

United States
Trade and Development
Program



Congressional Presentation
Fiscal Year 1989

United States International Development Cooperation Agency



United States
Trade and Development Program
FY 1989 Congressional Presentation

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TO THE UNITED STATES CONGRESS:

I am pleased to transmit the Congressional Presentation of the United States Trade and Development Program (TDP) for Fiscal Year 1989.

This program is administered under the authority of Sections 607(a) and 661 of the Foreign Assistance Act of 1961, as amended.

The program constitutes a unique element in United States foreign policy through its dual mandates of trade promotion and development. TDP carries out its mandates by promoting the export of U.S. goods and services needed to plan, design, build and equip major development projects in the Third World.



Nancy D. Frame
Acting Director
Trade and Development Program

Trade and Development Program

I. Executive Summary

The United States Trade and Development Program (TDP), was established on July 1, 1980, as a component organization of the International Development Cooperation Agency. TDP has two objectives: (1) to assist in the economic development of friendly developing and middle-income countries, and (2) to assist the U.S. private sector in increasing exports of U.S. goods and services to these countries. TDP accomplishes these objectives by financing the services of the U.S. private sector in planning projects in developing countries that are important to the development of the recipient countries and also represent significant opportunities for U.S. exports.

TDP's formula is simple but highly effective because:

-- it has involved the active cooperation of the U.S. private sector which has enabled TDP to operate as a small, streamlined organization;

-- it has focused heavily on the planning of projects that are initiated or approved by the recipient country and that are likely to be financed by the U.S. Export-Import Bank, a multilateral development bank, or through commercial financing;

-- it has strengthened bilateral relationships between the United States and developing countries by providing needed technical, financial and managerial expertise;

-- it has enabled U.S. firms to gain an advantage over aggressive foreign competitors by getting in on the ground floor of major projects that provide both short and long term markets for U.S. goods and services; and

-- it has assisted U.S. firms in establishing business relationships in developing countries that both directly and through a ripple effect create additional export opportunities.

Since 1980, TDP has financed the planning of some 480 projects in 91 countries. TDP-financed feasibility studies and other project planning services have led to over one billion dollars in exports from the United States. Because of the extensive lapse between the completion of a feasibility study and the execution of a project, the full results of the exports generated cannot be expected for a number of years. It is estimated that over the next decade the TDP activities that have been financed to date are likely to generate an additional \$7 billion in exports.

For FY 1989 TDP is requesting \$20.4 million. This funding will allow TDP to continue to finance feasibility studies and other planning services for major development projects. TDP strategy for FY 1989 will build on our past strategy of assisting U.S. firms to capture major export markets. There will be an increased emphasis on funding follow-on activities once the feasibility studies are complete. Such activities will include providing information on projects to U.S. engineering and manufacturing firms, familiarizing key foreign government decision-makers with U.S. equipment and technology relevant to particular projects, and maintaining relationships with U.S. and multilateral financial institutions. In addition, TDP will assess the progress of its work with state export promotion agencies. TDP expects to continue to emphasize energy, waste management, telecommunications and industrial projects as well as training components of major projects. We anticipate that TDP will be most active in China, Taiwan, Thailand, India, the Philippines, Turkey, Colombia, Argentina and Zimbabwe.

II. TDP Budget

TDP Budget: FY 1980-88

TDP is a relatively young program that has experienced rapid growth since its establishment in FY 1980. Since FY 1982 TDP has received a separate line item authorization and appropriation pursuant to Section 661 of the Foreign Assistance Act of 1961, as amended. The table below tracks this growth:

TDP APPROPRIATIONS (in millions of dollars)									
Fiscal Year	<u>80</u>	<u>81</u>	<u>82</u>	<u>83</u>	<u>84</u>	<u>85</u>	<u>86</u>	<u>87</u>	<u>88</u>
	4.9	5.5	6.9	10.5	16.3	21.0	18.1	20.0	25.0

As the table indicates, TDP's budget grew by approximately 510% between 1980 and 1988. Since FY 1984, operating expenses have been kept at approximately 10% of the total budget.

TDP BUDGET: FY 1989

In keeping with the effort to reduce the Federal budget deficit, TDP is requesting \$20.4 million for FY 1989, of which only \$2.39 million will be devoted to operating expenses.

The budget will enable TDP to:

- Continue to manage approximately 350 projects out of the total 480 projects TDP has financed since FY 1981.
- Continue to evaluate the 480 projects financed by TDP from FY 1981-87.
- Process and review approximately 250 new projects which at any given time are being considered by TDP.
- Develop, approve and award some 90 projects in FY 1989.

The core elements of our operating expense budget are personnel, office space, and travel costs. In addition, we intend to utilize contractors to assist us with a variety of operational tasks such as conducting audits and evaluations and helping to maintain our computer data base and information system. The following chart gives a breakdown of TDP's operating costs for FY 1989:

TRADE AND DEVELOPMENT PROGRAM
FY 1989 BUDGET REQUEST
(in thousands of dollars)

	<u>FY 1987</u> <u>Actual</u>	<u>FY 1988</u> <u>Planned</u>	<u>FY 1989</u> <u>Proposed</u>
<u>TOTAL TDP</u>	21,017	25,820	20,400
<u>PROGRAM FUNDS</u>	18,917	23,580	18,010
<u>OPERATING EXPENSES TOTAL</u>	2,100	2,240	2,390
--Personal services	1,134	1,338	1,400
--Travel	145	160	175
--Transportation of things	-	8	-
--Rent, Communications, Utilities	185	210	226
--Printing & Reproduction	4	6	6
--Other services	600	487	550
Reimbursable support to A.I.D & State (included above)	(314)	(330)	(345)
--Supplies & Materials	6	7	8
--Equipment	26	24	25

III. TDP PROGRAM

The United States is currently facing the largest trade deficit in its history. In FY 1987 the deficit was estimated to be \$173.5 billion, exceeding the FY 1986 previous high of \$156.2 billion by \$17.3 billion.

Major capital projects in developing and middle income countries constitute important markets for U.S. exports, but American firms are increasingly getting a smaller share of these markets. Until recently, U.S. firms have been undercut by the high value of the dollar. In addition, other industrialized countries have been putting billions of dollars into programs to help their firms compete in these major export markets. Feasibility study financing and subsequent concessional project financing packages offered by other foreign governments represent a serious challenge to U.S. export competitiveness. The fact that the United States may have the best technology in certain sectors is often not enough to overcome the advantage held by foreign firms who can offer subsidized financial packages. The result is that the United States loses export markets and domestic jobs are threatened.

TDP seeks to address this situation by financing project planning services, including pre-feasibility and feasibility studies, and technical symposia to assist foreign governments in developing major capital projects which both are central to their development efforts and represent significant export opportunities for U.S. technology, equipment, and services. The feasibility studies and other planning activities are carried out by U.S. firms. The involvement of U.S. firms at this early stage of the project often enables them to win large follow-on contracts and tends to encourage the procurement of U.S. equipment in the project implementation phase. It may also create long-term business relationships and establish a base for U.S. firms in their future efforts to expand market share. Such large infra-structure projects also help make the developing country a more attractive location for direct foreign investment by U.S. firms.

TDP also provides technical assistance to developing and middle income countries in the design of capital projects vital to their development. U.S. expertise at this stage can save the recipient country money and time and ensure high quality projects. By helping countries carefully plan these major projects, TDP is making a significant contribution to the overall development of the host country.

The bulk of TDP funds are provided as grants to foreign governments to finance feasibility studies for public sector projects that are frequently financed by the World Bank or by regional development banks. The feasibility studies are carried out by U.S. firms competitively selected by the host country government. These projects are primarily large scale, capital intensive projects, such as power generation, infrastructure, communications, waste treatment, and basic industry.

In other instances, TDP selects projects in which U.S. firms are confronting stiff competition from firms from other industrialized nations that have subsidized financing from their governments. In such cases, the U.S. firms would not be awarded the study without TDP participation. Our major foreign competitors, particularly Japan, Canada, France, Italy and other OECD nations, all have programs similar to TDP, but with significantly larger budgets.

TDP also spends approximately 10% of its budget financing feasibility studies with U.S. private sector investors. TDP co-finances, on a cost-sharing basis, up to 50% of pre-investment feasibility studies of projects in which the investor intends to have a substantial equity participation and which, if implemented, will require substantial U.S. exports. If the project proves feasible and an investment is made, TDP requires reimbursement of its contribution to the study.

Lastly, TDP serves as the coordinating and authorizing agency for other U.S. Government agencies to provide technical assistance to friendly foreign countries under Section 607(a) of the Foreign Assistance Act of 1961, as amended. The U.S. Government agencies are reimbursed by the foreign countries for their services. In 1987, TDP processed 36 requests involving 12 U.S. agencies or departments in 22 foreign countries. The technical assistance provided by the agencies, such as advice from the Federal Aviation Administration (FAA) on airport management, has led to several hundred million dollars in exports from the United States.

TDP: Major Sectors

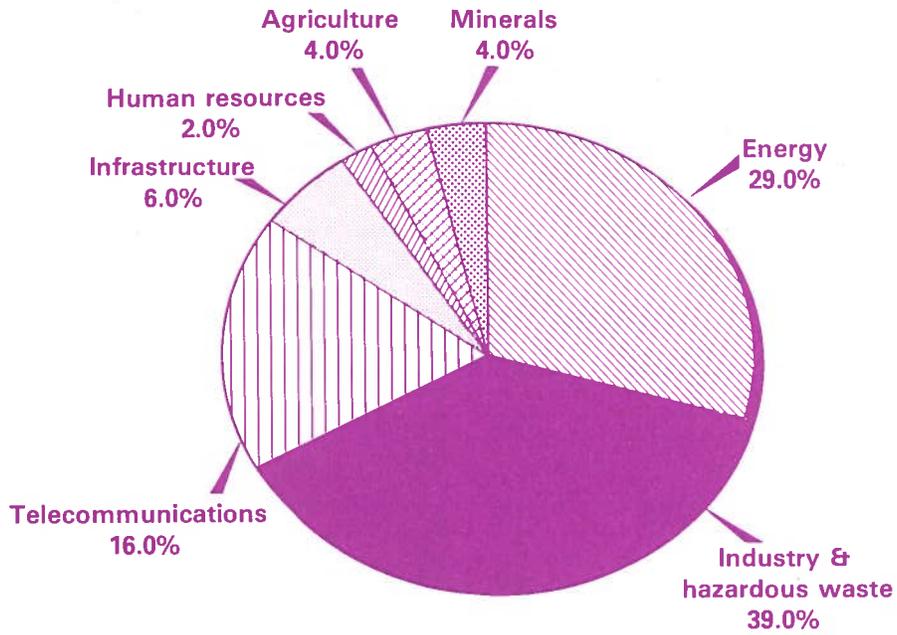
TDP has promoted exports in a number of important sectors in developing countries around the world. Although TDP attempts to select projects that will give an immediate return on the TDP investment, TDP also attempts to counter U.S. market share erosion in particular sectors. In countries where the U.S. market share in particular sectors is low or declining, TDP has provided the leverage to help U.S. firms penetrate that sector and has enhanced the U.S. position to compete with foreign firms. For example, in Thailand, TDP projects generated exports in the transportation sector despite a substantial decline in U.S. market share for civil engineering equipment in Thailand. Additionally, TDP is interested in newly emerging markets, which, while not yet generating substantial exports, could be lost to U.S. business altogether if early investment efforts and contacts are not established.

Since FY 1980, TDP has concentrated most heavily on the energy and infrastructure sectors. TDP will continue to follow the development needs of the recipient countries in those areas in which the U.S. has strong technological capabilities. Therefore, TDP projects a continuing emphasis on energy (estimates of total potential exports of power equipment and services to developing countries between 1988 and 2008 range from \$370 billion to \$900 billion), hazardous and solid waste management, telecommunications and industrial projects. TDP also anticipates an increasing emphasis on financing the training components of large projects.

The following pie charts summarize the percent of the total program by sector for FY 1986 and FY 1987. These sectors are representative of those TDP anticipates funding in FY 1988 and 1989.

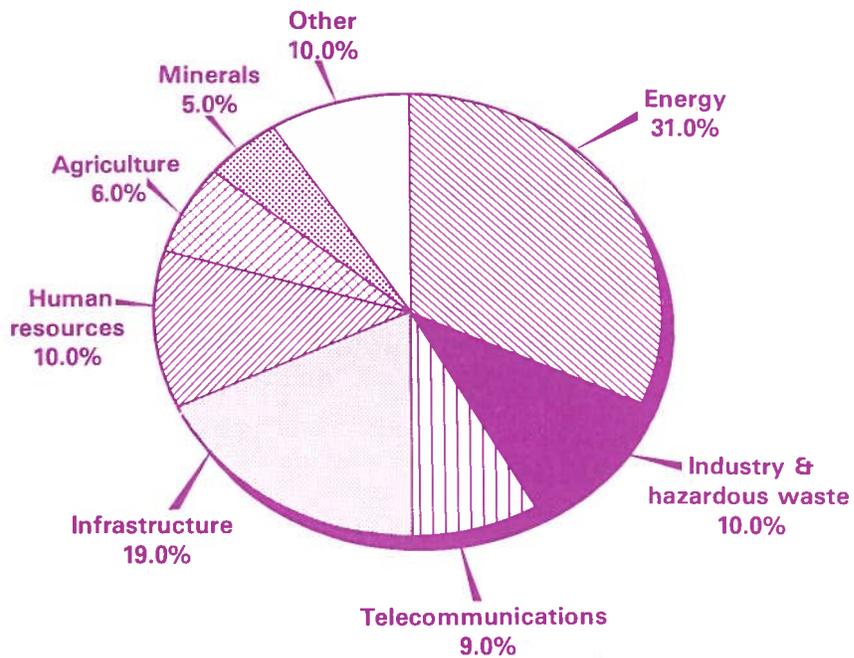
TDP Major Sectors FY 1986

% Obligated



TDP Major Sectors FY 1987

% Obligated



TDP Regional Concentration

An important criterion in selecting projects for TDP financing is the economic condition of a country or region. TDP gives highest priority to those projects which stand a strong chance of being financed once the study is completed. Since 1981, East Asia's economy has tended to be the strongest economy in the developing world; accordingly, TDP has devoted at least 50% of its program budget to this region annually.

The following table provides a percentage breakdown of TDP's activities on a regional basis since FY 1981:

<u>Region</u>	<u>FY 81</u>	<u>FY 82</u>	<u>FY 83</u>	<u>FY 84</u>	<u>FY 85</u>	<u>FY 86</u>	<u>FY 87</u>
Africa	12%	17%	10%	10%	6%	17%	16%
Lat. Amer./ Caribbean	25%	35%	20%	20%	23%	17%	12%
Asia	50%	30%	50%	47%	50%	51%	59%
Middle East/ Europe	12%	16%	10%	20%	15%	9%	8%
Worldwide	1%	2%	10%	3%	6%	6%	5%

TDP Country Programs

From FY 1981-87, TDP funded 480 projects in 91 countries. TDP projects for FY 1987 are listed by country in the Appendix.

The following countries or regions are the top ten recipients of TDP funds for the period FY 1981-87.

10 Largest Country/Region Programs FY 1981-87 Total Dollar Amount Obligated (thousands of dollars)

China	15,711
Thailand	7,852
Philippines	4,631
Indonesia	4,298
Turkey	4,122
Colombia	3,956
Zimbabwe	3,910
Taiwan	2,374
Tunisia	2,347
Pakistan	1,676

Based on past trends and our assessment of future commercial opportunities, we anticipate that in FY 1989, TDP will be most active in China, Taiwan, Thailand, India, the Philippines, Turkey, Colombia, Argentina, and Zimbabwe.

The TDP program in China has grown from 5% of TDP's world-wide program in FY 1980 to almost 26% of the program in 1987. TDP has financed feasibility studies on 46 projects in over a dozen provinces in China. The studies to date have led to \$70 million in exports from the United States. More significantly, the TDP program has enabled U.S. firms to develop new markets in a country that has a tremendous untapped export market potential.

Special Initiatives

Joint Activities with State Trade Promotion Agencies

In the 1988 Continuing Resolution, TDP was given authority to finance jointly with state trade promotion organizations activities directed at the expansion of trade with developing and middle income countries. TDP has been working with several state trade promotion organizations to identify those areas which are most compatible with TDP's program and in which we can forge a successful partnership.

Training

By 1990, the World Bank will be devoting approximately \$2 billion a year to training projects, and the TDP initiative is targeted in large part on helping U.S. firms capture a significant portion of these World Bank-financed contracts. TDP has dispatched teams to identify training projects in Indonesia, Malaysia, Korea, Taiwan, Hong Kong, Singapore, the Philippines, and China. TDP has sponsored visits to the United States of key decision-makers in the various multilateral development banks who are responsible for training projects to familiarize them with U.S. training technology and equipment. TDP also is funding a training conference in Hawaii to bring Asian officials who are responsible for large training projects in their countries together with individuals from the U.S. private sector and U.S. junior colleges and technical schools.

Recently, TDP provided two grants to cover a large portion of the training costs related to two contracts for the Shidongkou coal-fired power plant project in China. The training grants not only assisted in the awards of two large contracts, each over \$100 million, to U.S. firms, but also provided a much needed service to the Chinese client. We attach a very high priority to this initiative, as it both meets a critical development need and helps open a new market for U.S. industry.

Waste Management

Recognizing the importance of efficient waste management from a developing country's point of view and the enormous potential it presents for U.S. exports and investment, TDP will continue to emphasize this critical area. The growing realization on the part of developing nations, particularly the newly industrialized countries of the Far East, that rapid industrialization without effective waste management systems in place can result in environmental disaster has led to a new emphasis in examining waste controls. The U.S. experience in combatting the environmental problems of the 1960's, 1970's, and 1980's especially in areas of hazardous and toxic waste treatment, has positioned U.S. companies to compete effectively in the international arena. TDP believes that this sector offers great export potential for U.S. firms and it will continue its efforts in this area.

Privatization

Since 1985 TDP has funded a number of studies which promote privatization efforts. These grants have assisted U.S. firms in their efforts to develop, as privately held projects, those projects that normally would fall in the public domain. For example, TDP has funded feasibility studies on private power generation projects in Turkey, Pakistan, and Greece. Interest in private power in a number of developing countries such as Pakistan, the Philippines, Indonesia, Jamaica, the Dominican Republic, Costa Rica, Brazil and Turkey is growing rapidly. TDP intends to seize opportunities to encourage the private participation of U.S. firms in the power sectors and other appropriate sectors in developing countries.

IV. The Importance of the Program

By linking development and trade objectives, TDP plays a unique role in strengthening U.S. business relationships with the developing world, particularly the middle-income developing countries. The TDP program provides these countries with funding for valuable technical, financial and managerial expertise in planning major projects that is unavailable from any other government agency. In turn, these countries represent major markets for U.S. firms.

TDP's effectiveness in large part is due to the active involvement of the U.S. private sector in carrying out TDP's program. TDP feasibility studies have been carried out by 300 different firms, located in some 34 states. TDP also utilizes the resources of other U.S. Government agencies, by drawing upon their technical expertise and skills and by coordinating activities to help U.S. firms obtain a foothold in particular overseas markets.

To date TDP-funded activities have resulted in approximately one billion dollars in U.S. exports. Based on the number of export-generating projects and cost-benefit ratios (ratio of dollars expended by TDP to actual U.S. exports generated) the ten countries or regions that have had the best performance from FY 1981-1986 are Nigeria, China, India, Indonesia, Taiwan, Thailand, Colombia, Costa Rica, Morocco and Turkey. But the full effect of TDP's program may not be evident for years. We are just beginning to see exports generated from projects funded by TDP more than five years ago. With a budget of only \$5.5 million in FY 1981, TDP activities obligated in that year have led to the actual sale of \$253 million of U.S. products and services.

It is estimated that over the next decade an additional \$7 billion in U.S. sales is likely to flow from this small U.S. Government program. However, probably the most important long-run impact of TDP activities is the establishment of business relationships which help the U.S. private sector become more competitive overseas. As U.S. firms are introduced to new markets overseas through TDP activities, and as these developing nations, in turn, become familiar with U.S. goods, services and firms, the potential for U.S. exports will expand substantially. Thus TDP's real success may lie far beyond the exports that are generated directly from projects for which TDP financed the feasibility studies.

Results: U.S. Exports

The following table provides a partial listing of projects in which TDP funded the feasibility studies. The table identifies the value of U.S. goods and services which have been sold thus far to the project after completion of the study. The table also identifies the states which have benefited from the exports.

EXPORTS INFORMATION

Country	Project Title	Fiscal Year Obligated	Amount of TDP Study (000's)	U.S. Exports to date (000's)	U.S. States Exporting
Algeria	Center Pivot Irrig.	1985	46.4	27,000	CO, NE, & WI
China	Tien Sheng Qiao Hydro	1980-83	620.6	20,300	WA, IL, ID
	Zhuhai Indust. Park	1984	161.7	7,000	MO, ID, MI
	Silicon Production	1984	100.0	11,000	CA, MN, NY
Colombia	Telecommunications	1984-87	1,000.0	120,000	MA
Gabon	Minerals Port	1979-80, 83	457.4	1,950	NY
Indonesia	Reactor Lab	1983	350.0	6,114	CA
Jamaica	Agribusiness	1981	27.4	1,800	FL, OH
	Rice Production	1982	75.0	2,300	AR, IL
Kenya	Nozoia Sugar Factory	1986	55.0	23,000	LA, OH
Malaysia	Mini-Hydro	1981	35.0	2,500	IO
Morocco	Oil Shale Symposium	1980-81	66.6	6,925	CO, OH, ID, WV, NJ, IN, MO, KY, PA
Nepal	Arun Hydropower	1986	65.0	20,000	CA
Nigeria	Agribusiness	1981	93.2	97,000	AL/others
Pakistan	Airport Projects Mgt.	1984	450.0	5,000	CA
Peru	Cusco Airport	1982	340.0	2,000	VA
Philippines	Coal/Lignite	1982-85	1,313.6	3,000	PA
	Telecommunications	1983-84	703.0	1,680	
	Illigan Steel Plant	1982	300.0	112,700	PA
St. Lucia	Geothermal	1983	350.0	2,500	LA, CO
Thailand	Mae Moh Transmission	1980-81	403.3	11,642	MO, CT, MA, NY
	Lignite and Oil Shale	1980-81, 83-84	369.9	31,400	OH, IL, MA, PA, CA
	Don Muang Airport	1984-85	500.0	4,200	UT
Turkey	Agribusiness	1982-83	167.0	110,000	MN & other farm belt states
	Highway Maintenance	1981	6.7	3,200	TX, OH, MN, (

TDP studies have far-reaching benefits to U.S. exporters. The following is a small sampling of the U.S. suppliers of goods and services who have benefited from TDP-financed feasibility studies since FY 1980.

U.S. PRIVATE SECTOR SUPPLIERS

Abey Jetways (VT)	Jacobs Engineering (CA & FL)
Ade Corp. (MA)	J.I. Case (WI)
Advanced Waste Management (TN)	John Deere (IL)
Ag Pro Inc. (TX)	Johnson Ecolotech (NJ)
Airways Engineering Corp. (VA)	Joseph Heil (AL)
American Conveyor Co. (FL)	Kaiser Engineering (CA)
A.O. Smith (WI)	Koehring Manufacturing (OH)
A.P. Green (MO)	Kravat Coal Company (OH)
Arkel Int'l., Inc. (LA)	LEMCO (MO)
Arthur D. Little Int'l., Inc. (MA)	Lockwood Manufacturing (NE)
Babcock and Wilcox (OH)	Long Airdox Company (WV & NJ)
Bailey Controls (OH)	Louisiana State Univ. (LA)
Bateman Engineering, Inc. (CO)	McDaniel Erection Company (TX)
Bechtel Corp. (CA)	McLellan Equipment Co. (CA)
Bergey Wind Power (OK)	Meta Systems (MA)
Big Chief Drilling (OK)	Minnesota Mining & Manuf. (MN)
Blaw Knox (PA)	Mitchell Building (TX)
Broadhead Garrett (GA)	Morrison Knudsen (ID)
Browning Ferris Int. (TX)	Motorola (AZ)
Burns & Roe (NJ)	Multinational Agribusiness Sys (VA)
California Pellet Mill (CA)	Nat'l Inter Indus Serv. Inc. (MO)
Cargill (IL)	New Idea Company (OH)
Caterpillar Tractor (IL)	Omnivac Company
Cummins Diesel (OH)	Pebco (KY)
Cybec Systems (CA)	Performance Associates (CA)
Dane Corp. (OH)	Perini Corporation (MA)
Davy McKee (IL)	Phoenix Associates, Inc. (MD)
D.C. Associates (DC)	Planning Research Corp. (VA, NY)
Digital Equipment (MA)	Power Technology Inc. (NY)
Dempster (TN)	P.R. Hoffman (MN)
D. Ralph Young & Assoc. (MO)	Raymond International (CA)
Dravo Engineering (PA)	Raymond Kaiser (TX)
Dresser Industries (IN)	Reedmill Manufacturing (TX)
Electromatics (NY)	Resource Development Assoc. (CA)
Ford Motor Company (KY)	Rice Machinery (AK)
Foster-Wheeler Corp. (NJ)	Robbins Machine Co. (WA)
Freightliner (WA)	S.A. Healy (IL)
General Electric Co. (CT)	Sargent Irrigation (NE)
Hampco Corp. (NY)	Science Applications Inc. (CO)
Hill Manufacturing (PA)	Soros Associates (NY)
H. K. Ferguson (OH)	Stanley Consultants (IA)
Holstein-Friesian (VT)(WI)	Taylor Cross Group (AR)
Hyspan Precision Products (CA)	Teleconsult (DC)
IBM (NY)	Tele-Teaching Intl. (MD)
Ingersoll Rand Company (OH)	Tippens Machine & Manuf. (PA)
International Harvester (IL)	U.S. Engineers & Consultants (PA)
I.S. Joseph (MN)	Western Agri-Management (CO)
	Westinghouse Elect. Co. (PA)

V. TDP Success Stories

CHILE TELECOMMUNICATIONS

In 1984, TDP financed a \$350,000 three part study to assess the feasibility of: a) the conversion of satellite earth stations to time division multiple access, b) the conversion of the microwave network to a digital system, and c) the means of attracting U.S. private investment into the Chilean telecommunications sector. Teleconsult of Washington, D.C. carried out the study. Due to the positive recommendations of the TDP-funded feasibility study, Entel, the Chilean telecommunications company, has initiated a \$20 million digitalization project that will be bid in five stages over twelve months. U.S. exporters have already been awarded contracts worth \$1.2 million as a result of the \$2 million first phase portion of the project.

COLOMBIA FIBER OPTICS

In 1984, TDP financed a \$500,000 study optimization of Colombian international telecommunications systems. The study evaluated the alternatives of: (a) a fiber optic submarine cable from Colombia to the United States, or (b) additional satellite links. Arthur D. Little, the firm that carried out the study, recommended the undersea cable as being more efficient and economic than reliance on satellites alone. Colombia's telecommunications agency thereupon made its decision in favor of the fiber optic link and initiated negotiations with AT&T to plan, supply, and install the cable. In September of 1987, Colombia's telecommunications agency, TELECOM, initiated a contract with AT&T for \$130 million for the cable portion of the telecommunication system, \$120 million of which represents U.S. goods and services.

CONGO NRECA UTILITY POLE REIMBURSABLE GRANT AGREEMENT

A subsidiary of the National Rural Electric Cooperative Association, NRECA International Ltd. of Washington, D.C., along with Koppers Company, approached TDP with a request for TDP to finance one-half the costs of a feasibility study for a utility pole project in the Congo. The project entailed the construction and operation of a utility pole plant employing eucalyptus trees from an existing plantation. The utility poles would be marketed in the electric distribution and telephone industries in Africa, Asia, and the Middle East. TDP funded \$90,000 on a reimbursable basis. The study was positive and NRECA International Ltd. went ahead with the investment, reimbursing the United States Government under the terms of the grant. Since May of 1987, \$4.2 million in U.S. exports have been generated by this project.

TAIWAN MASS TRANSIT

TDP's strategy in Taiwan has been to concentrate on a few selected sectors, including the mass transit sector. The two largest urban centers of Taiwan, Taipei and Kaohsiung, have developed major traffic problems. In the 1980's Taiwan authorities became interested in mass transit as a solution to their growing traffic dilemma. Such public works projects range in cost from \$15-\$20 billion providing significant potential for U.S. exports. As a result, TDP has invested \$1 million to provide planning studies by U.S. engineering consultants and technical orientation visits by U.S. manufacturers.

Thus far, through TDP's efforts to position U.S. firms in the mainstream of these public works projects, a consortium of U.S. engineering firms has won a general engineering contract for work in Taipei. The contract is worth over \$100 million with an estimated \$50 million going for U.S.-based engineering services. Of special interest is the consortium approach. For the first time, normally very competitive companies joined together to share costs and consolidate technical expertise in promoting American products. The consortium has the potential for making sales of U.S. equipment including rail cars, power packages, signalling equipment, elevators, and ticketing devices estimated at \$300 to \$800 million.

NEPAL HYDROPOWER PROJECT

One of the most important aspects of the TDP program is the ripple effect of the feasibility studies TDP finances. For example, in 1986 TDP financed a \$650,000 feasibility study carried out by the firm Morrison-Knudsen of Idaho on a major hydropower facility in Nepal. Morrison-Knudsen conducted the study with a partner from the People's Republic of China. The Chinese partner was so impressed with Morrison-Knudsen's expertise on the Nepal project that the Government of China in turn awarded Morrison-Knudsen a \$20 million contract for work in China. The TDP study thus gave Morrison-Knudsen significant inroads not only into Nepal but also into China, resulting in additional business to a U.S. firm.

ZHUHAI ECONOMIC ZONE

In 1984, TDP provided a grant of \$161,777 to the People's Republic of China to enable M.K. Ferguson Company of California to conduct a feasibility study on an industrial zone in Zhuhai Special Economic Zone. One of the recommendations of the study was that a compressor factory be established. Based on that recommendation, the People's Republic of China purchased \$4 million in construction and engineering services from M.K. Ferguson and \$3 million in equipment from National Industrial Services Inc. of Missouri.

ALGERIA IRRIGATION

In 1985, TDP provided a \$46,428 grant to Western Agri-Management of Colorado. Western Agri-Management was competing against firms from France, Italy and Spain to conduct a feasibility Study on a major irrigation project. The TDP grant enabled Western Agri-Management to obtain the prime contract to provide some \$30 million in equipment from the United States to support this project. Principal suppliers of the equipment were from Nebraska and Wisconsin.

SHINDONGKOU POWER PLANT IN CHINA

TDP provided a grant of \$500,000 to cover a portion of the training costs related to a contract for the Shidongkou coal-fired power plant project in China. The training grant assisted in the award of a \$100 million contract to Combustion Engineering of Connecticut for the boilers. A similar TDP grant of \$750,000 to cover training costs related to the balance of plant portion of the project, including engineering services and assorted equipment assisted in the award of a \$100 million contract for Sargent & Lundy of Illinois. The U.S. Export-Import Bank offered a direct loan for partial financing of the project. These two U.S. Government agencies, working together, helped U.S. firms capture this important project in China in the face of stiff foreign competition.

MANGALORE REFINERY PLANT IN INDIA

TDP and the Agency for International Development combined forces to provide grants of \$900,000 and \$300,000, respectively, to assist Lummus Crest of Connecticut in winning a feasibility study contract for the one billion dollar Mangalore Refinery project in India. TDP's offer was essential to counter a French Government grant offer in support of a French company bidding on the contract.

ORIENTATION AND TECHNICAL SYMPOSIA

At a TDP-financed Renewable Energy Technology Workshop Exhibition for Caribbean countries in Kingston, Jamaica, \$237,000 in U.S. equipment was sold off the floor with \$5 million in promised orders for the following year.

A technical orientation program carried out by Stanley Consultants with TDP funds, brought Malaysian energy officials to the United States to review U.S. capabilities in the mini-hydropower subsector. This program led to \$2.5 million in follow-on contracts for study and design with possible equipment procurement and service contracts totalling up to \$26 million.

APPENDIX

Section 661
TDP Projects Obligated
FY 1987

The following is the key to abbreviations used in the table below in identifying the types of projects TDP has funded.

WS = Workshop (seminars, technical symposia, etc...)
 RGA = Reimbursable Grant Agreement (TDP shares cost with U.S. investor)
 DM = Definitional Mission (i.e., analysis undertaken on a project prior to TDP financing a feasibility study)
 FS = Feasibility Study (study of a proposed project to assess feasibility)
 OV = Orientation Visit (trips to the U.S. by foreign officials interested in buying U.S. technology.

<u>REGION</u>	<u>COUNTRY</u>	<u>PROJECT TITLE</u>	<u>AMOUNT</u> (000'S)
<u>AFRICA</u>			
	Cameroon	Natural Gas DM	1,601
	Congo	STS Hydroelectric FS	197,881
	Ghana	KIC/Wood Products RGA	19,881
	Madagascar	Ferrochrome Mining FS	300,000
	Mozambique	Strategic Minerals DM	19,090
	Nigeria	Power Authority NEPA MIS DM	9,600
	Regional	AFDB Training & Orientation (Amend)	750,000
	Senegal	Minerals Titanium DM	28,015
	Sierra Leone	Sierra Rutile/Agribusiness DM	89,898
	Regional	Bio Energy Systems DM	40,000
	Zimbabwe	Power System Survey FS	1,000,000
	Zimbabwe	Hwange Power FS	640,000
		Total	\$3,095,966
<u>ASIA</u>			
	China	Sichuan Gas Well Testing FS	550,000
	China	Tianjin Econ. Develop. Plan FS	467,000
	China	Tianjin Econ. Develop. Plan OV	1,526
	China	Shanghai Sewer FS	380,000
	China	Gongzhuling Packaging Adhesives FS	290,000
	China	Nat. Council U.S.-China Trade DM's	63,318
	China	PC Tele-Teaching FS	225,000
	China	Shanghai Transportation FS	380,000
	China	Shanghai Industrial Renovation	55,000
	China	Baoshan Mgmt Info System FS	650,000
	China	Zhongyuan Pharmaceutical FS	400,000
	China	Kaifeng Graphite Electrodes FS	150,000
	China	U.S.-China Auto Industry FS	500,000
	China	CAAC Air Traffic Control DM	28,565
	China	Jiangnan Cement Plant FS	225,000
	China	MOFERT OV	13,000
	China	Tire Factory DM	21,096
	China	Tire Factory FS	176,000

<u>REGION</u>	<u>COUNTRY</u>	<u>PROJECT TITLE</u>	<u>AMOUNT</u> (000's)
<u>ASIA</u>			
	China	Baoshan Plant Training FS	250,000
	China	Shanghai Medical Instruments DM	21,520
	China	Shanghai Chemical Reagent Works DM	10,245
	China	Beilun Terminal DM	22,940
	China	Geophysical Analysis DM	23,145
	China	Jinan-Qingdao Highway DM	22,683
	Hong Kong	Baptist College DM	10,200
	Indonesia	Data Text Transmission/Telecomm FS	600,000
	Indonesia	Air Audit DM	7,700
	Indonesia	RCA Manpower Orientation RGA	25,000
	Indonesia	Market Survey-Telecommunications DM	90,000
	India	TCIL Data Communications FS	250,000
	India	Meghalaya Flue Gas Desulfurization WS	8,324
	India	Coal Transport/Coastal Power Plant FS	200,000
	Korea	Environmental Monitoring DM	9,000
	Malaysia	Telecommunications DM	9,737
	Malaysia	Power Transmission DM	7,600
	Micronesia	Truk Power Study DM	3,200
	Micronesia	Micronesia Institute Project DM	6,500
	Pacific Rim	Aviation Conference OV	10,634
	Pacific Rim	East-West Center Workshop Waste Mngt WS	6,544
	Pakistan	Indus River DM	12,500
	Pakistan	Lowari Tunnel FS	300,000
	Pakistan	Power Plant RGA - Pyropower	350,000
	Philippines	Airport Study DM	7,300
	Philippines	Airport Study FS	500,000
	Philippines	Overbridge Cattle RGA	49,050
	Philippines	Vegetable RGA	50,000
	Philippines	Agri-Energy Roundtable WS	15,000
	Philippines	(NEDA) Balut Waste Management DM	9,909
	Philippines	Investor Promotion OV	40,000
	Philippines	NEDA FS	800,000
	Regional	Energy Sector Survey FS	139,000
	Regional	University of Hawaii	496,106
	Regional	Economic Dev. Coop of Honolulu (EDCH)	59,610
	Regional	Dept. of Labor OV	83,446
	Taiwan	USTTG/Transit Mrkt RGA	300,000
	Thailand	Bangpakong Power FS	350,000
	Thailand	Mass Transit FS	150,000
	Thailand	Air Audit-Nat'l DM FAA Masterplan	14,700
	Thailand	Bangkok Airport DM	9,943
	Thailand	SRT Computer Masterplan	100,000
	Thailand	EGAT N. Bangkok Power Station DM	7,520
	Thailand	EGAT N. Bangkok Power Station FS	200,000
	Thailand	Provencial Electric Supply DM	32,400
	Thailand	Provencial Electric Supply FS	500,000
	Thailand	Frequency Modulation - NTIA FS	157,000
	Thailand	Mae Moh Lignite Mine Conveyor System DM	2,626
	Thailand	Mae Moh Lignite Mine Conveyor System FS	200,000
	Thailand	Petroleum Data Base System PTIT	50,000

<u>REGION</u>	<u>COUNTRY</u>	<u>PROJECT TITLE</u>	<u>AMOUNT</u> (000's)
<u>LATIN AMERICA & CARIBBEAN</u>			
	Argentina	Secretary of Housing OV	946
	Chile	Telecommunications DM	28,000
	Chile	Telecommunications FS	500,000
	Colombia	Informatics	11,000
	Colombia	Computerized Health Info System DM	22,000
	Colombia	Computerized Health Info System FS	250,000
	Colombia	Equip. Specifications for NPI	430,000
	Colombia	Cartagena Airport Modernization FS	240,000
	Ecuador	Tracker Fishmeal RGA	94,950
	Honduras	Hydroelectric Proj. (El Naranjito) FS	100,000
	Regional	Caribbean Renewable Energy	6,000
	Trinidad	Tenneco Yankee/Methanol RGA	500,000
	Uruguay	World Tuna RGA	83,975
		Total	\$2,266,971
<u>MIDDLE EAST & EUROPE</u>			
	Algeria	Sonatrach LPG Study FS	360,000
	Greece	Consolidated Power RGA	293,000
	N. Ireland	Int'l Building Modular RGA	37,500
	Tunisia	Wind Energy Facilities DM	5,066
	Tunisia	Telecommunications OV	7,700
	Turkey	Intersol Power RGA	29,937
	Turkey	Chromite DM	1,900
	Turkey	Civil Bechtel Free Trade Zone RGA	515,500
	Turkey	Telecommunication OV	23,837
	Yugoslavia	TTL Power Rehabilitation FS	175,000
		Total	\$1,458,990
<u>WORLDWIDE & OTHERS</u>			
	Worldwide	Education Survey (AACJC)	85,290
	Worldwide	ASACI	744,212
	Worldwide	Iowa Food Processing Trade Fair	40,000
	Worldwide	National Academy of Sciences - S&T	25,000
	Worldwide	Committee on Large Dams (USCOLD)	50,000
		Total	\$944,502



