the other extreme, manufacturing wage compensation levels in Japan in mid-1981 were more than one-third lower than those in Canada and wage levels in Britain were also appreciably lower.

Changes in productivity aside, these developments suggest that, while Canada still holds a competitive edge in wage compensation levels in manufacturing, this edge has narrowed considerably since 1980. However, Canada's edge is still considerable based on our historical relationship with most major industrial countries. Japan's position in the current picture (i.e. tenth among the 10) explains in part why they have been so successful in selling their manufacturing products in all major industrial countries **(Table 2)**.

A factor that may not be known generally — Canadian employers encounter a significantly lower burden of additional compensation over and above that of **direct** hourly wages than do most industrial countries, the only exception being Japan. The ratio of additional compensation to direct hourly earnings in Canadian manufacturing in mid-1981 was about 30 per cent. This compares with about 35 per cent in Britain, 37 per cent in the United States and upwards of 63-97 per cent in countries such as Germany, Belgium, France, Italy, Sweden and The Netherlands. This differential is one of the important factors (apart from exchange rate re-alignments) keeping Canadian compensation levels in manufacturing down in comparison with these other industrial countries.

It is important to note that these comparisons relate only to compensation levels; they do not include comparisons of productivity levels. The latter are much more difficult to compare internationally but nevertheless are important in obtaining true unit labour cost comparisons.

Productivity in Canadian manufacturing (output per person-hour) grew at an average annual rate of 4.0 per cent for the entire period 1947-1980, a rate which is significantly higher than the 2.7 per cent annual increase in the United States in the same time period. However, manufacturing productivity in Canada slowed appreciably in the 1970s to average only 2.4 per cent a year. This deceleration in manufacturing productivity, however, was common to all the major industrial economies; witness the fact that in the U.S. manufacturing productivity for the period 1971-1980 fell to a rate of 2.1 per cent per year.[1]

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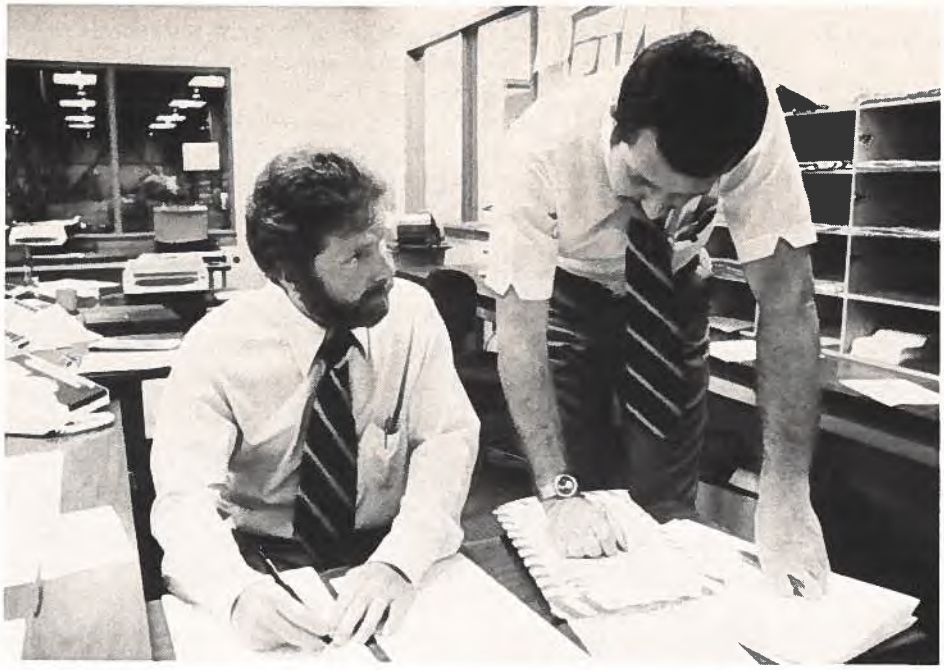
[1]Statistics Canada, Aggregate Productivity Measures, December, 1981.

The foregoing international comparisons do not in any way reflect any normative conclusions as to whether Canadian manufacturing wages are either too high or too low in an absolute sense as far as the Canadian economy is concerned. In particular it should be emphasized that the market exchange rates used to convert the national currencies to



U.S. dollars do not necessarily reflect the relative purchasing power of the various currencies. As a consequence it should not be concluded that the individual standard of living in some of the Western European countries is higher than in Canada simply because their wage compensation levels measured in U.S. dollars may be higher.

A word of caution is in order insofar as the competitive position of Canadian manufactured goods vis-à-vis some of the more advanced developing countries is concerned. Manufacturing wage compensation levels in countries such as Mexico, Brazil, Korea, Hong Kong, and Taiwan range between one-eighth to about one-third of those in Canada when expressed in United States dollars.

Recently published data for the motor vehicle and equipment industry point up some interesting trends in hourly wage compensation levels in the Canadian and the U.S. auto industries compared with those in other major industrial nations. The hourly compensation level for auto workers in the United States in mid-1981 was $16.85 (U.S. dollars). According to U.S. Department of Labor data, U.S. auto production workers were paid $4.33 an hour more than in Canada at mid-1981, and $9.09 an hour more than in Japan.

There has been considerable discussion of late regarding the comparison of wage compensation levels in the United States with those of Japan. Some observers point out that bonuses account for a major portion of Japanese workers' remuneration. In general, of the total remuneration in Japanese manufacturing, about 70 per cent is paid as regular monthly pay and a large part of the remainder is paid in the form of bi-annual bonuses, equivalent to nearly four contractural monthly payments.

It is a fact that production workers in U.S. auto manufacturing are paid half as much again as the average for all U.S. manufacturing employees. This ratio is much higher than in other major industrial nations. In fact, Canada comes a distant second with its automotive employees paid about 27 per cent more than the average for all production workers in Canadian manufacturing. Elsewhere, auto workers in countries such as Sweden, the Netherlands, Italy and France receive compensation which is more or less at parity with the average of other manufacturing employees.

Canadian auto workers were being paid 37 to 38 per cent more than their counterparts in Britain and Japan in mid-1981; their wages were appreciably higher than those in most Western European countries with the possible exception of Germany and Sweden as well. Thus it seems likely that competition from foreign auto imports will continue to be strong. The available evidence suggests that U.S. wage compensation levels in the auto industry also are very much out of line with those of their major competitors. This gap is being reflected in the willingness of U.S. auto workers to consider wage reductions in the near term as their contribution to the continued viability of the U.S. auto industry.

C. Schwartz
Economic Intelligence Directorate
Office of Policy Analysis
Industry, Trade and Commerce
Regional Economic Expansion
Tel: (613) 995-6384

TABLE 1: ESTIMATED HOURLY COMPENSATION OF PRODUCTION WORKERS IN MANUFACTURING IN TEN INDUSTRIAL COUNTRIES IN U.S. DOLLARS 1960-MID-1981

Country	1960	1965	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979*	1980**	1981**
U.S.	2.66	3.14	4.18	4.49	4.84	5.26	5.75	6.35	6.93	7.59	8.29	9.07	9.90	10.97
Belgium	.82	1.30	2.07	2.45	3.18	4.22	5.17	6.60	7.13	8.56	10.50	12.15	13.35	11.29
CANADA	2.13	2.28	3.46	3.91	4.31	4.66	5.45	6.11	7.20	7.54	7.68	8.16	9.03	9.85
France	.83	1.24	1.74	1.95	2.37	3.11	3.45	4.63	4.82	5.37	6.61	8.00	9.44	8.50
Germany	.85	1.41	2.35	2.78	3.37	4.60	5.41	6.24	6.65	7.85	9.74	11.36	12.38	10.37
Italy	.62	1.12	1.76	2.12	2.57	3.20	3.66	4.65	4.49	5.30	6.45	7.62	8.99	8.29
Netherlands	.68	1.24	2.14	2.58	3.16	4.33	5.40	6.60	7.05	8.24	10.08	11.66	12.40	10.38
Sweden	1.20	1.87	2.93	3.23	4.03	4.93	5.63	7.18	8.21	8.85	9.65	11.33	12.58	11.90
Britain	.83	1.15	1.48	1.73	2.03	2.27	2.60	3.27	3.14	3.37	4.30	5.52	7.23	7.13
Japan	.26	.48	.99	1.18	1.58	2.19	2.67	3.05	3.30	4.03	5.54	5.49	5.65	6.24

*** Preliminary**
**** Provisional**
Source: Unpublished data. U.S. Department of Labour, Bureau of Labor Statistics, Office of Productivity and Technology, December, 1981.
Note: Total hourly compensation includes all direct payments made to the worker (pay for time worked, pay for vacations and other leave, all bonuses and pay in kind **before** payroll deductions of any kind). It **also includes** "fringe benefits" such as employer expenditures for social security, insurance, etc. The information is derived from periodic labour cost surveys prorated for intervening years. Small differences in compensation levels should not be considered significant. Total compensation is computed per hour worked.

TABLE 2: ESTIMATED COMPENSATION PER HOUR WORKED OF PRODUCTION WORKERS IN MANUFACTURING IN TEN INDUSTRIAL COUNTRIES (U.S. DOLLARS) 1960-MID-1981 CANADA = 100

COUNTRY*	1960	RANK	1965	RANK	1970	RANK	1975	RANK	1978	RANK	1979	RANK	Preliminary 1980	RANK	Provisional Estimated 1981	RANK
Sweden	56	3	82	3	85	3	118	1	126	4	139	4	139	2	121	1
Belgium	38	5	57	5	60	6	108	3	137	1	149	1	148	1	115	2
United States	125	1	138	1	121	1	104	4	108	5	111	5	110	5	111	3
Netherlands	32	8	54	6	62	5	108	2	131	2	143	2	137	3	105	4
Germany	40	4	62	4	68	4	102	5	127	3	139	3	137	4	105	5
CANADA	100	2	100	2	100	2	100	6	100	6	100	6	100	7	100	6
France	39	5	54	6	50	8	76	8	86	7	98	7	105	6	86	7
Italy	29	9	49	9	51	7	76	7	84	8	93	8	100	8	84	8
Britain	39	5	50	8	43	9	54	9	56	10	68	9	80	9	72	9
Japan	12	10	21	10	29	10	50	10	72	9	67	10	63	10	63	10

Source: Based on unpublished data of the U.S. Department of Labor, Bureau of Labor Statistics, Office of Productivity and Technology, December, 1981.
*** Listed as per 1981 rank.**

New and Up-Dated Publications

REPORT OF THE CANADIAN PORK AND PORK PRODUCTS MISSION TO PANAMA, CURACAO, VENEZUELA AND THE DOMINICAN REPUBLIC: MARCH 17-27, 1981

Four individual reports on the visit of eight mission members from the private sector, one representative from the Department of Industry, Trade and Commerce, the president of the Canadian Pork Council and one representative from a provincial hog marketing commission to the four countries listed in the title.

The group compiled the following information for each country: basic trade data concerning exports to these areas of pork, processed pork, pork by-products and breeding swine; trade agreements and restrictions for these exports, facts about the major importers in these areas; general suggestions about demand, refrigeration, and other subjects that the mission members felt would be valuable to Canadian exporters; a list of contacts.

A short summary for each country is provided at the end of the brochure.

English, 32 pages.

French, 37 pages.

For copies contact: Mr. A.G. Baker, Chief, Animal Products Division, Food Branch, Department of Industry, Trade and Commerce, 235 Queen Street, 6th Floor, Ottawa, Ontario K1A 0H5
Telephone: (613) 995-8107

CANADA IN THE WORLD OF COMPUTING

This directory, published by Canadian Datasystems in co-operation with the Department of Industry, Trade and Commerce, contains profiles of Canadian manufacturers of information processing equipment who have indicated that they are active in exporting, and a cross listing of their products. The post and cable addresses and the telephone and telex numbers of the 89 trade posts maintained by the Department of Industry, Trade and Commerce to provide assistance for foreign buyers and Canadian exporters are listed at the back of the magazine.

English, 44 pages

SO YOU WANT TO EXPORT

Three brochures in a series, full of valuable information for companies considering a venture into new market areas outside of Canada, are available under the following sub-titles:

Number 1 — Making a Market Survey
Beginning with recommendations for appraising the impact of exporting on the company concerned and its product, this brochure lists suggestions for evaluation of the product's potential and preparation of market profiles, sources of information, the services provided by the Trade Commissioners overseas, and the Regional Offices of the Department of Industry, Trade and Commerce in Canada.

Bilingual, 11 pages.

Number 2 — Tips for Your Trip
This brochure includes information concerning promotional materials and advertising, methods of communicating with foreign countries, a complete check list for a successful overseas trip and exhibition, and a list of the Regional Offices of the Department of Industry, Trade and Commerce.

Bilingual, 14 pages.

Number 3 — Your Reference Sources
A necessity for exporting beginners — includes explanations of terms, titles, short forms and expressions used daily by exporters. A list of government organizations that offer support to exporters is also included, followed by suggested reading material published by the Canadian and United States governments and private sectors.

Bilingual, 9 pages.

1982 INDEX TO PROGRAMS AND SERVICES

Includes descriptions of services offered to the public by more than 100 federal departments and agencies and tells where in Canada these organizations may be reached. Published by the Task Force on Services to the Public, the index is available on request to federal and provincial government bodies and public libraries. The general public may obtain a copy for $9.95 at any of the government-authorized bookstore agents or from the Canadian Government Publishing Centre, Ottawa, Ontario, K1A 0S9

English, 480 pages;
French, 544 pages.

FOR ADDITIONAL INFORMATION CONTACT:

Martha Hancock
Department of Industry, Trade and Commerce
Public Information Directorate
Technical Services
235 Queen Street, 2nd Floor West (98)
OTTAWA, Ontario
K1A 0H5
Telephone: (613) 995-8900, ext. 55

Multilateral Project Opportunities

The following list of multilateral project opportunities has been prepared by the Bureau of Pacific, Asian, African and Middle Eastern Affairs (PAM), a merger of the former Office of Overseas Projects, the Bureau of Asian and Pacific Affairs and the Bureau of African and Middle Eastern Affairs. The objective of this list is to inform Canadian companies of the projects being considered or already approved for financing by the international financing institutions such as the World Bank, the Asian Development Bank and the Inter-American Development Bank.

PLEASE NOTE that further information is available on approved projects only and may be obtained from the respective geographical divisions of PAM listed below.

In order to capitalize on these export opportunities, experience has shown that getting in on the ground floor by advance marketing activities or use of local agents has increased the probability of success. Smaller companies may wish to consider participating as sub-suppliers or as part of a consortium bidding on equipment packages.

Projects Under Consideration

Due to a reorganization in the Department, certain names and telephone numbers are subject to change. Sorry for any inconvenience this may cause.

The Bureau of Pacific, Asian, African and Middle Eastern Affairs is prepared to assist companies in formulating their bids, and to suggest the appropriate contacts for companies interested in obtaining insurance, bonds and performance guarantees which are often required as part of tender specifications.

In addition, our Trade Commissioners abroad are ready to assist you in pursuing business, such as arranging meetings with personnel at the executing agencies. The Department also maintains liaison officers in Washington and Manila, who are prepared to undertake enquiries on your behalf. However, we recommend that you initially contact the appropriate officer listed below.

If any of the approved projects interest you, contact: **The Bureau of Pacific, Asian, African and Middle Eastern Affairs (PAM)**, Department of Industry, Trade and Commerce, 235 Queen Street, 9th Floor East, Ottawa, Ontario K1A 0H5, or call the telephone numbers which are listed.

The Canadian Commercial Corporation, through the Export Supply Centre, can assist suppliers with bids on Canadian equipment packages for multilateral projects, when required by the private sector. For further information, please call Bob Burwash (819) 997-5715.

Projects Under Consideration

AFRICA (613) 995-8188

CAMEROON
Contact: *J. Desjardins*
Western Province Rural Development Project
World Bank (IDA) — 25.0 M.

EQUATORIAL GUINEA
Contact: *J. Desjardins*
Rehabilitation of cocoa and coffee
World Bank (IDA) — 3.0 M.

GUINEA
Contact: *J. Desjardins*
Technical Assistance
World Bank (IDA) — 5.0 M.

MOROCCO
Contact: *J. Arsenault*
Beni Amir Irrigation
World Bank (IBRD) — To be determined

NIGERIA
Contact: *P. McLachlan*
Technical Assistance
World Bank (IBRD) — 3.0 M.

SENEGAL
Contact: *J. Desjardins*
Dakar Port III
World Bank (IBRD) — 20.0 M.

Regional Management School
World Bank (IDA) — 4.5 M.

Technical Assistance to Parapublic Sector II
World Bank (IDA) — 10.0 M.

Water Supply II
World Bank (IDA) — 20.0 M.
World Bank (IBRD) — 20.0 M.

TUNISIA
Contact: *J. Arsenault*
Technical assistance to identify and/or prepare projects in agriculture, industry and energy
World Bank (IBRD) — to be determined

ZAMBIA
Contact: *R. Bélanger*
Lusaka Fuelwood
World Bank (IDA) — 20.0 M. (approx.)

ZIMBABWE
Contact: *R. Bélanger*
Forestry Wood Energy
World Bank (IDA) — 20.0 M (approx.)

ASIA (613) 992-0356

BANGLADESH
Contact: *N. Barber*
Ashuganj Thermal Power
No decision made whether consultants will be required
Asian Development Bank (ASDB) — 30.0 M. (approx.)

Greater Titas Gas Distribution
No decision made whether consultants will be required
Asian Development Bank (ASDB) — 20.0 M. (approx.)

Second Railway
Consultants will be recruited by executing agency
Asian Development Bank (ASDB) — 45.0 M. (approx.)

BURMA
Contact: *N. Barber*
Livestock Development (T.A.)
Consultants will be required
Asian Development Bank (ASDB)

Myanma Economic Bank (Second Loan)
No decision made whether consultants will be required
Asian Development Bank (ASDB) — 15.0 M.

Water Supply Sector Profile (T.A.)
Consultants will be required
Asian Development Bank (ASDB)

CHINA
Contact: *N. Mailhot & J. Stephenson-Howarth*
Luan/Jincheng Coal Mines Project
To be determined

Lubuge Hydropower
To be determined

INDIA
Contact: *M. Vandenhoff*
Madhya Pradesh Fertilizer
World Bank (IDA) — 200.0 M.

KOREA, REPUBLIC OF
Contact: *A. Pacher*
Second Provincial Cities Water Supply (T.A.)
Consultants recruited by Bank
Asian Development Bank (ASDB)

Third Road Improvement
No decision made whether consultants will be required
Asian Development Bank (ASDB) — 60.0 M. (approx.)

NEPAL
Contact: *M. Vandenhoff*
Pulp and Paper
Consultants will be required
Asian Development Bank (ASDB) — To be determined

Irrigation — (Bhairawa/Lumbini II)
World Bank (IDA) — up to 20.0 M

Water Supply Sector Profile — T.A.
Consultants will be required
Asian Development Bank (ASDB)

PAKISTAN
Contact: *N. Barber*
Coal Engineering
World Bank (IDA) — 5.0 M.

Tarbela Operations and Maintenance
World Bank (IDA) — 40.0 M.

Technical Assistance Project
World Bank (IDA) — 5.0 M.

S.E. ASIA (613) 996-8661

INDONESIA
Contact: *J. Brenchley*
BAPINDO V
World Bank — 60.0 M.

Coal Exploration
World Bank — 30.0 M.

First Irrigation Package
No decision made whether consultants will be required
Asian Development Bank (ASDB) — 70.0 M. (approx.)

National Pest Control (T.A.)
Consultants will be required
Asian Development Bank (ASDB)

Second Irrigation Package
No decision made whether consultants will be required
Asian Development Bank (ASDB) — 40.0 M. (approx.)

PHILIPPINES
Contact: *J. MacLeod*
Agricultural Education (T.A.)
Consultants will be required
Asian Development Bank (ASDB)

Aquaculture Development (T.A.)
Consultants will be recruited by the Bank
Asian Development Bank (ASDB)

Health Sector Study (T.A.)
Consultants will be required
Asian Development Bank (ASDB)

Municipal Fisheries Ports — T.A.
Consultants will be required
Asian Development Bank (ASDB)

Provincial Roads — T.A.
Consultants will be required
Asian Development Bank (ASDB)

THAILAND
Contact: *T. Greenberg*
Second Medium-Scale Irrigation Package — T.A.
Consultants will be required
Asian Development Bank (ASDB)

JAPAN & SOUTH PACIFIC (613) 995-7752

PAPUA NEW GUINEA
Contact: *R. Beare*
Transport Development
World Bank — 16.0 M

VANUATU
Contact: *R. Beare*
Agricultural Development (T.A.)
Consultants will be recruited by the Bank
Asian Development Bank (ASDB)

WESTERN SAMOA
Contact: *R. Beare*
Fagaloa/Afulilo Hydropower
No decision made whether consultants will be required
Asian Development Bank (ASDB) — 4.5 M.

Village Land Development (T.A.)
Consultants will be recruited by the Bank
Asian Development Bank (ASDB)

LATIN AMERICA & CARIBBEAN (613) 996-5357

BRAZIL
Contact: *K. Roeske, M.L. Lambert*
Construction of irrigation systems in the cerrados of the States of Goias and Mato Grosso
Inter-American Development Bank (IADB) — 50.0 M.

COLOMBIA
Contact: *F. Spoke*
Program for financing Small Projects: Institutional support for executing agency (T.C.)
Inter-American Development Bank (IADB) — 9,600

COSTA RICA
Contact: *F.R. Harris*
Credit to promote exports
World Bank — 25.0 M.

ECUADOR
Contact: *C. Hartman*
Integrated rural development in Canar Province (T.C.)
Inter-American Development Bank (IADB) — 33.0 M.

GUYANA
Contact: *J. Snyder*
Program for Financing Small Projects: Institutional support for executing agency (T.C.)
Inter-American Development Bank (IADB) — 56,000

Secondary drainage and irrigation in Abary Region
Inter-American Development Bank (IADB) — 30.0 M.

HAITI
Contact: *J. Snyder*
Agricultural credit program
Inter-American Development Bank (IADB) — 16.0 M.

Industrial credit program
Inter-American Development Bank (IADB) — 9.0 M.

Industrial parks in Port-au-Prince, Cayes and Cap-Haitien
Inter-American Development Bank (IADB) — 16.0 M.

HONDURAS
Contact: *F.R. Harris*
Credit for small rural enterprises (T.C.)
Inter-American Development Bank (IADB) — 300,000

Institutional support for executing agency (T.C.)
Inter-American Development Bank (IADB) — 50,000

Second stage in program to expand and strengthen technical education
Inter-American Development Bank (IADB) — 19.0 M.

NICARAGUA
Contact: *F.R. Harris*
Rehabilitation of existing coconut plantation and provision of processing facilities for small producers
World Bank — 6.0 M.

PERU
Contact: *C. Hartman*
Technical assistance to strengthen public sector management
World Bank — 5.0 M.

MIDDLE EAST (613) 593-4362

JORDAN
Contact: *R. Slowikowski*
Construction, extension and equipping of vocational and technical training institutions
World Bank — To be determined

TURKEY
Contact: *R. Slowikowski*
Structural Adjustment Loan IV
World Bank — To be determined

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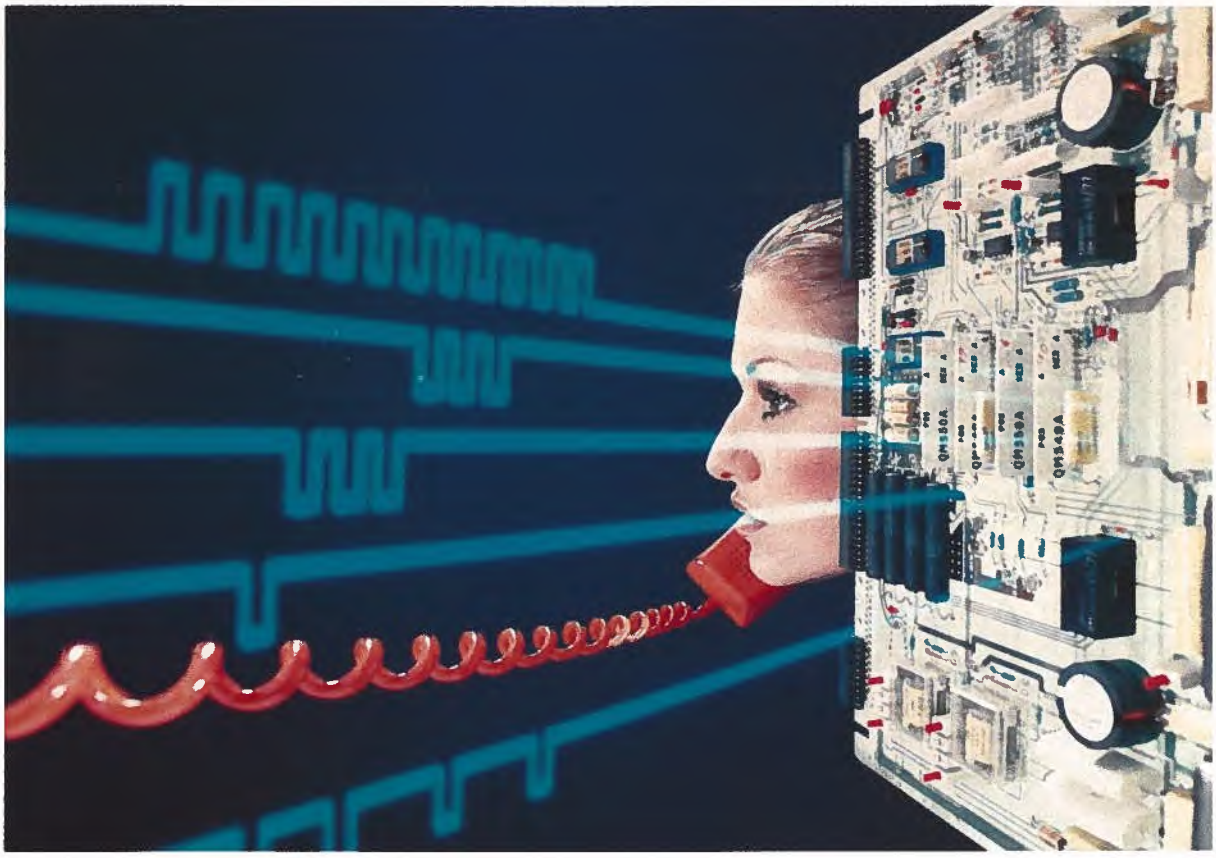
High Technology Opportunities in Britain



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