REPORT OF

THE ENERGY INDUSTRY REVIEW GROUP

ON

POWER SHORTAGES IN DEVELOPING COUNTRIES

TO

AMBASSADOR ALAN WOODS

ADMINISTRATOR OF

THE U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT

ENERGY INDUSTRY REVIEW GROUP ON POWER SHORTAGES IN DEVELOPING COUNTRIES

April 17, 1989

Ambassador Alan Woods
Administrator
Agency for International Development
Washington, D.C., 20503

Dear Ambassador Woods:

We are pleased to submit the results of our review of the power shortages situation in developing countries and our suggestions for possible actions by your Agency and the U.S. Government. The enclosed report presents our findings and recommendations based on the information we obtained during our fact-finding missions to the Dominican Republic, the Philippines, and Indonesia, as well as our own experiences working in developing countries.

We concur fully with your Agency's Report to Congress on "Power Shortages in Developing Countries" (March 1988) that power shortages are seriously constraining economic growth and social development in most A.I.D.-assisted countries. We found, however, that without a significant change in the way A.I.D. views the relationship between the energy/power sector and economic growth, A.I.D. will not be able to effectively help developing countries achieve self-sustaining economic growth. Furthermore, without increased assistance from A.I.D. and the U.S. Government in general, the United States stands to lose a significant opportunity for economic cooperation with these countries. Such a loss would be a serious detriment to both the developing countries and to the United States. In this light, we believe increased assistance by A.I.D. to provide reliable supplies of electricity and efficient use of energy is a good investment by the U.S. Government.

It is our hope that this report represents the first step in a long and productive partnership between A.I.D. and the U.S. energy industry. We look forward to meeting with you to discuss our findings and recommendations in more detail.

Sincerely yours,

Energy Industry Review Group

Energy Industry Review Group
(List of members attached)

cc. Nancy K. Ellis, Assistant to the Administrator for International Trade and Promotion
Jack Vanderryn, Director, Energy & Natural Resources
James B. Sullivan, Director, Office of Energy

ENERGY INDUSTRY REVIEW GROUP

Jay Starling	ARCO SOLAR, INC. Manager of Business Development
Paul F. Rouser	BECHTEL POWER CORPORATION Vice President
Brooks M. Howell	COMBUSTION ENGINEERING, INC. Director of Federal Programs
Eugene W. Zeltmann	GENERAL ELECTRIC CORPORATION Manager of Market Development and Communication Operations
Steven W. Houghton	HADSON CORPORATION President and CEO
Roger A. Eatman	QUALTEC, INC. President and CEO
Henri-Claude Bailly	RCG INTERNATIONAL, INC. Senior Vice President
William B. Bigge	STONE & WEBSTER ENGINEERING CORPORATION Manager of Financing and Project Development
Harold H. Wilson	UNITED ENGINEERS AND CONSTRUCTORS, INC. Vice President
Stuart P. Simpson	WESTINGHOUSE ELECTRIC CORPORATION Director of International Strategic Resources

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INTRODUCTION

One year ago, the United States Agency for International Development (A.I.D.) submitted to Congress a report on the serious imbalance between the supply and demand of electric power in developing countries, and the fact that this imbalance was constraining efforts to achieve sustainable social and economic growth. Subsequently, the Administrator of A.I.D. asked for a private sector perspective on steps that A.I.D might consider taking to improve the power shortages situation in A.I.D.-assisted countries. Ten companies from the energy industry agreed to participate in this review.

The Administrator asked the Energy Industry Review Group to address three key questions:

- What should be A.I.D.'s role in helping countries provide adequate energy supplies for their economic development? What mechanisms, resources and programs are needed?

- What are the most feasible approaches for the private sector to become more involved in resolving the problem of energy shortages?

- What are the impediments to increased private sector participation in the energy sector? What are the impediments to increased system efficiency and cost effective approaches to increasing such system efficiency in developing countries?

This report summarizes the Review Group's findings and presents its recommendations and proposed actions for A.I.D. and the U.S. government. The Review Group focused primarily on the first question because it is a prerequisite to properly addressing the other two questions.

SUMMARY

Background

Last March 1988, A.I.D. found and reported to Congress that (i) substantial electric power shortages exist in over half of A.I.D.-assisted countries and that (ii) these shortages of adequate and reliable supplies of energy/power are directly threatening sustainable social and economic growth. A.I.D also acknowledged that assistance to solving power shortages in developing countries was important for the United States for both U.S. development and foreign policy objectives and U.S. trade.[1]

Concerned about the development-constraining impacts of energy shortages, particularly for electric power, Alan Woods, the Administrator of A.I.D., asked executives from the U.S. energy industry to review the situation and suggest steps that could be taken to solve the problem. This dialogue resulted, last December, in the formation of the Energy Industry Review Group on Power Shortages in Developing Countries. Ten suppliers of power equipment goods and services responded to the Administrator's request and agreed to contribute their time and effort to this review. The companies were: Arco Solar, Inc.; Bechtel Power Corp.; Combustion Engineering, Inc.; General Electric Corp.; Hadson Corp.; Qualtec, Inc.; RCG International, Inc.; Stone and Webster Engineering Corp.; United Engineers and Constructors, Inc.; and Westinghouse Electric Corp. A list of the members of the Review Group is appended to this report.

The Energy Industry Review Group conducted three fact-finding missions, travelling to the Dominican Republic in December of 1988 and to the Philippines and Indonesia in January of 1989. In each country, members of the Review Group interviewed representatives from private sector companies, energy ministries, finance ministries, state-owned utilities, legislative bodies, U.S. Embassies, U.S.A.I.D. Missions, multilateral development agencies, and U.S. firms operating in these countries.

Findings

The Energy Industry Review Group strongly reaffirms A.I.D.'s findings that investment in the energy/power sector of developing countries provides an essential element for economic growth, social well-being and political stability of these countries, and also presents the United States with increased opportunities for economic cooperation and trade.

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[1] *Power Shortages in Developing Countries: Magnitude, Impacts, Solutions, and the Role of the Private Sector,* Report to Congress, Agency for International Development, March 1988.

Although A.I.D. has made valuable contributions to several fields vital to international development, we discovered, in the energy/power sector, a serious disparity between the critical development needs expressed by leaders of developing countries and the current priorities of A.I.D. The current development activities of A.I.D. no longer recognize the critical linkage between energy, particularly electric power, and economic and social growth. Less than 4% of A.I.D.'s annual budget is now committed to energy/power development activities. Yet, in the three countries visited by the Review Group, electric power development ranked among the top priorities of each country.

This situation is particularly disturbing since the U.S. energy industry, with its experience in efficient operation and technology development can help developing countries alleviate power shortages - through state-of-the-art new equipment or rehabilitation of existing systems in the developing countries - and meet increased environmental concerns. It can help inject expertise, leadership and additional financial resources into the energy/power sectors of developing countries. Assistance to developing countries includes technology transfer.

The energy/power market in developing countries provides significant opportunities for economic cooperation and trade for U.S. businesses. Yet, U.S. exports of power generation equipment and services to developing countries have been declining from over 20% of the market in the late 1970s to less than 10% today.

Without a significant change in the way A.I.D views the relationship between the energy/power sector and economic growth, we found that it is unlikely that A.I.D. can help developing countries meet the development challenge confronting them. Without increased assistance from A.I.D. and the U.S. government in general, the United States stands to lose a significant opportunity for economic cooperation with developing countries. Such a loss will be a serious detriment to both the developing countries and to the United States.

Recommendations

Overall, the Review Group concludes that assistance by A.I.D. to help developing countries provide adequate and reliable supply of electricity is a good investment for the United States for four major reasons. First, this assistance would address a high development priority area that is critical for developing countries to achieve self-sustaining economic and social growth. Second, it would also benefit important U.S. national security, foreign policy, and trade development goals. Third, it would offer the U.S. the opportunity to cooperate with developing countries in addressing global climate and other environmental issues. Finally, it offers substantial opportunities for cooperative actions between A.I.D. and the U.S. energy industry.

The Energy Industry Review Group offers four general recommendations:

1) A.I.D. should place a greater emphasis on energy, particularly electric power, and on the transfer of proven U.S. technologies and services. It should make the necessary organizational and budget changes to achieve this objective and seek, if necessary, additional Congressional authority.

2) A.I.D. should provide more leadership within the U.S. government to coordinate energy/power development assistance programs and trade policy for developing countries. It should also attempt to bring about a more equitable balance between trade and aid assistance among donor nations.

3) A.I.D. should be more active and innovative in helping to promote, market, and finance U.S. energy/power equipment and services that can support sustainable economic growth in developing countries in ways that are environmentally sound.

4) The U.S. energy industry should respond with a more active interest and take a long-term perspective toward developing country energy/power markets.

In the following pages, we elaborate on our overall conclusion and major recommendations. Under each recommendation, we propose specific actions. These are categorized as (1) actions that the Administrator of A.I.D. can directly implement, and (2) actions which involve Congress or other government agencies. Although many of the actions can be implemented using existing resources, certain actions will require additional staff and funding.

OVERALL CONCLUSION

CONCLUSION: Investment in the energy/power sector of developing countries is good for the United States. It provides an essential element for the economic growth, social well-being and political stability of these countries, and also presents the U.S. with increased opportunities for economic cooperation and trade.

Electricity, as an especially high-grade form of energy/power plays a large role in the development process. According to World Bank and United Nations statistics, over the past two decades the ratio of electric power consumption to economic growth rate has been 1.4 to 1 in developing countries. Statistics show that for Indonesia, the Philippines and the Dominican Republic, energy consumption growth rates are commensurate with GDP growth. In Indonesia for example, the average annual energy growth rate of commercial energy consumption between 1980 and 1986 was 3.9%. During the same period, the GDP grew at an average annual rate of 3.4%.

> **"To support economic growth and avoid power shortages on the island of Java, we will need an additional 27,000 megawatts of electric generating capacity by the year 2015 – a five-fold increase over our current capacity."**
>
> **His Excellency Dr. B.J. Habibie, State Minister for Research and Technology, Republic of Indonesia**

> **"The shortage of power is one of our most serious problems. Solving this problem has the highest priority."**
>
> **Manuel E. Gomez, Vice Governor, Central Bank, Dominican Republic**

Similar patterns are evident in the Philippines and in the Dominican Republic. During the economic recovery of 1987-1988, GDP in the Philippines grew at a rate of 6.7%, while overall energy consumption grew at an annual rate of 8.9%. Electric power consumption during the same period grew by 10.7%. In the

Dominican Republic the GDP growth rate for 1980-1986 was 1.0%. The energy consumption growth rate was 2.6%.

> **"As far as electric power is concerned, the Dominican Republic is on the critical list. Everyone here is calling it a 'crisis'."**
>
> **The Honorable Paul Taylor, U.S. Ambassador to the Dominican Republic**

A large percentage of total electricity consumption in these countries occurs in the industrial/commercial sector. The industrial sector in the Dominican Republic consumes 37% of the electricity produced by the national utility. In Indonesia, nearly 70% of the electricity consumed is used by the industrial sector. In the Philippines, the industrial and commercial sectors accounted for over 51% of electricity consumption in recent years.

In meetings with representatives of U.S. and local private companies in the Dominican Republic, the Philippines and Indonesia, we found that the provision of a reliable source of energy, especially electric power, plays a major role in future investment decisions. Many companies are forced to spend substantial resources to install their own power generating plants due to the unavailability or unreliability of power from the state-owned utilities. This reduces the capital they have available for their primary activities, such as steel, aluminum, fertilizer, textiles and electronics production. Also, many interviewed by the Review Group told of new investments and plant expansions delayed or cancelled due to the unavailability of power.

> **"The first thing that businesses look at when considering investments in Indonesia is the reliability of electric power."**
>
> **Harvey Goldstein, President, American Chamber of Commerce, Republic of Indonesia**

> **"Free Trade Zones in the Dominican Republic employ over 85,000 people. Yet, many of our FTZ's have serious problems obtaining reliable power and this has begun to curtail their expansion. It is a very, very serious problem."**
>
> **Manuel Tavares, President, Free Trade Zone Association of the Dominican Republic**

In the Dominican Republic, the peak demand for electricity exceeds the national utility's supply by 60 MW. Brownouts occur on the average of one to four hours each day. The National Power Corporation in the Philippines is planning to geographically rotate scheduled load shedding for industry. Consequently, companies served by NPC will lose 10% of their power requirements once a week. NPC hopes to avoid severe power shortages that could result from the 8.8% increase in demand for electricity that is expected in 1989. Twenty-four Indonesian industry representatives in a meeting with the Review Group indicated that their companies suffer power disruption 5 to 6 times a month. We found that for these countries to sustain their current economic growth rates, they must alleviate their power shortage problem.

> **"Infrastructure, especially electric power, drives development."**
>
> **Ernesto M. Aboitiz**
> **President, National Power Corporation**
> **Republic of the Philippines**

Assistance by A.I.D. to help developing countries provide an adequate, clean and reliable supply of electricity is a good investment by the United States. It directs assistance to a high priority development need of these countries. Growth in demand for electricity is high in these countries. Satisfying that demand is critical to the ability of those countries to achieve economic growth and maintain political stability. The experience and capabilities of the U.S. power industry can be directly applied to the needs of developing countries. The economic growth resulting from improved power systems will, in turn, offer the prospects of increased exports of U.S. products and services. Finally, assistance by the U.S. to help these countries provide a reliable source of electric power to their citizens now, could avoid the need for larger levels of assistance to meet basic human needs in the future.

> **"We are looking to the private sector to provide power to our utility system. We believe that the private sector can build plants quicker at lower cost and can operate them more efficiently."**
>
> **Senator Vicente T. Paterno**
> **Republic of the Philippines**

According to the **Power Shortages in Developing Countries** report of A.I.D., U. S. current exports represent less than 10% of total power generation exports to developing countries, while they accounted for over 20% in the late 1970's. Developing countries will need to import an estimated $370 billion to $900 billion worth of power equipment and services between 1988 and 2008, to sustain GDP growth rates of 3.5 to 5.5% per year over the same period. If U.S. suppliers raised their market share in developing countries to their 1970s levels, the value of U.S. power exports would be equivalent to $80 to $180 billion.

The power crisis also presents A.I.D. and the U.S. energy industry with significant opportunities to influence environmental policy in A.I.D.-assisted countries, a major concern of U.S. foreign assistance policy. U.S. companies are among the world's leaders in designing and constructing energy efficient power systems. A.I.D. and the U.S. energy industry can work collaboratively to transfer the technology and know-how behind successful U.S. energy conservation programs. A.I.D. can assure that appropriate technologies are applied to developing countries' needs. Also, the U.S. energy industry remains a leader in renewable energy technology as well as new and innovative, environmentally beneficial technologies including advanced coal cleaning techniques, gas reburning, and advanced flue gas cleanup.

RECOMMENDATIONS AND PROPOSED ACTIONS

RECOMMENDATION 1: A.I.D. should place a greater emphasis on energy, particularly electric power, and on the transfer of proven U.S. technologies and services. It should make the necessary organizational and budget changes to achieve this objective and seek, if necessary, additional congressional authority.

A.I.D.-assisted countries need and welcome increased assistance in the energy/power area from the U.S. government and private companies. Yet, A.I.D. central policy directives do not require nor sufficiently encourage its Regional Bureaus and country Missions to undertake energy/power development activities. Apparently, policy makers in A.I.D. have been concerned that such assistance can only be undertaken by financing massive energy/power infrastructure projects, which is unrealistic given the declining budget of the Agency.

A.I.D. views its few remaining energy/power activities as isolated projects moving toward project close out. Lost is the understanding adopted by other donor nations that energy/power improvements correlate directly with improvements in economic growth for the assisted country and trade benefits for the donor nation. In the traditional A.I.D. view, capital intensive power projects are assisted by A.I.D. only in a few countries with large Economic Support Fund (ESF) budgets, such as Egypt and Pakistan. Consequently, other developing countries do not expect from A.I.D. significant energy and power sector assistance. When A.I.D. does provide assistance to power development projects, the assistance is often restricted to funding for definitional activities.

Due to this traditional view of energy and the Agency's shift to a budget support focus, A.I.D./Washington and the U.S.A.I.D. Missions have devoted increasingly less attention and fewer resources to energy/power activities. Policy guidance from Washington does not sufficiently emphasize energy/power as a necessary component of Mission portfolios, nor does it identify how energy/power assistance can be used to further A.I.D.'s goals dealing with private sector development and capital markets reform.

The Review Group concluded that more A.I.D. resources should be applied to energy/power activities. We believe this reallocation could yield higher returns in economic and social development than some competing activities in the current A.I.D. portfolio.

PROPOSED ACTIONS

The Administrator of A.I.D. should:

1-A. Issue (i) a strong energy policy directive that emphasizes the link between increased energy availability, particularly electric power, and economic growth with a strong emphasis on involving the private sector and (ii) provide strong guidance to the country Missions to address the energy/power needs by supporting specific energy/power development activities. It should address the total system's design and efficiency issues in developing countries. It should also address the rehabilitation and efficiency improvement needs of the total existing system. The implications and importance of U.S. energy trade an investment to developing countries should be emphasized in these directives.

1-B. Create within A.I.D. a senior level position with "line" operating authority for energy, infrastructure and trade programs. This new position should be at least at a Deputy Assistant Administrator level.

1-C. Provide the A.I.D. regional development offices, located in the Africa, Latin America, and Asia/Near East regions, with energy/power program advisors with private sector background that are experienced in the energy/power field. This could be accomplished initially on a contractual basis.

1-D. Provide additional resources, both economic support funds and development assistance funds, to give emphasis to energy, infrastructure, trade and investment even if this requires a reallocation of existing resources within the A.I.D. budget.

1-E. Encourage private sector participation in power supply and investment through continuous policy and institutional reform, creation of private sector financing windows, funding of prefeasibility studies and other mechanisms.

1-F. Expand A.I.D.'s current limited energy/power activities in policy development assistance, preproject planning assistance, training, and energy/power technical assistance. To accomplish this, the Administrator might consider creating an "Energy/Power, Infrastructure and Trade Institute" as a public-private partnership to promote energy and infrastructure-related activities in A.I.D.-assisted countries.

RECOMMENDATION 2: A.I.D. should provide more leadership within the U.S. government to coordinate energy/power development assistance programs and trade policy for developing countries. It should also attempt to bring about a more equitable balance between trade and aid assistance among donor nations.

Power shortages in developing countries are constraining social development and economic growth. With its experience in efficient operation and technology development and transfer, the U.S. energy industry can work with the U.S. government to help developing countries reduce their power shortages. However, in recent years the U.S. government has de-emphasized the developing country energy/power market in its programming activities, reducing the number and the scope of its activities in that sector.

In cases where A.I.D. has provided assistance it has not adequately coordinated its efforts with the many U.S. agencies dealing with developing countries. Therefore, efforts by the U.S. government to improve the energy/power sector in developing countries have been inconsistent. As a result, U.S. suppliers of energy/power services and equipment have faced increasing difficulty winning major assignments in that sector, causing a significant decline in economic cooperation between the U.S. and developing countries. A recommendation of the Review Group is that a more coordinated approach to energy development assistance is required to make it effective.

Another of our findings is that other bilateral donors are using development assistance, in the form of long term concessionary financing, to promote power exports while U.S. aid is not. We found that other bilateral donors are reluctant to provide budget support or funding for social development programs with little potential for trade. Traditionally, funding for social development has been left to the United States, while other donors have preferred to provide development assistance in areas that lead to exports. By dividing development assistance in this manner, the U.S. loses a significant opportunity for trade with developing countries.

A more equitable approach to development assistance activities would be for all donors to provide an equal proportional share of overall budget support and funding for social programs. This would allow the U.S. to pursue a more project specific approach to energy/power sector assistance. It would also provide the U.S. with an opportunity to increase its economic ties to A.I.D.-assisted countries.

PROPOSED ACTIONS

The A.I.D. Administrator should:

2-A. Continue the dialogue now begun with private sector groups by establishing an informal or formal energy industry advisory group.

2-B. Ensure that economic and not only political and strategic concerns shape A.I.D.'s program. This could mean coordinating an interagency group that includes other arms of the U.S. government, for example, DOE, DOC, USTR, TDP, EXIMBANK and OPIC, to develop a U.S. government-wide and country-specific approach to the energy/power sector. These efforts might be initially targeted at selected countries, such as the Dominican Republic, Costa Rica, the Philippines, Egypt, Thailand, Indonesia and Pakistan.

The Department of the Treasury should:

2-C. Set up arrangements with multilateral development banks for A.I.D. funding of energy sector feasibility studies to be conducted by U.S. companies. Countries with high market potential for U.S. goods and services should be targeted.

The Department of State should:

2-D. Press other bilateral donors to provide more untied, general budget and more direct support for social programs in order to release more U.S. funds for energy/power infrastructure project development.

RECOMMENDATION 3: A.I.D. should be more active and innovative in helping to promote, market, and finance U.S. energy/power equipment and services that can support sustainable economic growth in developing countries in ways that are environmentally sound.

U.S. energy/power supply equipment is often superior to foreign equipment. U.S. technologies frequently set the world standard for reducing environmental impacts of power generation systems and current U.S. programs promise further advances in these areas. Nevertheless, the U.S. energy industry's share of exports to the power sector of developing countries has declined in recent years. For example, the U.S. share of the world market for gas turbine generators declined from 51.3% in the 1970-1973 period to 45.4% in the 1978-1981 period. Since the U.S. equipment is on a technical par with that of competitive nations, the deterioration in energy/power sector exports reflects primarily financial, cost, and political factors. In particular, other donor nations have very successfully used concessionary financing to promote their exports.

The U.S. Government has been unwilling to play an aggressive role in neutralizing mixed credit competition in the export markets. As a result, the share of the U.S. electrical manufacturers in the major export markets has dropped drastically. Through Eximbank, the U.S. provides small amounts of mixed credit support only in those instances where the OECD agreement is violated by the competing governments. This, however, happens very rarely. The competing governments are following OECD rules and offering mixed credit packages and the U.S. firms are losing jobs as a result. The European and Japanese governments are well assured that their mixed credit packages will go unchallenged by the U.S., if their agencies adhere to the notification requirements of the OECD agreement and observe the 35% minimum grant element rule.

We realize that the current economic climate will not allow the U.S. government to fully finance capital intensive energy/power projects in developing countries at concessionary rates. Nevertheless, the Review Group believes that an opportunity to leverage private investment with government funds does exist. Such an approach would serve to reduce the overall cost of energy/power projects in developing countries. Since the energy/power sector consumes 25% of the development budget of many A.I.D.-assisted countries, any reduction in the cost of energy/power projects could free-up resources for development activities in other sectors. This approach would also strengthen the ties of economic cooperation between the United States and A.I.D.-assisted countries.

We learned that governments from other industrialized nations cooperate more closely with industry than does the U.S. government. As a result, foreign companies enjoy a higher level of political support than U.S. companies. The Review Group believes A.I.D.'s energy program planning could benefit from a more open dialogue with U.S. industry as to (i) appropriate power technologies, programs and projects, and (ii) effective assistance measures to reduce the risks in those projects.

We concluded that to promote development in A.I.D.-assisted countries and to increase economic cooperation between them and the United States, A.I.D. should be more active and innovative in promoting, marketing, and financing U.S. energy trade interests that support economic growth.

PROPOSED ACTIONS

The U.S. government should revise its export promotion and financing support programs to help make U.S. goods more competitive in the world marketplace. This would serve to place U.S. companies on a level playing field in their competition with other exporters for trade in energy/power goods and services. In particular,

The Administrator of A.I.D. should:

3-A. Together with other U.S. government agencies, provide funding to support feasibility studies and project development activities for electric power and other "commercial" energy projects in developing countries.

3-B. Establish a fund to help finance energy/power and other infrastructure projects on concessionary terms or provide funds that would leverage private capital for such projects with large export potential. The development fund could loan to both public and private sector projects.

3-C. Explore and employ innovative financing approaches to support energy/power projects, possibly including loan guarantees and additional risk insurance.

3-D. Designate increased portions of economic support funds for electric power projects. In particular, target the Philippines (through the Philippines Multilateral Assistance Initiative), the Dominican Republic, Indonesia, and other countries with power supply constraints.

3-E. Target activities to develop local capital markets in developing countries for private sector energy/power infrastructure projects.

3-F. Review and help streamline U.S. procurement regulations that hinder U.S. private sector efforts or place U.S. companies at a disadvantage with foreign competitors.

3-G. Encourage the placement of U.S. citizens in key energy/power, financial and technical positions within the multilateral development banks and in the utilities of host countries.

<u>The U.S. Congress should</u>:

3-H. Appropriate additional funds specifically for electric power projects in developing countries.

3-I. Support additional funding for the direct lending program of the Eximbank and mixed credit programs of Eximbank and TDP. U.S. policy should be revised to adopt proactive use of mixed credit authority.

RECOMMENDATION 4: The U.S. energy industry should respond with a more active interest and take a long-term perspective toward developing country energy/power markets.

The inability of U.S. energy industry companies to win major assignments in developing countries in part results from their short term focus upon specific project opportunities rather than longer term export market development. Energy/power project development in A.I.D.-assisted countries can be a lengthy process. Market intelligence is scarce, so project opportunities must be created. Drawn-out bureaucratic reviews during the development of energy/power projects are common, and in certain cases legislative reform is required.

We found that companies in other industrialized nations view the developing country energy/power market as a long term investment. With assistance from their governments, they pace their investments to establish durable relationships based on a long term presence in the country. They station qualified energy/power system and business development experts to gather market intelligence and help create project opportunities.

U.S. firms, on the other hand, are known for intensive marketing over fairly short periods directed a specific project opportunities. Frequently, major efforts must be directed at gaining an advantage over other U.S. firms only to learn that the relationships established by the foreign competitors with the client over a long period of time are a dominant factor in the ultimate selection.

We concluded that U.S. energy industry needs to adopt a longer term perspective in developing country energy/power markets. U.S. assistance programs could help U.S. firms in the formation of long term working relationships with public agencies and local private sector capabilities. This would materially strengthen market intelligence and the ability of U.S. firms to compete.

PROPOSED ACTIONS

The U.S. energy industry should:

4-A. Work with A.I.D. toward (i) designing and implementing well conceived energy/power sector projects and (ii) conducting activities that will establish durable long term relationships with the power sector of A.I.D.-assisted countries.

4-B. Show senior U.S. government officials and Congress a strong corporate commitment to participate in the energy/power sector activities of A.I.D. and other U.S. trade assistance programs.

4-C. Work with A.I.D. and other government agencies in developing risk sharing assistance mechanisms.

4-D. Commit resources to pursue those energy/power sector business opportunities that result from A.I.D. program initiatives.

ANNEX

MEMBERS OF THE

ADMINISTRATOR'S

ENERGY INDUSTRY REVIEW GROUP

ARCO SOLAR, INC.
Jay Starling
Manager of Business Development

BECHTEL POWER CORPORATION
Paul F. Rouser
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