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BY THE U.S. GENERAL ACCOUNTING OFFICE

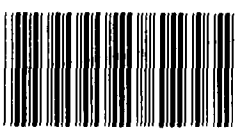
Report To The Chairman
Subcommittee On Energy Research And Production
Committee On Science And Technology
House Of Representatives

International Restraints To Competitiveness Of The U.S. Heavy Electrical Equipment Industry

The heavy electrical equipment industry consists of a few large multinational manufacturers that dominate their home markets and compete for the remaining world markets. Buy-national practices generally restrict the procurement of such equipment to domestic manufacturers in France, Great Britain, West Germany, and Japan.

The U.S. market is open to foreign competition, although almost half of the U.S. private utilities report giving preference to U.S. goods.

U.S. manufacturers view the buy-national and export subsidy practices of other countries as the major impediments to increasing U.S. exports of heavy electrical equipment. They view U.S. anti-trust laws, anti-boycott regulations, and the Foreign Corrupt Practices Act as less significant impediments.



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UNITED STATES GENERAL ACCOUNTING OFFICE
WASHINGTON, D.C. 20548

NATIONAL SECURITY AND
INTERNATIONAL AFFAIRS DIVISION

B-203700

The Honorable Marilyn Lloyd
Chairman, Subcommittee on Energy
Research and Production
Committee on Science and Technology
House of Representatives

Dear Madam Chairman:

This report addresses your request that we review the worldwide competitiveness of U.S. manufacturers of heavy electrical equipment. As agreed with your office, we focused our review on the following three areas.

1. Buy-national practices of the United States and selected foreign governments to restrain access to their domestic markets.

2. Non-competitive practices, such as the use of subsidies to promote exports.

3. Other concerns of U.S. firms, such as intended and unintended barriers to exports attributable to U.S. statutes and regulations.

As arranged with your office, no further distribution of this report will be made for 3 days from the date of issue unless you publicly announce its contents earlier.

Sincerely yours,

Frank C. Conahan
Director

GENERAL ACCOUNTING OFFICE
REPORT TO THE CHAIRMAN
SUBCOMMITTEE ON ENERGY
RESEARCH AND PRODUCTION,
HOUSE COMMITTEE ON
SCIENCE AND TECHNOLOGY

INTERNATIONAL RESTRAINTS TO COMPETITIVENESS OF THE U.S. HEAVY ELECTRICAL EQUIPMENT INDUSTRY

D I G E S T

Heavy electrical equipment, which includes steam, gas and hydraulic turbines and generators; power transformers; and power circuit breakers; is used to generate, transmit, or distribute electricity. For the most part this equipment is physically large, made to customer specifications, and costly.

The industry consists of a relatively few large multinational manufacturers that dominate their home markets and compete for the remaining world markets.

At the request of the Chairman, Subcommittee on Energy Research and Production, House Committee on Science and Technology, GAO reviewed the international competitiveness of the U.S. heavy electrical equipment industry, particularly the:

--Buy-national practices of the United States and selected foreign governments to restrain access to domestic markets.

--Non-competitive practices, such as the use of subsidies, to promote exports.

--Concerns of U.S. firms about other export barriers attributable to U.S. statutes and regulations.

BUY-NATIONAL PRACTICES

The major purchasers of heavy electrical equipment in countries such as France, Great Britain, and West Germany are government-owned utilities. In these countries, buy-national practices generally restrict procurement of this equipment to domestic manufacturers. Their procurement practices, such as maintaining closed bidding systems, demonstrate bias against foreign sources.

Historically, Japan has imported about 10 percent of its electrical plant from U.S. suppliers. U.S. manufacturers, however, estimate that recent sales to Japan are now in the 0.5 to 2.5 percent range. These manufacturers believe that their participation is limited because all major heavy electrical equipment purchases must be approved by Japan's Ministry of International Trade and Industry. Sales to Japan are now restricted to the first unit of a new design or vintage, purchased mainly from U.S. manufacturers under technical licensing arrangements, and all subsequent units have been made by Japanese suppliers.

The general U.S. market is open to foreign competition. In the United States, private utilities purchase most of the heavy electrical equipment and some have a strong tendency to purchase from domestic manufacturers. A survey performed for GAO by the Edison Electric Institute indicates that (1) almost half of these utilities' purchasing policies give preference to U.S. goods and (2) the majority of those U.S. utilities that have purchased foreign heavy electrical equipment indicated that such purchases represent less than 15 percent of their total purchases in the last 5 years.

U.S. Federal purchasers of heavy electrical equipment follow policies pursuant to the Buy-American Act, which is designed to make domestic manufacturers more price competitive without excluding foreign suppliers. The amount of Federal purchases in recent years has been small but includes a sizable percentage of imports.

NON-COMPETITIVE PRACTICES

Most major supplier countries, including the United States, offer government-sponsored export programs (e.g., export financing), but the degree of subsidization differs.

The importance of financing in export competitiveness has led some countries to offer subsidized export credit and mixed credits (in which export financing is blended with foreign aid). As a result of U.S. Government efforts, progressively more restrictive international arrangements on guidelines for officially supported credit were negotiated between 1977-82. U.S.

manufacturers note, however, that these guidelines have only set controls on interest rates and maturity, while foreign countries find additional ways to provide subsidized financing (e.g., blending in enough foreign aid to exempt a sale from the guidelines).

Many countries that export heavy electrical equipment have government insurance programs covering commercial and political risks for exporters. These insurance programs benefit manufacturers by taking away risks that are considered in pricing each bid.

In recent years, the Export-Import Bank of the United States has offered long-term financing at higher rates than its competitors. Nevertheless, more than one-third of the Bank's direct loans in 1982 were made to finance U.S. export sales of heavy electrical equipment. Moreover, in January 1983 the Bank decided to reduce its interest rates as necessary to make them equal to the minimum rates in all cases.

OTHER CONCERNS

Some U.S. Government policies may have adversely affected the ability of U.S. heavy electrical manufacturers to compete effectively in the export markets. However, some consequences were probably foreseen by Government officials when they established these policies. For example, the administration knew that barring the delivery of U.S. gas turbines for the Soviet gas pipeline in 1982 would affect export sales. The extent to which future overseas sales may be lost because foreign buyers question U.S. reliability as a result of this action, however, is unknown. The U.S. gas turbine manufacturer involved estimates that over $500 million will be lost in pipeline-related sales alone over the next 15 years.

U.S. manufacturers believe that U.S. anti-trust laws, anti-boycott regulations, and the Foreign Corrupt Practices Act of 1977 adversely affect heavy electrical equipment exports. However, they consider these concerns to be small compared with the buy-national practices and export subsidies of other nations.

Contents

ABBREVIATIONS

FCIA	Foreign Credit Insurance Association
GAO	General Accounting Office
OPIC	Overseas Private Investment Corporation
OUSTR	Office of the United States Trade Representative

CHAPTER 1

INTRODUCTION

The Chairman, Subcommittee on Energy Research and Production, House Committee on Science and Technology asked us to review the worldwide competitiveness of U.S. manufacturers of electrical generation, transmission, and distribution equipment. It was agreed that we would examine the following three areas.

1. Buy-national practices of the United States and selected foreign governments to restrain access to their domestic markets.

2. Non-competitive practices, such as the use of subsidies to promote exports.

3. Other concerns of U.S. firms, such as intended and unintended barriers to exports attributable to U.S. statutes and regulations.

The heavy electrical equipment industry dates back to the late 19th century, with the first major companies being Thomson-Houston, Edison, and Westinghouse. Today General Electric (Edison merged with Thomson-Houston in 1892) and Westinghouse are the two largest heavy electrical equipment manufacturers in the United States. Both these companies are the principal U.S. exporters of heavy electrical equipment and, because of their large U.S. home market, are two of the largest worldwide manufacturers.

In meetings with U.S. manufacturers, we learned that their concerns across product lines were similar, especially since many products are sold in combination; therefore, we discuss specific types of equipment only when providing examples. Heavy electrical equipment includes steam, gas, and hydraulic turbines and generators and power transformers and power circuit breakers. These products are used to generate, transmit, or distribute electricity. For the most part this equipment is physically large, made to customer specifications, and costly. For example, a large steam turbine may cost more than $60 million.

OBJECTIVES, SCOPE, AND METHODOLOGY

The U.S. manufacturers were most concerned about the policies of Great Britain, West Germany, France, and Japan, so we focused our discussion of buy-national policies and government subsidies on these countries. Because heavy electrical equipment is primarily used by electrical utilities to generate, transmit, and distribute electricity, we concentrated on the buying practices of Federal and privately owned utilities in the United States, which together represent approximately 87 percent of the Nation's power generating capacity. The remaining 13 percent capacity is provided by utilities owned by State and local governments and cooperatives.

To identify concerns pertaining to worldwide competitiveness in the heavy electrical equipment industry, we obtained information from industry representatives at General Electric, Westinghouse, Allis-Chalmers, Brown-Boveri, Elliott Company, McGraw-Edison, Siemens-Allis, and the National Electrical Manufacturers Association (NEMA), which contacted its member companies to ensure that they were given a chance to voice their concerns.

To obtain additional perspective on these concerns and to identify buy-national and non-competitive practices, we obtained information from the Office of the United States Trade Representative (OUSTR); Departments of Commerce (including the Bureau of Census), Energy (including the Federal Energy Regulatory Commission and the Bonneville, Western Area, and Southwestern Power Administrations), Defense (including the Army Corps of Engineers), State, and Interior (including the Bureau of Reclamation); Agency for International Development; Office of Management and Budget; International Trade Commission; Export-Import Bank of the United States; Tennessee Valley Authority, and the United Nations. We also met with representatives of the Edison Electric Institute; American Public Power Association; Economics Associates; Gates Associates; and U.S. importers representing ASEA (Swedish), American Elin (Austrian), and Fuji and Hitachi (Japanese).

The Edison Electric Institute, which represents over 99 percent of the private utilities in the United States, responded to our questions after surveying its member companies.

We used the most current readily available information. Statistical information concerning world trade in heavy electrical equipment was not available for all components of the industry. In some cases information was only available through 1980; this was especially true for worldwide statistics and data comparing individual country programs. Nevertheless, we believe that this report presents an accurate description of the heavy electrical equipment industry.

We were able to identify practices which provide foreign manufacturers with some competitive advantages but we were unable to quantify how much these practices adversely affect U.S.manufacturers because of the complexity and large number of technical, economic, and political variables involved in making a decision to procure such equipment.

We performed our review in accordance with generally accepted Government auditing standards.

AGENCY COMMENTS

We sent copies of our draft report to the Departments of Commerce, Defense, and State; Office of the United States Trade Representative; and Export Import Bank of the United States for comments. We also met with industry representatives of General Electric and Westinghouse to discuss the draft.

The Department of State had no comments. The Office of the United States Trade Representative stated the report presents a balanced and accurate perspective. Department of Defense officials met with us and told us that they concurred with our sections pertaining to their Department. They also provided us with updated information which was added to the report.

Comments received from the Department of Commerce and the Export Import Bank were incorporated in the report where appropriate. Written comments received are in appendixes V through VIII.

CHAPTER 2

THE INDUSTRY AND THE WORLD MARKET

The heavy electrical equipment industry is characterized by a small number of manufacturers, high capital investments, large technically complex equipment that requires skilled labor, and long lead times for manufacture. It consists of a relatively few large multinational manufacturers that dominate their home markets and compete for the remaining world markets. Market demand for equipment is directly related to growth in the demand for electricity, but increases in installed generating capacity and the generation of electricity have been declining. Most countries with home-based manufacturers engage in restrictive practices that give their domestic firms competitive advantages. Large manufacturers whose countries usually provide incentives for export sales compete for markets in countries without home-based manufacturers.

THE MANUFACTURERS

U.S. manufacturers of heavy electrical equipment are prominent in the world market, primarily because of their dominance in the large U.S. market. The major firms of the world manufacture equipment in several countries and license technology to other manufacturers, generally to secure access to otherwise closed markets.

Although there are many secondary manufacturers in the industry the following 10 companies are usually considered the major manufacturers; they are also considered full line manufacturers, although each company may not produce every type of heavy electrical equipment.

1. General Electric (U.S.)
2. Westinghouse (U.S.)
3. Brown-Boveri (Switzerland)
4. KWU-Siemens (West Germany)
5. General Electric Company, Ltd. (GEC) (Great Britain) (Not affiliated with General Electric of the United States.)
6. NEI-Parsons (Great Britain)
7. Toshiba (Japan)
8. Mitsubishi (Japan)
9. Hitachi (Japan)
10. Compagnie Generale d' Electricite (France) (includes Alsthom Atlantique)

U.S. firms

General Electric and Westinghouse produce most types of heavy electrical equipment in their U.S. manufacturing facilities and they clearly dominate the U.S. market. Secondary domestic manufacturers that compete with Westinghouse and General Electric include

--Brown-Boveri (a subsidiary of the Swiss firm);

--Federal Pacific;

--High Voltage Breakers (a joint venture between General Electric and Japan's Hitachi);

--McGraw Edison;

--RTE-ASEA (a subsidiary of Sweden's ASEA);

--Siemens-Allis (85% owned subsidiary of Germany's Siemens and 15% owned by Allis-Chalmers of the United States); and

--Elliott Company (a subsidiary of United Technologies).

Allis-Chalmers is the only full-capacity U.S. manufacturer of large hydraulic turbines and Siemens-Allis is the only current U.S. manufacturer of generators for large hydraulic turbines. However, General Electric manufactures hydraulic turbines and generators in Canada and Westinghouse is bidding on an overseas contract for generators for large hydraulic turbines. Westinghouse officials note that if they win the contract these generators will be manufactured in their U.S. facilities.

International relationships

The large firms in this industry have expanded their overseas sales through a variety of cooperative arrangements with foreign firms. U.S. manufacturers maintain that they have generally entered into such arrangements to share sales in what would otherwise be closed markets. For example, General Electric and Westinghouse manufactured approximately 20 and 10 percent of the world's 1981 output of gas turbines, respectively; however, when their manufacturing associates[1] and licensees are included, they accounted for approximately 55 and 20 percent.

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[1]Foreign companies that agree to produce General Electric equipment under their own names. These companies also purchase all the high-technology components from General Electric.

General Electric and Westinghouse have manufacturing associates, licensees, joint ventures, and/or subsidiaries to penetrate foreign markets and to secure home market subsidies and protection. For example, General Electric's Turbine Business Group has a joint venture for steam turbines in Taiwan; a gas turbine licensee in France; and manufacturing associates for gas turbines in Holland, Great Britain, Italy, Japan, Norway, and West Germany. Westinghouse has licensees for steam turbines in six countries, generators in eight countries, power transformers in eleven countries, and power circuit breakers in two countries.

In contrast, U.S. manufacturers say that foreign firms cooperate, in part, to restrain competition, citing participation in the International Electrical Association, which they and others assert is a foreign cartel that attempts to regulate worldwide competition. Several studies support these contentions that most major foreign firms belong to the Association. Evidence of the Association's restrictive activities is not conclusive, but in a 1981 report the OUSTR acknowledged that the Association is a cartel.

To gain access to other markets in the world, Brown-Boveri, a manufacturer with a small home market in Switzerland, has major subsidiaries in Germany, Italy, Belgium, the Netherlands, Norway, and the United States. Brown-Boveri became a U.S. domestic supplier of heavy electrical equipment in 1980 by purchasing the electrical systems portion of a U.S. firm.

Sizes and market shares

A 1982 U.N. Conference on Trade and Development report estimated the output of the 10 principal manufacturers of steam turbine generators as follows.

Installation of Steam Turbine Generators by Principal Manufacturers

	1970-73	1974-77	1978-81	Total
	(Gigawatts)		(note a)	
General Electric	47.3	60.4	45.7	153
Westinghouse	53.1	30.9	40.5	124
KWU	14.7	18.2	19.8	52
Brown-Boveri	18.4	24.6	18.0	61
GEC	13.4	5.9	15.9	35
NEI-Parsons	11.8	12.4	9.8	34
Toshiba	12.2	10.7	8.2	31
Mitsubishi	10.0	11.1	10.3	31
Hitachi	9.5	9.7	7.2	26
Alsthom Atlantique	5.1	6.9	14.6	30

[a]One gigawatt equals one billion watts.

THE WORLD MARKET

Market demand for electrical equipment, especially in the developed countries, has declined in the last decade, so manufacturers have put more emphasis on export markets. The demand for heavy electrical equipment depends on anticipated consumer demand for electricity. Financing also effects demand, especially if funding is prohibitive due to high interest rates and/or the lack of available capital.

Slower demand growth has depressed market

The rate of increase in the generation of electricity has declined in the world since 1973. (See app. I.) Slow electricity demand growth, large reserve margins, and high interest rates have caused utilities to add generating capacity more slowly than in the past. As shown in appendix II, however, developing countries have not been affected as badly as the United States, France, Great Britain, Japan, and West Germany by this declining growth.

Appendix III shows that the non-Communist world's electricity production increased at a rate of about 9 percent in 1973 but only increased about 3 percent in 1980. The United States, which in 1980 had about 40 percent of the non-Communist world's installed generating capacity, has gone from a rate of increase of 10 percent in 1973 to 3 percent in 1980. Other industrialized countries, which had about 46 percent of the non-Communist world's installed generating capacity in 1980, increased generating capacity by 8 percent in 1973 and only by 4 percent in 1980.

While declining at times, electricity demand increases are still relatively strong in developing countries, which had about 14 percent of the non-Communist world's generating capacity in 1980. Appendix III shows that developing countries increased generating capacity by 6 to 10 percent from 1970 to 1974 and 7 to 10 percent from 1976 to 1980.

In recent years, developing countries have become a more important market for heavy electrical equipment, and manufacturers estimate that this trend will continue. The international debt crisis, however, has clouded the outcome for U.S. sales to many of these countries. In 1970, 11 percent of the non-Communist world's generating capacity additions were in developing countries, but by 1980, 27 percent of these additions occurred in developing countries. One U.S. manufacturer projected that developing countries will buy more than 40 percent of the electrical power equipment sold in the non-Communist world between 1981-95 but indicates that this trend will decline in the 1990s as developing countries' electrical growth rate slows and industrial countries recover economically and assimilate their current overcapacity. This manufacturer's estimates for increases in installed generating capacity from 1980 to 1983 are shown on the next page.

U.S. Manufacturer's Estimates of Increases in Installed Generating Capacity

	1980	1981	1982	1983
		(Gigawatts)		
Developing countries	26	35	33	28
United States	16	14	12	13
France	5	9	7	4
Great Britain	3	-	5	3
Japan	5	9	7	4
West Germany	6	4	2	2

In the early 1970s, heavy electrical equipment sales reached their highest levels ever, causing many manufacturers to increase production capacity. The declining sales after 1974 left many manufacturers with excess manufacturing capacity. U.S. manufacturers believe that, U.S. and worldwide, heavy electrical equipment manufacturers were operating at roughly 50 to 60 percent of capacity in 1982. For comparison, all U.S. manufacturing industries combined operated at approximately 70 percent of capacity in 1982, according to the Federal Reserve Board.

Export sales are increasingly important

Foreign manufacturers' domestic markets are smaller than the U.S. market, so they have always relied heavily on export sales. A 1982 U.N. report estimates that British and German steam turbine generator manufacturers will export 50 percent of their output from 1976 through 1985 compared with only 6 percent for U.S. manufacturers. The United States is estimated to be fifth in exports of total electrical plants of the six main exporting countries of heavy electrical equipment. (See app. IV.) However, one manufacturer noted that U.S. manufacturers are now giving export markets more priority.

U.S. heavy electrical equipment manufacturers have generally built their position of world sales leadership on domestic sales, not export sales. Thus, U.S. companies' sales are being affected by slow demand in the U.S. market.

One manufacturer notes that U.S. companies were highly export oriented during the post World War II period, after which foreign suppliers rebuilt indigenous capacity, closed their borders and, after satisfying home market demand, sought export business. With the downturn in the U.S. market, U.S. manufacturers now consider the export business essential.

According to U.S. manufacturers, foreign suppliers are able to dominate exports by selling to third world countries at below cost. They also note that foreign countries help subsidize these losses through export programs and protected home markets. The 1981 annual report of a foreign transformer manufacturer states that its increase in sales over the previous year "was achieved

exclusively through a vigorous rise in international sales. However, in order to secure sufficient capacity utilization in the plants and to avoid lay offs, the company was compelled to accept some foreign orders at prices which do not cover costs." The report also notes that "Costs rose, in particular for raw materials and personnel, but due to stiff competition on the international markets it was not possible to pass them on in full."

According to the Edison Electric Institute, U.S. exports of steam turbine-generators, have increased over the last decade. From 1970 to 1975, steam turbine-generator exports totaled 17.2 gigawatts of total U.S. shipments of 201.2 gigawatts. Although total shipments decreased to 151.4 gigawatts, from 1976 to 1981, exports increased to 22.5 gigawatts for the period.

The United States is the world's largest importer

According to a U.N. study, the United States has historically been the world's largest importer of heavy electrical equipment and from 1955 to 1985 accounted for 15 percent of the estimated 307.6 gigawatts of imported electrical plants in the world. U.S. utilities, however, still rely heavily on U.S. manufacturers.

Edison Electric Institute estimates that from 1970 to 1981, 11 percent of the 350 gigawatts of steam turbine-generators shipped to U.S. utilities were imported. From 1978 to 1981, it estimates that import orders represented 10 percent of the 37 gigawatts of new steam turbine-generator orders placed.

The Institute estimates that from 1970 to 1981 imports accounted for 35 percent of the 24 million horsepower[2] of hydraulic turbines shipped to U.S. utilities and from 1978 to 1981, import orders accounted for less than one percent of the 4 million horsepower of new hydraulic turbine orders placed. The Institute also estimated that from 1970 to 1981, 34 percent of the 27 gigawatts of generators for hydraulic turbines shipped to U.S. utilities were imported and that from 1978 to 1981, 7 percent of the 3 gigawatts of new orders of these generators were placed with importers.

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[2]One million horsepower converts to approximately 746 million watts.

CHAPTER 3

BUY-NATIONAL PRACTICES LIMIT IMPORTS

U.S. manufacturers state unanimously that almost all utilities in major foreign heavy electrical equipment manufacturing countries purchase only from suppliers within their own borders. They also say that U.S. trade in heavy electrical equipment has suffered from this lack of equivalent competitive access to world markets because foreign suppliers enjoy higher prices in their home markets, which in turn allows them to cut prices in export markets.

The major purchasers of heavy electrical equipment in West Germany, Great Britain, and France are government-owned utilities. In these countries, government buy-national practices restrict procurement of this equipment to their domestic manufacturers. Procurement practices, such as maintaining bidding systems which are only open to domestic manufacturers, demonstrate bias against imports.

Most utilities in Japan are privately owned, but the U.S. Embassy there indicated that the Japanese Government limits import pentration into Japan's heavy electrical equipment market. According to U.S. manufacturers, participation by foreign suppliers is limited because all major heavy electrical equipment purchases must be approved by Japan's Ministry of International Trade and Industry. U.S. manufacturers also note that opportunities to bid on projects in Japan are not widely publicized.

The general U.S. market is more open to foreign competition. However, U.S. private utilities have a strong tendency to purchase from domestic manufacturers. According to the Edison Electric Institute survey, almost half of these utilities adhere to buying policies which make domestic heavy electrical equipment manufacturers more price competitive.

U.S. Federal purchasers of heavy electrical equipment follow policies pursuant to the Buy-American Act, which is designed to make domestic manufacturers more price competitive without excluding foreign suppliers, but these purchasers' degree of support for the policies differ.

EUROPE

The 1982 U.N. report states that domestic suppliers account for 97 percent of the installed and on-order power generating plants in Great Britain, France, West Germany, and Switzerland. The remaining 3 percent is estimated to come from non-domestic European suppliers.

The major purchasers of heavy electrical equipment in West Germany, Great Britain, and France are government-owned utilities and the Government Procurement Code[1] excludes government entities which purchase heavy electrical equipment (U.S. Government entities are also excluded). For example, this exclusion applies to almost the entire British and French electric generating market and allows procurement officials to purchase heavy electrical equipment without having to consider imports. The European's unwillingness to include under the Code entities which purchase heavy electrical equipment is probably indicative of the importance they place on protecting their heavy electrical industries.

The OUSTR states in a 1981 report that European government procurement practices are often part of broader industrial policies to promote domestic industries, employment, national security, technological development, and/or other factors. The OUSTR report also states that the heavy electrical equipment sector was excluded from a European Community Council directive on government purchasing, which required that public supply contracts within the European Community be open to all European Community firms.

Great Britain

Great Britain has no regulations which mandate purchasing of domestic heavy electrical equipment. However, all contracts involving 50,000 British Pounds (approximately $80,000) or more must be referred to the British treasury for review and formal consent if it is likely that the contract will be awarded to a foreign supplier. Apart from this requirement, each British agency has discretion in awarding contracts for its supplies but they tend to favor domestic suppliers. According to U.S. manufacturers, no sales have been made to utilities in Great Britain for years and no future sales are anticipated.

The generation of electricity in Great Britain is essentially monopolized by the nationalized Central Electricity Generating Board. A 1975 U.S. Department of Commerce study of the British market for electric energy systems stated that the Board is not likely to buy U.S. equipment because of the need to keep domestic manufacturers in business. The study also noted that there was no American-manufactured equipment anywhere in the utility sector of generation, transmission, or distribution and not likely to be any in the next 10 years.

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[1]The Code was one of the non-tariff barrier "codes of conduct" negotiated during the Multilateral Trade Negotiations concluded in Tokyo in 1979 under the General Agreement on Tariffs and Trade (GATT). The GATT was concluded in 1947 to establish groundrules governing international trade.

France

France has no formal buy-national legislation but strongly favors local firms. According to the OUSTR, the French Government prefers to buy heavy electrical equipment domestically when possible and the State Department believes that opportunities for foreign suppliers are limited by a strong "preference" for or "tradition" of buying from local manufacturers. U.S. manufacturers indicated that no recent heavy electrical equipment sales have been made to France and no future sales are anticipated.

According to the Department of State, the French Government has a virtual monopoly over electricity generation and transmission through Electricite de France, which supplies more than 90 percent of the country's electricity.

West Germany

The official policy position of the German Government is that it does not discriminate in favor of German firms. There are no written rules or regulations which favor domestic procurement of heavy electrical equipment, but procurement officials have a marked tendency to favor German suppliers. As in Great Britain and France, U.S. manufacturers have not made sales in recent years and do not expect to make any in coming years.

Approximately 75 percent of the German market consists of government-owned utilities. Among the major consumers of heavy electrical equipment are Vereinigte Industrie-Unternehmungen Ag holding company, Saarbergwerke, and VEBA. VEBA is controlled by the government but is managed as a private enterprise.

JAPAN

Nine regional electric utilities, all private corporations, own 79 percent of Japan's generating capacity. There are also three semi-governmental organizations--the Electric Power Development, Japan Atomic Power, and Okinawa Power Companies.

Although most utilities in Japan are privately owned, the U.S. Embassy in Japan estimated that government influence has a substantial effect on the Japanese electrical industry and limits import penetration. The 1981 OUSTR report noted that Japan's limited public notification of bid opportunities has the effect of excluding foreign suppliers from penetrating the market.

Japan's electric power equipment industry is totally dominated by four corporate groups--Mitsubishi, Toshiba, Hitachi, and Fuji. Most Japanese manufacturers have technical licensing agreements with U.S. companies. Although an appreciable amount of power equipment in Japan has been imported, U.S. manufacturers

and a 1982 U.N. study note that imports have been restricted to the first unit of a new design or vintage purchased from U.S. firms under technical licensing arrangements and all subsequent units have been made by Japanese suppliers.

A 1975 Department of Commerce study of the Japanese market for electric energy systems concluded that there was no way to significantly improve the market position of U.S. manufacturers unless the pattern of technological license agreements is discontinued or the price of U.S. equipment is substantially lower than that of Japanese equipment. Appendix IV shows that Japan has historically been the primary export market of electrical plants for U.S. manufacturers. U.S. manufacturers, however, note that the 10 percent of electrical plant imported from 1955 includes post World War II sales. These manufacturers estimate that the Japanese have imported approximately 7.8 percent since 1970 and only 0.5 to 2.5 percent in more recent years.

UNITED STATES

Individual U.S. utilities' purchasing practices range from a complete "open door" policy to complete exclusion of foreign heavy electrical equipment. The Federal Government, which owns about 10 percent of the Nation's installed generating capacity, usually gives preference to domestic manufacturers by adding a percentage differential to foreign bids, as required by the procurement regulations which implement the Buy-American Act (41 U.S.C. 10).

Private utilities, which are not subject to Government buy-national policies, make up 77 percent of the U.S. market. An Edison Electric Institute survey, however, revealed that almost half of the 161 respondents (85% of the Institute's member utilities responded) have policies which favor the purchasing of heavy electrical equipment from U.S. manufacturers.

U.S. Government entities which purchase heavy electrical equipment follow policies pursuant to the Buy-American Act. The use of the Act by these entities was in response to the European's unwillingness to include their entities in the Government Procurement Code.

The Buy-American Act requires Federal agencies to purchase only domestic supplies and materials for public use in the United States, unless

--domestic supplies of a satisfactory quality do not exist in sufficient and reasonably available commercial quantities,

--their purchase would be inconsistent with the public interest, or

--their cost would be unreasonable.

Regulations implementing the Act define domestic and foreign end products and specify that either a 6 or 12 percent differential will be added to foreign bids to evaluate whether the cost of domestic products is reasonable.

Private utility practices

About 45 percent of the private utilities have purchased some foreign equipment within the last 5 years. According to the Institute survey, most of these utilities say foreign purchases represent less than 15 percent of all their purchases. The most frequent reasons for buying foreign equipment were price, superior quality, and unavailability of domestic equipment.

Half of the private utilities that have not bought foreign equipment during the last 5 years indicated they had their own policies, giving preference to U.S. manufactured products. Other reasons included (1) better quality, price, delivery, spare parts availability, or service from U.S. firms, (2) proximity of U.S. firms' manufacturing facilities, (3) no solicitation by foreign firms, and (4) little or no need to buy any equipment.

Federal agencies' practices

The major Federal agencies which buy heavy electrical equipment are the Army Corps of Engineers; Tennessee Valley Authority; Western Area, Southwestern, and Bonneville Power Administrations; and Bureau of Reclamation. These agencies, which represent about 9 percent of the U.S. market, usually apply the 6 or 12 percent differential which is designed to make domestic manufacturers more price-competitive.

U.S. manufacturers assert that the 6 and 12 percent differentials have no impact on foreign manufacturers that get their governments' support through closed home markets and subsidies. Data obtained from the Tennessee Valley Authority; Western Area, Southwestern, and Bonneville Power Administrations; and Bureau of Reclamation indicates that from 1977 to 1981 these agencies combined purchased only $110.9 million of heavy electrical equipment; however, $56.4 million or 51 percent of it was imported.

The Corps of Engineers, which applies purchasing procedures more favorable to U.S. firms in letting certain contracts, purchased $162.3 million of heavy electrical equipment from 1977 to 1981; however, only 10 percent was imported. For example, in August 1982 the Office of the Secretary of Defense issued a requirement that the Army Corps of Engineers purchase only hydraulic turbines and generators with 100 percent domestic content. Hydraulic equipment is the principal heavy electrical equipment purchased by the Corps. The Corps currently plans to purchase hydraulic turbines and generators for the Richard Russell Dam in Georgia.

The Office of the Secretary of Defense's reasons for providing such exceptional protection to domestic manufacturers of hydraulic turbines and generators were to

--keep the sole U.S. manufacturer of large hydraulic turbines in business, since it is also a planned producer of shafts and propellers for ships and support components under certain mobilization conditions;

--maintain a defense mobilization base for future hydraulic generator requirements;

--support U.S. research and development capability, labor skills, employment, and repair capability; and

--help achieve U.S. energy self-sufficiency.

An April 5, 1983 memorandum from the then Acting Deputy Under Secretary of Defense, Research and Engineering (Acquisition Management), however, stated that the 100 percent requirement was being withdrawn because additional technical analysis was required to assess the justification for additional buy-national preferences to support a defense mobilization base for hydraulic turbine and generator requirements. Prior to this withdrawal, there was a bid protest challenging the basis for the 100 percent buy-national preference.

In July 1983, the Under Secretary of Defense issued guidance on the specific items, services, and conditions for procurement of hydraulic turbines by the Army Corps of Engineers. This guidance included the requirements that turbine prototype designers have engineering departments located in the United States or Canada and that certain components of the turbine be manufactured in the United States or Canada. As of July 1983, the analysis on hydraulic turbine generators had not been completed.

CHAPTER 4

U.S. AND FOREIGN GOVERNMENT POLICIES AFFECT SALES

U.S. heavy electrical equipment manufacturers noted that many U.S. Government policies make them less competitive in the U.S. and foreign markets; they are, however, particularly concerned with foreign government programs that subsidize exports of heavy electrical equipment. Many export programs provided by major supplier countries, including the United States, offer some degree of subsidy; however, U.S. manufacturers note that subsidies provided by many other major supplier countries are far more than those provided by the United States.

The appropriate use of export financing subsidies are covered by the International Arrangement on Guidelines for Officially Supported Export Credit.[1] A series of "Arrangements" negotiated since 1977 coupled with the recent decline in market interest rates have reduced much of the subsidy element in officially supported export financing. However, according to U.S. manufacturers, elements such as tax preferences given to foreign exporters are not controlled.

The use of export subsidies including heavy electrical equipment, is the subject of the 1979 Subsidies/Countervailing Measures Agreement,[2] which was concluded in the context of the General Agreement on Tariffs and Trade, for most traded products. Despite the prohibition requiring that signatories to the Subsidies Code not grant export subsidies on non-primary products, not as much progress has been made under the Subsidies Code as was expected when it was signed.

OFFICIAL CREDIT IS IMPORTANT TO EXPORT SALES

The Export-Import Bank of the United States (Eximbank) offers export financing to U.S. heavy electrical equipment manufacturers. In 1982, direct loans for this industry totaled more than one-third of Eximbank's total direct loans. According to

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[1]Concluded by governments of the Organization for Economic Cooperation and Development in 1978 to establish guidelines for officially supported export credits in the form of minimum interest rates and maximum loan maturities. A U.S. Government policy objective is to have all official financing automatically aligned with market rates and the subsidy element eliminated.

[2]Formally, an "Agreement on Interpretation and Application of Articles VI, XVI, and XXVII of the General Agreement on Tariffs and Trade." Article VI in part concerns the use of countervailing or offsetting duties on subsidized imports, Article XVI concerns the use of subsidies, and Article XXIII establishes, in part, the dispute settlement procedures of the GATT.

Eximbank, however, U.S. heavy electrical equipment manufacturers have lost some sales because of more favorable foreign financing. Industry officials, however, note that many other potential sales have not been pursued because it was apparent that Eximbank financing was not competitive. They also note that with so few sales now, loss of a few can have a substanial impact, especially since there have been no domestic orders for large steam turbines in 1982 and the first half of 1983.

U.S. and foreign official export credit

U.S. manufacturers emphasize that attractive financing is critical in exporting heavy electrical equipment to developing countries. The finance director of a major manufacturer told us that virtually all U.S. heavy electrical equipment exports are either left up to the buyer to finance or left up to the U.S. manufacturer to obtain Eximbank financing for the buyer. According to this official, commercial banks do not offer the long-term, fixed-rate financing needed to support these large sales. Although some countries finance purchases with their own resources, official credit is essential in selling heavy electrical equipment to most countries.

The importance of financing to export competitiveness (particularly for such high-value sales as electric power equipment) has led countries which export heavy electrical equipment to offer subsidized export credit and mixed credits (in which export financing is blended with foreign aid).

Eximbank makes direct loans to foreign buyers of U.S. electric power equipment and provides financial guarantees to private banks that finance exports. Eximbank authorized $1.030 billion in direct loans for U.S. heavy electrical equipment exports in fiscal year 1982, supporting $1.365 billion in export sales. In fiscal year 1981, Eximbank extended $651 million in direct loans for this industry, supporting $1.028 billion in export sales. Eximbank has also provided a few loan guarantees to private banks that finance electric power equipment exports in recent years. These loan guarantees also have assisted U.S. manufacturers in obtaining low-interest foreign bank loans.

U.S. manufacturers note that some export sales are lost because foreign governments commonly provide mixed credit financing. By combining Eximbank loans, private financing, and Agency for International Development grants, the United States has only twice provided mixed credits for heavy electrical equipment exports. The combined value of the two sales was about $51 million. Officials we contacted emphasized that these mixed credits were provided to match foreign mixed credit offers for projects in Egypt.

Foreign countries which compete with the United States for heavy electrical equipment sales offer similar official export

credit programs, although the degree of support varies from one country to another. The French Government administers an aggressive subsidized export credit program and a large and growing mixed credits program. In contrast, the German Government offers minimal subsidized financing.

Although, many factors (e.g., terms, price, quality, and delivery) affect foreign utilities' purchase decisions, Eximbank has offered long-term financing at higher rates than its competitors. U.S. manufacturers note that a one percent difference can give foreign manufacturers a major advantage with a purchaser. A $100 million loan for 10 years at 9.82 percent requires annual payments of principal and interest of $16.15 million. The same loan at 8.82 percent would require annual payments of principal and interest of $15.46 million, which is a 4.3 percent reduction in the annual carrying costs of the loan.

According to Eximbank, many countries, particularly France, Great Britain, and Italy, for several years have been prepared to expend large amounts of money (in some cases over $1 billion per year) to bring their interest rates down.

In 1981, Eximbank provided long-term financing (over 5 years) at an average 9.82 percent effective annual interest rate, which was higher than that of France, West Germany, Japan, or Great Britain. Japan had the lowest rate, 7.94 percent for yen financing, and Germany was closest to the United States, with a 9.55 percent effective annual rate. Based on Eximbank's comparison of effective interest rates, the U.S. rates were closer to the other countries in 1979 and 1980 than they were in 1981. Eximbank's comparison of average annual rates for each of the 3 years are shown on the next page.

Eximbank agrees that prior to January 18, 1983, its interest rates were higher for some buyers than the minimum interest rates prevailing; but a decision has been made to reduce Eximbank rates as necessary to make them equal to the minimum rates in all cases.

Because market interest rates vary in each of these countries, it is useful to look at the subsidy element in each country's officially supported financing. According to Eximbank, the subsidy element was about $160 million for each $1 billion in 1981 Eximbank long-term credits. Eximbank has not yet prepared an estimate of subsidy costs for 1982. Japan and West Germany had lower subsidy rates than the United States (because of lower commercial rates), about $3 million and $69 million, respectively, while France and Great Britain had higher subsidy rates, about $280 million and $252 million, respectively. From 1979 through 1981, the United States held the same relative loan subsidy position with Japan, West Germany, Great Britain, and France. Eximbank believes that subsidy costs were generally lower in 1982, partly because of lower market interest rates.

Comparative Long-Term Officially Supported Interest Rates for Loans to Selected Upper-Tier Developing Countries (note a)

Country	1979	1980	1981
	(percent)		
France (French francs--99%)	8.35	8.45	8.55
West Germany (D-Marks--100%)	8.90	9.05	9.55
Japan (yen--25%)	7.85	7.65	7.94
(U.S. dollars--75%) (note b)	-	-	7.71
Great Britain (sterling--68%)	8.10	8.19	8.79
(U.S. dollars--30%)	-	-	8.50
(D-Marks--2%)	-	-	8.50
United States (U.S. dollars--100%)	8.30	8.60	9.82

[a]Estimated total cost of 85% financing, including required insurance and guarantee fees and any private financing needed to obtain 85% cover. Rates shown are yearly averages.

[b]Japan provides financing at subsidized rates only in yen. Frequently, however, Japan's suppliers offer financing in U.S. dollars, based on a yen supplier credit obtained in Japan's Export-Import Bank.

Other factors also influence competitiveness. Eximbank loans cover up to 65 percent of the export price; if the exporter obtains 10 percent financing from private sources, Eximbank may finance another 10 percent, for a maximum 75 percent. Eximbank provided 75 percent financing for all power equipment exports it supported in fiscal year 1982. France and Great Britain typically finance 80 to 85 percent of the export price without the requirement for private financing, while West Germany and Japan respectively cover only 70 and 60 percent of the export value. According to a U.S. manufacturer, the 10 percent private financing associated with an Eximbank loan must be "bought down" to the Eximbank rate and thus is an additional cost to U.S. manufacturers.

Eximbank's analysis shows that the United States offers fewer extraordinary export support programs than its major competitors. For example, in 1981 Eximbank provided no mixed credits, local-cost support (financing for costs in the buyer's country which support the U.S. export), or foreign currency loans. All other major export competitors used some of these programs; France and Great Britain used all of them. One U.S. manufacturer noted that some of these countries even reduce and sometimes eliminate charges for loan costs.

Eximbank's follow-up reports indicate that Eximbank believes that U.S. manufacturers have lost four heavy electrical equipment export sales worth about $503 million since October 1978, primarily due to more favorable financing offered by other countries. However, as mentioned earlier, other variables also could have affected these sales.

Multilateral attempts to reduce subsidized financing

The U.S. Government has attempted since the mid-1970s to negotiate effective international control over export credit subsidies. Progressively more restrictive International Arrangements on Guidelines for Officially Supported Credit were negotiated between 1977 and 1982. The current Arrangement rates, effective since July 1982, are shown on the next page.

Mixed credits with a grant element of less than 20 percent must comply with Arrangement terms, but credits with a larger grant element are not subject to the Arrangement. Under previous Arrangements, signatories could deviate from the agreed terms if they notified their trading partners in advance; beginning July 6, 1982, participating governments pledged not to deviate from the current Arrangement terms.

The July 1982 Arrangement reduced the subsidy element in official export credit, through

--higher minimum interest rates;

--the pledge not to deviate from the terms for one year; and

--reclassification of several countries from the "relatively poor" to the "intermediate" category and from the "intermediate" category to the "relatively rich" category.

Declining commercial interest rates in several participating countries have further reduced the subsidy in government-supported export financing.

Export credit financing for U.S. utilities

U.S. manufacturers are concerned that foreign export credit financing could be used to sell heavy electrical equipment to U.S. utilities. Manufacturers claimed that in 1981 a private utility, Atlantic City Electric Company, began discussions with two European producers about the construction of a generating plant. Though the project was subsequently postponed, informal foreign proposals were received which offered interest rates of about 9.5 percent as opposed to the U.S. commercial rate of 17 percent. According to the utility, this would have saved it about $100 million of the estimated $550 million cost of the power plant and would have been one of the primary decisionmaking factors.

Terms on International Arrangement on Guidelines for Officially Supported Credit (As of July 1982)

Borrower's economic development level	Interest rates (note a) 2 to 5 years	over 5 to 8.5 years	over 8.5 to 10 years
	(percent)		
Relatively Rich (gross national product per capita $4,000 and over)	12.15	12.40	No official credit
Intermediate	10.85	11.35	No official credit
Upper tier developing countries (note b)			
Effective July 6, 1982	10.50	10.75	10.75
Effective Jan. 1, 1983	10.85	11.35	11.35
Relatively poor (note c)	10.00	10.00	10.00

[a]Excludes special rates permitted for low interest rate countries, such as Japan. Officially supported export credits in low interest rate currencies must be at least 0.30 percent above the domestic commercial lending rate of that currency. In essence, this means that Japan will have to charge 0.30 percent over its long-term prime rate (its market rate).

[b]Countries graduated from the relatively poor into the intermediate category. Interest rates were applied in two stages.

[c]Includes countries eligible for International Development Association loans.

Had Atlantic City Electric proceeded with the project and the foreign offer, U.S. manufacturers could have sought remedy through Export Credit Competition (sec. 1912, Export-Import Bank Amendments of 1978) or Countervailing Duties (sec. 701, Trade Agreements Act of 1979) provisions.

The 1978 Export-Import Bank legislation empowers the Secretary of the Treasury to conduct an investigation upon receipt of information that a country is offering official export credits at variance with international agreements. If it is determined that non-competitive financing is being offered, the Secretary is to request immediate withdrawal of the offer. If the offer is not withdrawn, competing U.S. sellers can be provided with matching financing from Eximbank if the Secretary determines that the foreign financing would likely be a determining factor in the sale.

Manufacturers note that this remedy has not been used in the past. They note an unsuccessful attempt in 1982 by a U.S. subway car manufacturer to seek implementation of this provision.

Filing a countervailing duty suit requires an allegation of "material injury" to a U.S. industry. This allegation is required where the petition involves a country to which the United States applies the Subsidies Code. A U.S. manufacturer noted that it would have been difficult to demonstrate material injury.

Although subsidized credit for the sale of heavy electrical equipment to the U.S. market remains a potential problem, a January 1983 International Trade Commission study concluded that domestic utilities have not purchased foreign heavy electrical equipment solely on the basis of favorable foreign financing.

Government risk guarantees

Most countries which export heavy electrical equipment have government insurance programs which cover commercial and political risks for exporters; some also offer cost escalation and exchange risk insurance. These insurance programs appear to benefit manufacturers by taking away risks that are considered in pricing each bid.

Foreign government export insurance programs

Major supplier countries have government insurance programs covering commercial and political export risks. British, French, West German, and Japanese Government agencies also offer exchange risk and/or inflation risk insurance. According to U.S. Eximbank reports, Great Britain and France subsidize the losses of their export insurance programs, but Germany's official insurance agency has traditionally shown a profit on its operations.

Great Britain offers exporters commercial risk, inflation risk, and exchange risk insurance through its Export Credits Guarantee Department. In 1980, this department reported a loss on its insurance operations equivalent to about $221 million (in 1979, the loss was about $187 million). These insurance subsidies benefit British exporters, even though British exporters and bankers have commented that the inflation coverage is cumbersome to use and is of limited value because it covers only part of the risk.

The French Government offers the same types of coverage but a more extensive exchange risk insurance program. In 1980, export insurance programs cost the French Government at least $583 million.

West Germany offers exporters commercial and political risk insurance, exchange risk insurance, and local cost insurance

through a private company operating on behalf of the German Government. This company has traditionally recorded a profit on its operations. The U.S. Eximbank, however, believes there is a possibility of losses in future years due to insured loans to Poland and other Eastern Bloc countries.

Japan's Ministry of International Trade and Industry offers commercial and political risk insurance and exchange risk insurance. The exchange risk insurance program has not been used extensively, which the U.S. Eximbank believes implies that many Japanese exporters are willing to assume the risk of exchange risk losses. In fiscal year 1980, the Ministry reported a small surplus from its insurance operations.

U.S. export insurance programs

The principal official Government export insurance program used by the U.S. power equipment manufacturers that export equipment through long-term financing arrangements is the Overseas Private Investment Corporation[3] (OPIC). This program offers coverage against arbitrary drawings of letters of credit or on-demand bonds required as bid, performance, or advance payment guarantees. OPIC also provides inconvertibility coverage designed to ensure that foreign currencies can continue to be converted to U.S. dollars. OPIC offers this coverage to U.S. manufacturers; however, it shows a profit on its insurance operations.

The Foreign Credit Insurance Association (FCIA), an association of commercial insurance companies formed by Eximbank and the insurance industry provides protection to U.S. exporters. Policies issued by FCIA insure repayment in the event of default by foreign buyers and may be used as collateral for bank loans to U.S. exporters. However, FCIA does not cover long-term transactions, which are primarily used in heavy electrical equipment sales.

Eximbank direct loans and loan guarantees give U.S. manufacturers some protection that foreign manufacturers receive through insurance programs. The portion of the loan financed or guaranteed by Eximbank does not represent a risk to the manufacturer.

DUMPING OF FOREIGN LARGE POWER TRANSFORMERS INJURED U.S. MANUFACTURERS

U.S. manufacturers maintain that subsidies and protected home markets permit foreign heavy electrical equipment manufacturers to "dump" their products in the U.S. market (i.e., sell

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[3]A U.S. Government corporation which offers political and inconvertibility risk insurance to U.S. exporters.

equipment in the United States for less than the seller's home market price). Many industry representatives, however, told us that in the heavy electrical equipment industry the market sometimes demands that companies sell in third-country markets at less than home market prices. These representatives noted that most manufacturers receive premium prices in their home markets, which permit them to cover fixed costs, and then compete abroad at prices close to variable costs. According to these representatives, foreign manufacturers with closed home markets can demand domestic prices necessary to assure coverage of fixed costs.

In 1972, the U.S. Government found that French, British, Italian, Swedish, Swiss, and Japanese manufacturers had dumped large power transformers in the United States, injuring domestic manufacturers. Periodic governmental administrative reviews subsequently have been made to determine the level of definitive duties to be assessed on imports during the period reviewed and to set the level of estimated duties to be collected pending the assessment of definitive duties in a subsequent review. U.S. importers of transformers from France, Italy, and Japan must still make cash deposits of estimated antidumping duties ranging from 3 to 26 percent, pending assessment of final dumping duties.

The representatives of one importer maintain that the cash deposit requirements and uncertainty caused by delays in establishing final anti-dumping duties create a barrier to sales of foreign large power transformers in the United States.

Some U.S. manufacturers believe that foreign producers dump other heavy electrical products, such as large steam and hydraulic turbines, in the United States. Their representatives say that they have not made formal complaints because of difficulties in obtaining information on foreign manufacturers' home market prices and in demonstrating injury.

OTHER U.S GOVERNMENT POLICIES THAT AFFECT EXPORT SALES

Some U.S. Government policies have a negative affect on exports; however, some economic consequences were probably foreseen when the policies were established. For example, the administration's embargo of the Soviet European pipeline caused a gas turbine manufacturer to lose sales and its investment in units already started. The manufacturer noted that there is a good chance that it will lose overseas business because many buyers are questioning U.S. reliability. A 1983 Office of Technology Assessment study points out that this action contributed to foreign perceptions of the United States as an unreliable supplier and had a larger negative impact on the United States than on the Soviet Union. The extent to which future overseas sales may be lost because foreign buyers question U.S. reliability as a result of this action, however, is unknown. The gas turbine manufacturer involved estimates that over $500 million will be lost in

pipeline-related sales over the next 15 years because the Soviets have taken steps to establish import sources that are not subject to U.S. interference.

Below is a summary of other U.S. policies cited by U.S. manufacturers as affecting exports of heavy electrical equipment.

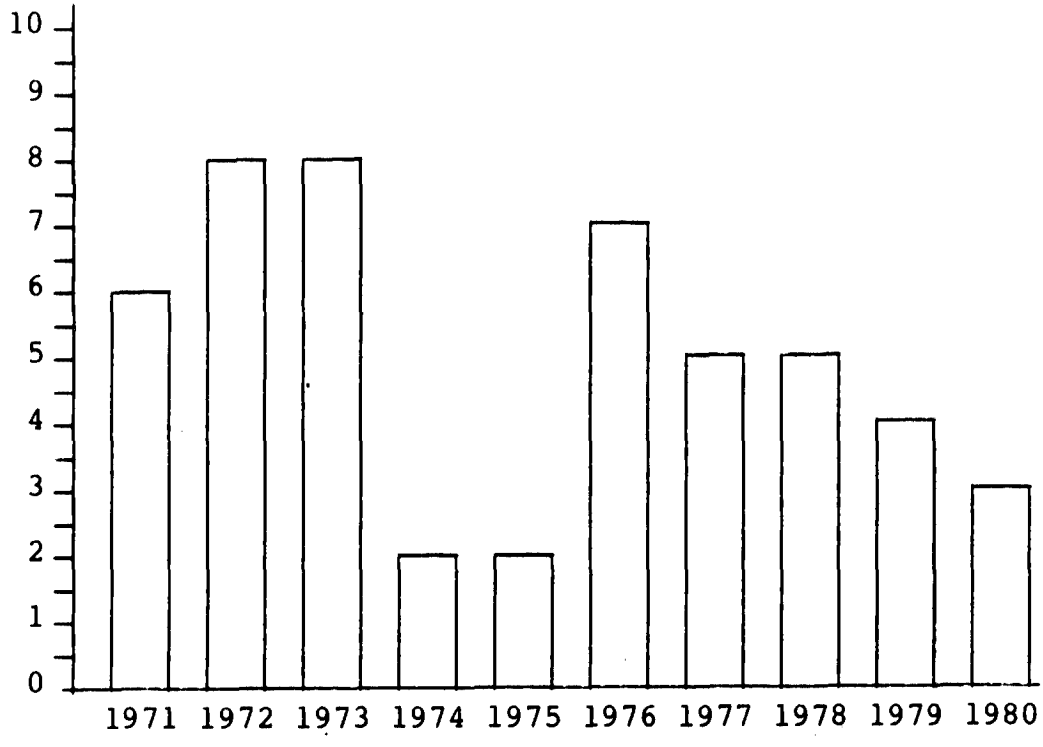
--Antitrust regulations are seen as restricting the forming of consortia (to bid on large overseas projects which could have an impact on export opportunities for other U.S. firms), prohibiting certain foreign arrangements, restricting joint research and development projects between U.S. manufacturers, and barring certain foreign licensing arrangements which would allow U.S. manufacturers to better protect their technology as foreign manufacturers are able to do.

Although some manufacturers maintained that changes in antitrust regulations concerning joint research and development would make them more competitive in the world market, one major manufacturer believes that current restrictions impose no hardship and would be reluctant to participate in developmental projects with its competitors. Justice Department officials stated that the Department does not take the approach that joint research and development ventures are necessarily illegal. These officials noted that U.S. exporters can ask the Department for an opinion concerning proposed ventures and although the opinion is not legally binding, it is binding for practical purposes. One manufacturer noted, however, that the real risk lies in competitor's treble damage suits.

--Anti-boycott statutes are seen as imposing an administrative burden on exporters, but manufacturers do not believe that these requirements place them at a major disadvantage in competing with foreign companies. In September 1982 the Commerce Department published revisions to certain aspects of the anti-boycott regulations in an attempt to reduce unnecessary and burdensome aspects of the reporting requirements.

--The Foreign Corrupt Practices Act of 1977 has raised uncertainty in international transactions because of the difficulty perceived by some companies in distinguishing between illegal payments and legitimate commissions. Manufacturers also note that other countries have generally endorsed the concept of prohibiting such illicit payments but that no formal agreement has been reached.

PERCENTAGE INCREASES IN WORLDWIDE GENERATION
OF ELECTRICITY 1971-80

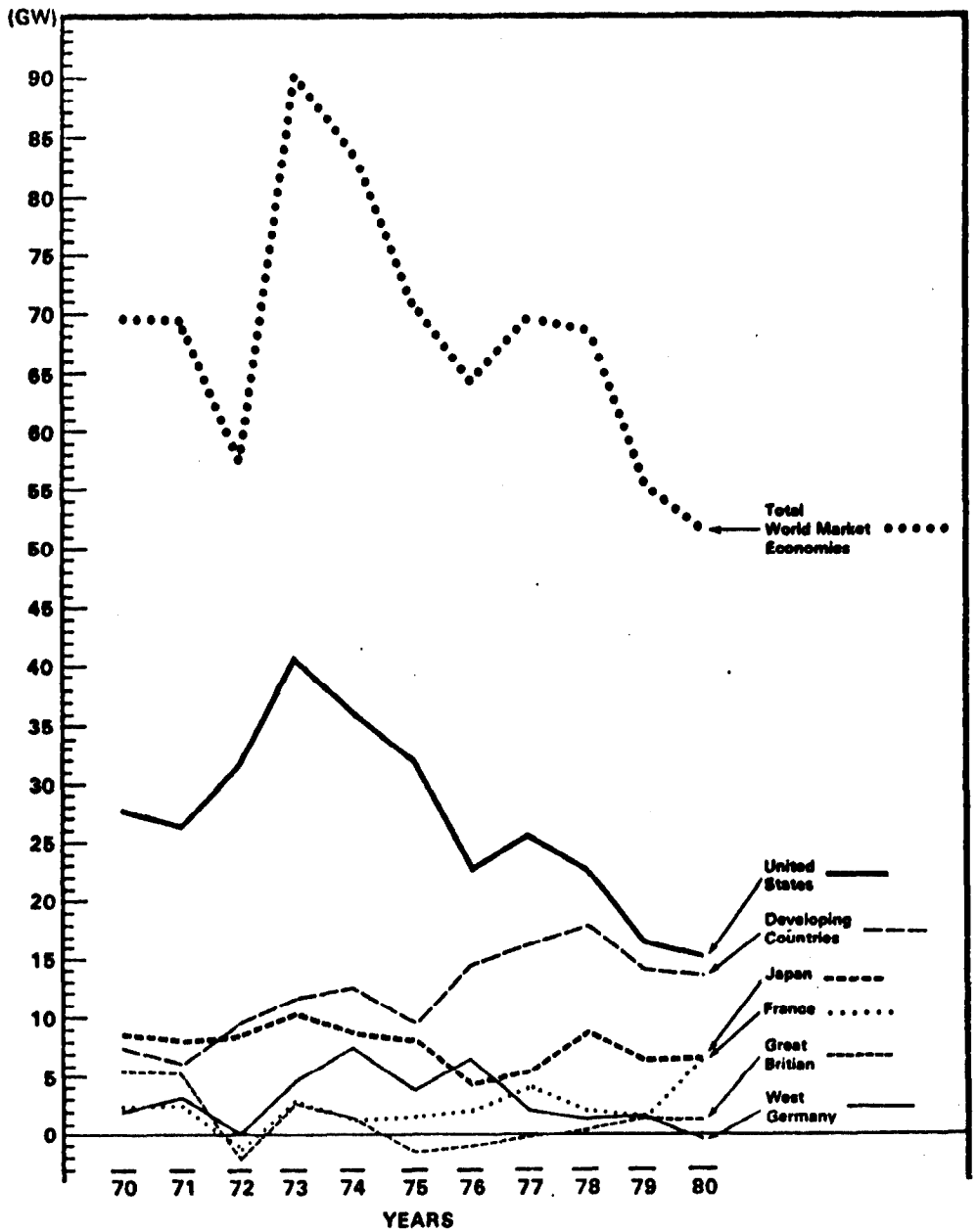


Source: Based on World Energy Statistics published by the U.N. Department of Economic and Social Affairs.

INCREASES IN INSTALLED GENERATING CAPACITY

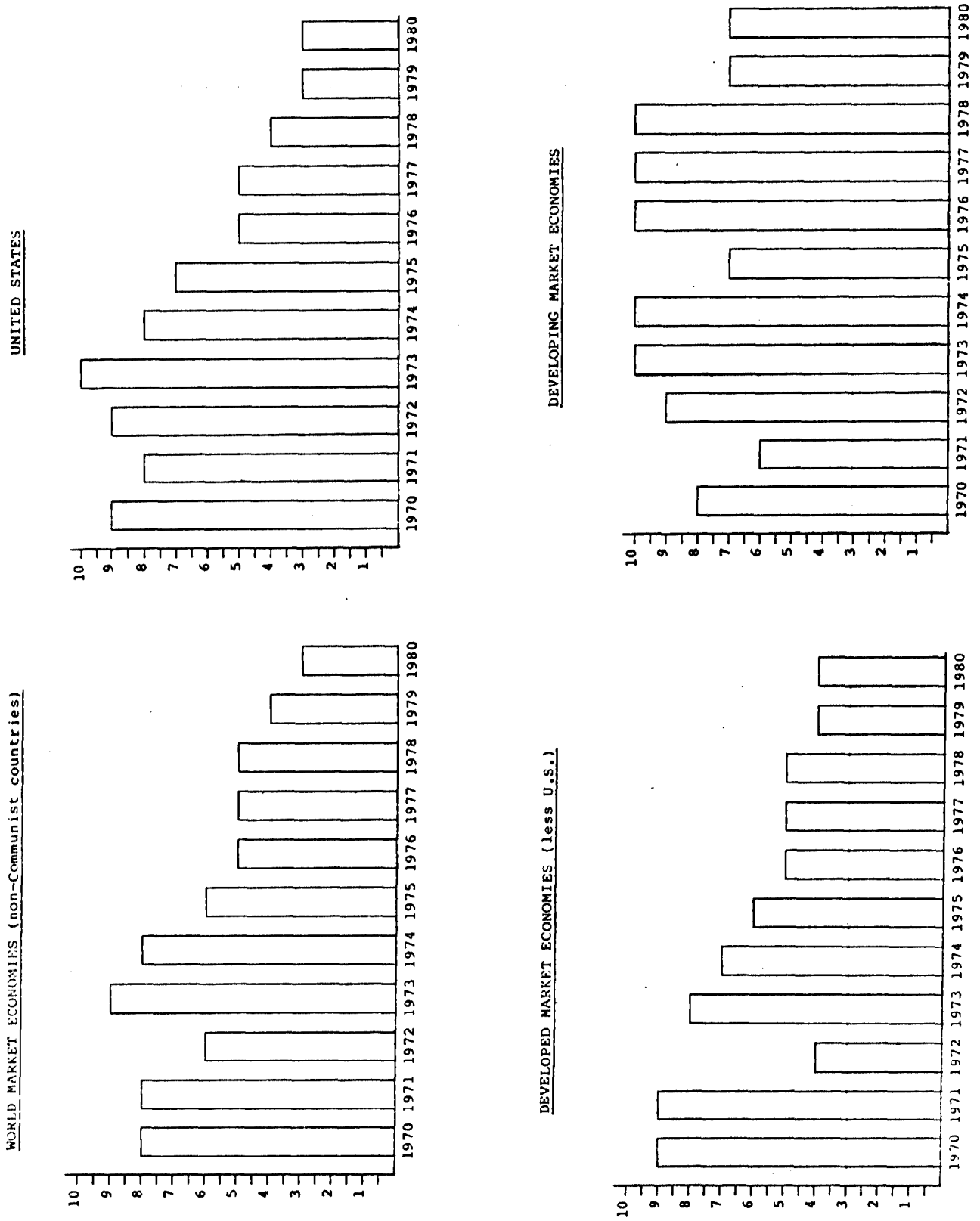
1970-80

(in gigawatts)



Source: Based on World Energy Statistics published by the U.N. Department of Economic and Social Affairs.

PERCENTAGE INCREASES IN INSTALLED GENERATING CAPACITY 1970-80



IMPORTERS AND EXPORTERS OF TOTAL

ELECTRICAL PLANTS 1955-85 (note a)

	Identified Imports		Main Exporters					
			Exports in gigawatts (GW)					
Importers	GW	Percent of total plant	West Germany	Japan	Switzerland	Great Britain	France	United States
United States	45.4	8	10.4	7.7	19.5	5.0	2.3	
Canada	31.5	44	2.2	5.4	0.9	21.4	0.3	1.6
Australia	18.2	67	2.7	5.8	1.5	8.0		
South Africa	18.2	93	4.9	1.6	3.1	4.4	4.4	
Spain	16.9	46	3.0	3.0	3.9	1.9	1.4	3.9
Japan	12.0	10	0.7			0.1		11.0
Netherlands	11.3	76	5.3		3.1		2.0	
Belgium	8.3	71	0.7		1.3	0.2	5.6	0.4
Denmark	6.2	95	1.4		4.5			
Finland	5.1	74	2.3		0.1	0.2		
New Zealand	5.0	92	1.4	0.3		2.3		
Greece	4.7	65	0.7	0.3	0.2		2.2	0.5
Israel	3.0	88	0.3			0.9		1.8
Other	23.9	10	6.2	2.4	8.6	1.2	1.7	1.9
Total developed market economy countries	209.7		42.2	26.5	46.7	45.6	19.9	21.1
Brazil	11.3	51	7.7	1.0	0.6			0.7
Mexico	9.6	56	0.8	7.4	0.2		0.7	0.6
India	9.5	54	1.7	0.6	0.1	0.8	0.4	1.4
Rep. of Korea	9.5	83	2.8	3.1		1.8	1.2	0.1
Iran	5.9	51	3.9	0.8		0.2	0.2	
Argentina	5.1	72	2.3	0.8	0.5	0.6		
Philippines	3.5	95	1.0	1.5				1.0
Thailand	2.6	91	0.4	2.0				0.2
Egypt	2.2	75	0.4				0.3	1.5
Kuwait	2.1	91	0.3	1.8				
Singapore	2.0	80		1.6		0.4		
Other developing countries	34.6	77	3.1	0.7	0.7	3.5	1.0	9.3
Total developing countries	97.9		24.4	21.3	2.1	7.3	3.8	14.8
Total world	307.6		66.6	47.8	48.8	52.9	23.7	35.9
Percent of world	100		22	16	16	17	8	12

[a]Power plants installed from Jan. 1955 through those scheduled to be in service before Dec. 1985.

Source: Based on data in U.N. Conference on Trade and Development's Study, "Trends in the Procurement of Electricity Generating Plant in Developing Countries" (TD/B/C.6/AC.9/3)

DEPARTMENT OF STATE
Comptroller
Washington, D.C. 20520

29 JUL 1983

Dear Frank:

I am replying to your letter of June 27, 1983, which forwarded copies of the draft report: "International Restraints to Competitiveness of the U.S. Heavy Electrical Equipment Industry."

The Department has reviewed the report and does not have any comments.

We appreciate having had the opportunity to review the draft report.

Sincerely,

Roger B. Feldman

Mr. Frank C. Conahan,
Director,
National Security and
International Affairs Division
U.S. General Accounting Office,
Washington, D.C. 20548

UNITED STATES DEPARTMENT OF COMMERCE
The Under Secretary for International Trade
Washington, D.C. 20230

JUL 19 1983

Mr. J. Dexter Peach
Director
Resources, Community, and
Economic Development Division
United States General
Accounting Office
Washington, D.C. 20548

Dear Mr. Peach:

Thank you for sending the GAO report, "International Restraints to Competitiveness of the U.S. Heavy Electrical Equipment Industry," to us for review and comment. The report provides useful information on some of the barriers to trade in this industry. The following specific comments are offered for your consideration:

-- Page 3. A more complete explanation of why it was impossible to assess how much these practices adversely affect U.S. firms would be very useful. A simple list of the major variables would give a better idea of the competitive environment in which U.S. firms must operate.

-- Page 13. In the discussion of the government procurement code on the exclusion of heavy electrical equipment purchasing entities, it would be useful to include information on whether U.S. firms believe the gains from inclusion would outweigh the losses.

-- Page 14. The data on TVA and Bonneville purchases of foreign heavy electrical equipment raised questions that need some response. The percentages of total purchases bought from foreign sources by these utilities, 46 percent (TVA) and 64 percent (Bonneville), are so large and inconsistent with the general trend described in the report that some explanation should be given.

-- Page 15. Is any additional information available on DOD's plans? Is there strong commitment to pursue this policy?

-- Page 16. In the third paragraph, we believe you should delete "legitimate" from the first line. While export subsidies are not prohibited on certain types of products, the Administration does not consider any use of export subsidies to be legitimate. In addition, we disagree with the assertion in the last two lines of the paragraph that "...little progress has been made under the Subsidies Agreement to reduce trade distorting subsidies." We believe a more accurate characterization would be that "not as much progress has been made under the Subsidies Code as was expected when the Code was signed."

-- Footnote 1 states an objective of the Arrangement and/or OECD governments which might be better characterized as a U.S. Government policy objective.

-- Page 17-21. The report appears to cite Eximbank sources in assessing U.S. financing competitiveness. Does this accord with the evaluation of the equipment vendors? If not, what are their views?

-- Page 18. How much competitive advantage is represented by interest rate differences? It may be more informative to the Subcommittee to state that the percentage point difference would affect the buyer's overall cost by xx percent when the interest rate difference is applied over the repayment period of the financing.

-- Page 20. The table on Arrangement Terms should reflect the current state of flux in the Arrangement. Thus in the title of the table, change "Effective July 1982" to "As of July 1983." Eliminate footnote b (validity date of the Arrangement is currently uncertain); and, from footnote d, eliminate "the World Bank's" and substitute "Association" for "Agency".

-- Page 22. The first sentence on the page should be amended to show that an allegation of material injury is required where the petition involves a country to which the United States applies the Subsidies Code.

-- Page 24. The first full paragraph mischaracterizes the process of assessing dumping duties. Each administrative review determines the level of definitive duties to be assessed on imports during the period reviewed and sets the level of estimated duties to be collected pending the assessment of definitive duties in a subsequent review. If the second and third sentences of this paragraph are deleted, the mischaracterization is eliminated.

Again, we appreciate the opportunity to provide our comments.

Sincerely,

Lionel H. Olmer

GAO note: Page number references may not correspond to page numbers in final report.

EXPORT-IMPORT BANK OF THE UNITED STATES
WASHINGTON, D.C. 20571

FIRST VICE PRESIDENT
AND
VICE CHAIRMAN

July 29, 1983

Mr. Frank C. Conahan
Director, National Security and
International Affairs Division
United States General Accounting
Office
Washington, D.C. 20548

Attention: Mr. Len Baptiste

Dear Mr. Conahan:

I welcome this opportunity to comment on the report entitled "International Restraints to Competitiveness of the U.S. Heavy Electrical Equipment Industry" a draft of which you submitted to us with your letter of June 27, 1983. The report appears to contain much useful information. However, the comments in the report about the degree of subsidy in government export credits, and the comparisons between financing offers of Export-Import Bank of the U.S. (Eximbank) and our competitors in other countries appear to reflect the situation in 1982 and earlier, rather than the present.

In the digest on Page iii, you state "The Export-Import Bank of the United States offers long-term financing at slightly higher rates than its competitors". While interest rates in the market-place will vary from currency to currency, Eximbank is prepared to provide guarantees to banks who lend in currencies of low interest rate, and to lend dollars at the lowest rate permitted for dollars and currencies with higher interest rates. It is true that prior to January 18, 1983 our interest rates were slightly higher for some buyers than the minimum interest rates prevailing in the Arrangement on Guidelines for Officially Supported Export Credits, which you show in your table on Page 20. However, on that date our Board of Directors agreed to reduce Eximbank's rates as necessary to make them equal to the minimum rates in all cases. Incidentally, the governments which are participants in the Arrangement have agreed that the minimum interest rates as shown in your table will remain in effect at least until October 31 of this year.

You comment (Pages 22 and 23) on the subsidies various governments have expended on export credits, and make specific reference to losses on export credit insurance programs, foreign exchange risk insurance programs, etc. When one looks back over several decades, one notices profitable and unprofitable years in the records of most export credit agencies. You are, of course, correct that we and all our major competitors have experienced an unusually high level of claims from insured exporters in our most recent fiscal years and are continuing to do so in the current year. However, we believe that this situation will correct itself when economic conditions throughout the world improve so that most delinquent debtors are able to become current again.

Of greater concern are the large amount of subsidies governments have been providing to bring interest rates on export credits below market rates. These subsidies have now been greatly reduced. For several years many countries, but particularly France, the United Kingdom and Italy, have been prepared to expend large amounts of money - in some cases more than one billion dollars per year - to bring the interest rates for their export credits down to the minimum rates of the Arrangement. In the recent past, this condition forced Eximbank to offer financing at interest rates below its own cost of raising funds through the Federal Financing Bank.

Increases in the minimum interest rates for officially supported export credits were negotiated in November of 1981 and June of 1982. In addition, there was a significant decline in interest rates in the United States and most other industrial countries during the second half of 1982 and early 1983. Consequently, it is now possible for Eximbank to offer financing at rates of interest which are equal to the minimum rates of the Arrangement as mentioned above and also in close relationship with Eximbank's own cost of funds.

We at Eximbank believe that we are in a good position to offer competitive financing for exports of heavy electrical equipment as well as other types of capital goods.

Sincerely,

Charles E. Lord
First Vice President
and Vice Chairman

GAO note: Page number references may not correspond to page numbers in final report.

THE UNITED STATES TRADE REPRESENTATIVE
WASHINGTON
20506

August 5, 1983

Mr. Frank C. Conahan
Director
National Security and International
Affairs Division
United States General Accounting Office
Washington, D.C. 20548

Dear Mr. Conahan:

This is in response to your letter of June 27, 1983 requesting comments on the draft report on "International Restraints to Competitiveness of the U.S. Heavy Electrical Equipment Industry". We have reviewed the report and believe that it represents a balanced and accurate perspective. We therefore do not believe the draft requires any substantive revisions prior to its release in final form.

Thank you for the opportunity to comment on the draft report.

Very truly yours,

WILLIAM E. BROCK

WEB:bcc

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