

PN-ACT-430
104551

**IMPLEMENTING PRIVATE POWER
IN ARMENIA:
INSTITUTIONAL BARRIERS
AND STRATEGIES**

Prepared for:

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November 14, 1995

CONTENTS

1.	INTRODUCTION	1-3
2.	BARRIERS TO PRIVATE POWER AND HBC STRATEGIES	1-3
2.1	Summary of Barriers	1-3
2.2	Summary of Strategies	1-4
3.	SPECIFIC BARRIERS AND STRATEGIES	1-6
	IPP Barrier #1 -- Institutional Uncertainty in the Power Sector	1-8
	IPP Barrier #2 -- Lack of a Clear Policy on Private Power by the Government of Armenia	1-10
	IPP Barrier #3 -- Inadequate Legal Framework for IPPs	1-13
	IPP Barrier #4 -- Inadequate Regulatory Environment for IPPs	1-16
	IPP Barrier #5 -- Inadequate Commercial Environment for IPPs ...	1-21
4.	CONCLUSION	1-25

1. INTRODUCTION

In February of 1995, the Hagler Bailly Consortium (HBC) began a USAID-sponsored project designed to promote independent private power (IPP) in the Republic of Armenia. Following several months of activity, a review of the project status has been undertaken. The results of this review are provided in this report. Specifically, this report:

- ▶ Describes the major barriers to independent private power (IPP) in Armenia;
- ▶ Identifies the comprehensive and proactive manner in which the power sector reform efforts of the HBC address such barriers;
- ▶ Clarifies the status of HBC's efforts and the relevant steps that have also been taken by the Government of Armenia or its Ministries with regard to energy sector reform.

This report is organized as follows: Section 2 summarizes HBC's analysis of the major barriers to private power in Armenia. In addition, a summary of HBC's strategy to address these problems is presented. Section 3 contains a detailed explanation of the barriers to private power in Armenia, HBC's strategy to address each of these issues, and some notes on the status of our efforts. This part of the report is in extended table form. Section 4 sets forth our conclusions and a summary.

2. BARRIERS TO PRIVATE POWER AND HBC STRATEGIES

2.1 Summary of Barriers

Major impediments to the development of private power projects in Armenia fall into the following five categories:

- ▶ Institutional Uncertainty in the Power Sector: Most prominent of these issues is the uncertainty that exists with regard to the future of Armenergo and the structure of the power sector. This is evidenced by, among other things, the struggle for power in the energy sector among Armenergo and Government Ministries. Also inhibiting reform in the power sector, and other areas of the Armenian economy, is the general crisis mentality in the Government.
- ▶ Lack of a Clear Government Policy on Private Power: This is characterized by the lack of a policy position on the role of private power in the energy sector and a lack of experience within the Government on private power. It is further

illustrated by an absence of legislation or decrees specifically promoting private power and the lack of a Government policy on guarantees or implementation agreements.

- ▶ Inadequate Legal Framework for IPP Development, Construction, Financing, and Operation: Up to now no overall Energy Law has been passed by the Government. In addition, there is an inadequate understanding of contracts in the country and the current legal framework lacks the ability to support collateral security matters.
- ▶ Inadequate Regulatory Environment for IPP Development and Implementation: There is no independent regulatory body in the power sector, open access for private power producers is not assured, and there is an inadequate licensing process for private producers. On the pricing side there is a uniform tariff in force throughout the nation, end-user tariffs are not cost-based, there is no consistent procedure for determining power purchase agreement (PPA) pricing, and there is an absence of a clearly stated transmission tariff.
- ▶ Inadequate Commercial Environment to Support Private Power: At present there is a high level of uncertainty over the macroeconomic environment, foreign and domestic financing and insurance are for the most part unavailable, and Armenergo is not financeable. Furthermore, domestic developers are unfamiliar with all aspects of private power implementation and the physical infrastructure in Armenia is not conducive to IPP development.

As is clear from the above list, there are many significant barriers to private power in Armenia. To combat these problems the HBC team has developed a multi-faceted strategy, which is summarized below.

2.2 Summary of Strategies

The HBC private power team has been acting to overcome the barriers summarized above and to implement private power in Armenia. Our strategy is a two-pronged approach. The first part of this strategy are top-down goals for the power sector. They seek to establish an overall climate in the power sector conducive to private power implementation. This is complemented by the second area of our activity. These are bottom-up actions that seek to institutionalize knowledge and procedures required for private power implementation. Taken together, we anticipate that these two components will succeed in overcoming the major barriers to private power in Armenia.

Our *top-down goals* for the private power task overlap with the goals of other HBC power sector reform tasks. The tasks with the most significant overlap with the IPP task are the

restructuring, energy legislation, and regulatory development tasks. The shared goals of these tasks include:

- ▶ Passage of a comprehensive Energy Law: Within the HBC-sponsored draft law are provisions that specifically address private power. These include rights to open access and the creation of a regulatory body to oversee private power solicitation.
- ▶ Implementation of power sector restructuring: HBC-sponsored power sector unbundling proposals call for the creation of an industry structure more conducive to private power. They require an understanding of power sector cost breakdowns that would enable the fixing of wheeling charges and consistency in PPA pricing determination.
- ▶ Creation of a regulatory body: The establishment and appropriate staffing of a regulatory body will facilitate private power by creating an independent entity to coordinate tenders for capacity expansion, standard offers for small producers, appropriate tariff determination, and the granting of licenses.

These tasks have required close cooperation and coordination with all institutions of the Armenian power sector and influential development assistance organizations (such as the World Bank). Activities have involved the cultivation of working relationships with local counterparts to assure the transfer of international private power experience and the HBC team's analysis of the Armenian situation. This has been done by way of presentations, workshops, and other activities. Throughout, the benefits of private power have been clearly presented to influential Armenian policymakers.

In the near term, the implementation of private power in Armenia does not need to wait for the achievement of the above goals. While a power sector institutional organization appropriate for the long term implementation of private power may not be in place until the end of 1996, private power plants can achieve financing and be commissioned now.

To facilitate this, the second aspect of the HBC IPP team's strategy has been to work with the players currently involved in private power in Armenia on both the regulatory and development sides of the industry. This work consists of a series of *bottom-up actions* aimed to enhance the understanding and implementation of private power in the Armenian context. These actions are the following:

- ▶ Policymaker education and training: Current and likely future private power policymakers and regulators have been identified. Training focuses on international experience, tariff and pricing, regulatory, and contractual aspects of private power. This ongoing training is being accomplished by way of meetings, roundtables, and study tours. As a result of this work this core group

will be better able to manage private power development in Armenia regardless of whether broader reforms are implemented.

- ▶ Domestic developer assistance: Through due diligence, consulting and the provision of contracts, domestic developers have been able to improve their effectiveness as private power developers.
- ▶ Model contracts: Generic contracts and *pro formas* have been provided to regulators, policymakers, and domestic developers to enable a sound contractual basis for private power projects.
- ▶ Licensing process improvements for small hydroplants (HPPs): Hydropower affords the most potential for the much needed development of Armenia's indigenous energy resources. The HBC team has undertaken diligence efforts to assess the feasibility of a number of proposed HPPs, including site visits and consultations with developers.
- ▶ Financing methods for domestic IPP development: The HBC team is actively pursuing financing alternatives that include direct contracts with financeable consumers and the creation of a fund for small hydroplant financing.

Experience gained from the HBC team's bottom-up actions will provide valuable feed-back into the design of proposals for the top-down goals (stated above) that will best encourage private power development in Armenia.

The following section provides a detailed presentation of our analysis of the major barriers to private power in Armenia, accompanied by the specific actions we are taking to address these barriers. The intended results are the near term and ongoing implementation of private power in Armenia.

3. SPECIFIC BARRIERS AND STRATEGIES

The following series of tables present the specific barriers to private power in Armenia. Accompanying this analysis is a presentation of the specific actions that HBC has taken and expects to take to create a climate conducive to private power development. These activities are not just part of the private power task, but are also being undertaken by the restructuring, energy legislation, and regulatory development project teams.

The information in the tables that follow is grouped according to major barriers to private power. For your convenience, the list below sets forth the major barriers and the number of table-pages associated with each barrier:

- ▶ Institutional uncertainty in the power sector (*2 pages*).
- ▶ Lack of a clear Government policy on the role of private power in the Armenian power sector (*3 pages*).

- ▶ Inadequate legal framework for IPP development, construction, financing, and operation (3 pages).
- ▶ Inadequate regulatory environment to oversee IPP development and implementation (5 pages).
- ▶ Inadequate commercial environment to support IPP development in Armenia (4 pages).

For each major barrier, the tables present four columns of information. The specific problem in each area is listed under the “*Problem*” column. A more detailed explanation of the problem is listed under the “*Explanation*” column. A summary of the HBC strategy to address the particular problem is listed under the “*HBC Strategy*” column. Finally, a report on the status of HBC efforts is listed under the “*Status*” column.

**IPP Barrier #1 (1 of 2)
Institutional Uncertainty in the Power Sector**

<i>Problem</i>	<i>Explanation</i>	<i>HBC Strategy</i>	<i>Status</i>
<p>Uncertainty on the future of Armenergo and the structure of the power sector.</p>	<p>1. This includes such issues as whether Armenergo will be corporatized or privatized, when this will happen, and how the political connections of key individuals will affect change. 2. Private power developers and investors prefer a stable institutional structure in the power sector. In addition, the power sector structure should provide for a fair playing field for competition in choosing new sources of capacity.</p>	<p>HBC is actively involved in the restructuring of Armenia's power sector. Special attention is being paid by the HBC team to facilitating the establishment of an environment conducive to private power. This includes seeking World Bank lending conditionality on power sector loans to support these efforts.</p>	<p>HBC is working extremely closely with the Minister of Energy to develop a power sector restructuring implementation plan by March 1996. Implementation of the new power sector structure and regulatory framework is scheduled for October 1996.</p>
<p>Struggle for power in the energy sector among Armenergo, the Ministry of Economy, and the Ministry of Energy.</p>	<p>This is evidenced by, among other things, disputes over where an Energy Regulatory Commission should be housed, who has the final say over tariff setting and licensing, the recent constitutional challenge to the Board of Privatization, and over who has the authority to sign an agreement on behalf of the Government.</p>	<p>1. HBC's strategy has been to garner the support of all three entities where possible, and to work closely with each of them. Where consensus is impossible, we have made decisions in the best interests of progress. 2. In our work we have demonstrated to energy sector officials how policy, regulatory, and commercial operational roles are delegated among energy sector institutions and have explained to such officials the role of regulation in market economies.</p>	<p>HBC has established offices and relations at the Ministry of Energy and Ministry of Economy. Contacts and meetings to promote private power in Armenia have been conducted at the Deputy Minister and Ministerial level of Government, and the development assistance community. We continue to expand these efforts, and by doing so expect to facilitate the establishment of an environment conducive to private power.</p>

**IPP Barrier #1 (2 of 2)
Institutional Uncertainty in the Power Sector**

<i>Problem</i>	<i>Explanation</i>	<i>HBC Strategy</i>	<i>Status</i>
Crisis mentality in the Government that inhibits reform.	Although Armenia does not demonstrate the political instability found in other republics of the former USSR, there is a general crisis mentality in the Government caused mostly by the ongoing conflict over Nagorno-Karabakh. This inhibits reform and exacerbates institutional uncertainty in the power sector.	<ol style="list-style-type: none"> 1. To facilitate debate on the long term reform of the power sector, HBC has been promoting a new energy law, power sector restructuring, the creation of a regulatory body, and the development of domestic power sources. 2. We have used examples from other countries where restructuring has helped to mitigate crisis conditions in the power sector and the economy as a whole. 	<ol style="list-style-type: none"> 1. Despite the ongoing crisis mentality, HBC, in conjunction with the Ministry of Energy and the World Bank, plans to implement an aggressive restructuring plan during 1996. 2. Our important role in current power sector restructuring efforts will make us better placed to promote the establishment of an appropriate institutional environment for private power.

**IPP Barrier #2 (1 of 3)
Lack of a Clear Policy on Private Power by the Government of Armenia**

<i>Problem</i>	<i>Explanation</i>	<i>HBC Strategy</i>	<i>Status</i>
Lack of a policy position on the role of private power in the energy sector.	Beyond Armenergo's apparent willingness to engage in dialogue with developers, there is little evidence that Armenergo is particularly supportive of private power.	The HBC team is focusing on the passage of an Energy Law and power sector restructuring as the most appropriate strategies to clarify the Government's policy on private power and to create an environment that facilitates private power in Armenia.	<ol style="list-style-type: none"> 1. Passage of a comprehensive Energy Law and power sector restructuring is expected to occur in 1996. 2. Subsequent to this the HBC consortium will continue to work with new power sector institutions in the development of a consistent strategy for increasing capacity through private power.

IPP Barrier #2 (2 of 3)
Lack of a Clear Policy on Private Power by the Government of Armenia

<i>Problem</i>	<i>Explanation</i>	<i>HBC Strategy</i>	<i>Status</i>
Lack of understanding and experience within the Government regarding private power.	<ol style="list-style-type: none"> 1. There is little expertise on the part of the Government as to the contractual components of private power. 2. There is no ministry representative who has been formally delegated the responsibility of negotiating with developers. 	<ol style="list-style-type: none"> 1. HBC has undertaken substantial education efforts over the course of the project. 2. Efforts have been and continue to be made to educate high level policymakers on general aspects of private power. 3. Special efforts are being made to identify and train a core group of deputy minister level officials who will be responsible for implementing Armenia's private power policy within the new legal and institutional environment soon to be in place in the power sector. 	<p>To address these areas the following activities have been undertaken by the HBC:</p> <ol style="list-style-type: none"> 1. A workshop for local developers. 2. A private power roundtable for Government officials. 3. Legal support to the Ministry of Energy and Ministry of Economy. 4. The development and distribution of model contracts and termsheets. 5. Pre-training, orientation, and then participation in the upcoming IPP study tour for a select core of private power policymakers. This team will be subsequently trained in the drafting of PPAs and implementation agreements. Further training of this core group will prepare them for negotiations with developers, arranging RFPs, and developing standard offers for private power capacity. 6. The above activities have been accompanied by one-on-one educational meetings with Government officials and developers throughout the course of the project.

IPP Barrier #2 (3 of 3)
Lack of a Clear Policy on Private Power by the Government of Armenia

<i>Problem</i>	<i>Explanation</i>	<i>HBC Strategy</i>	<i>Status</i>
No legislation or decrees specifically promoting private power.	There has been no significant legislation, decree, or declaration of the Government informing foreign investors and developers of the Government's interest in private power.	Passage of the proposed Energy Law and the establishment of power sector restructuring will mitigate this problem.	In the HBC team's contacts with Armenian power sector officials we continue to emphasize that a clear national policy on private power is required if the nation is to be successful in attracting foreign investment and mobilizing domestic capital for power sector development. (See above discussion on the status of power sector restructuring and the subsequent discussion on the status of the Energy Law.)
No Government policy on guarantees or implementation agreements.	There have been no generalized pronouncements on the level of support the Government is prepared to provide private power developers. However, the Government may in fact provide guarantees in the case of the HYE-DRO and ESI developments.	<ol style="list-style-type: none"> 1. The HBC project team continues to identify this issue in the debates on the Energy Law and power sector restructuring. 2. The liberal presentation of international experience with private power has been made to illustrate these issues. 3. Through providing guarantee provisions in model contract form the HBC team has sought to propose solutions to this barrier. 	Confronting this barrier is an ongoing task for the HBC team. Specific recommendations on how to address this issue within a new power sector institutional environment are to be made by the HBC team in a report issued in February 1996.

**IPP Barrier #3 (1 of 3)
Inadequate Legal Framework for IPPs**

<i>Problem</i>	<i>Explanation</i>	<i>HBC Strategy</i>	<i>Status</i>
No overall Energy Law.	An overall Energy Law that legislates in all areas of the Armenian power sector is required. The law would be consistent with the new political and economic environment in the country. At a minimum the new energy law would provide an improved legal framework for the development of private power.	The Ministry of Energy has been the focal point for the development of an energy law for the last two years; to date, no draft law has been approved by the Ministry. However, the Ministry recently released its legislative strategy for 1995-1996 which shows presentation of an energy law to the National Assembly scheduled for March, 1996. It also has the law listed as the highest legislative priority for the Ministry.	<ol style="list-style-type: none"> 1. The World Bank has placed a conditionality on the next power sector rehabilitation loan that an energy law be passed by the National Assembly. The World Bank has strengthened this by requiring that the Ministry of Energy approve a draft law by December 1, 1995 and that the Ministry of Economy and Ministry of Justice approve the draft law by February 1, 1996 as part of the consideration process for a structural adjustment credit. 2. The HBC legislative/regulation team will continue to support the USAID-sponsored draft law. Expected activities over the next two months include significant educational efforts targeted at the importance of regulation and the manner in which regulation can be organized in Armenia. The Ministry has requested HBC to meet with key members of the National Assembly to begin discussion about important provisions of the law (e.g. regulation, privatization).

**IPP Barrier #3 (2 of 3)
Inadequate Legal Framework for IPPs**

<i>Problem</i>	<i>Explanation</i>	<i>HBC Strategy</i>	<i>Status</i>
Inadequate understanding of contracts.	This is the case for Government officials as well as domestic Armenian developers.	<ol style="list-style-type: none"> Generic model contracts and termsheets have been developed by the HBC team for use in private power contracts and presentations have been made with regard thereto. In addition, project specific documents and consultations have been provided to developers. Legal memoranda have also been furnished. In addition to the above, the HBC team has provided, and will continue to provide, much needed training in this area to Government officials and domestic private power developers. 	<ol style="list-style-type: none"> The following generic model contracts have been made available: Implementation Agreement, Power Purchase Agreement, Transmission Service Agreement, Engineering, Procurement and Construction Agreement, and Operation and Maintenance Agreement. Working sessions with counterparts on the model contracts are anticipated to take place in the January 1996 timeframe. A model private power project <i>pro forma</i> has been provided and project specific contract documents (a PPA and lease agreement) have been drafted for the Kapan private power project. The project team continues to provide as-needed support to the Ministry of Energy and Ministry of Economy on contractual issues. Further, an IPP study tour will also provide an opportunity for an Armenian attorney with private power experience to visit the U.S. for more in-depth training.

**IPP Barrier #3 (3 of 3)
Inadequate Legal Framework for IPPs**

<i>Problem</i>	<i>Explanation</i>	<i>HBC Strategy</i>	<i>Status</i>
Lack of legal framework to support collateral security matters.	Preliminary diligence by the HBC team indicates the lack of a developed legal framework to support collateral security matters and other areas of commercial law that are important to investors and lenders (there is no Armenian system analogous to the UCC, there is lack of clarity with regard to registration of real property/personal property rights and pledges of interests, etc.)	<ol style="list-style-type: none"> 1. The HBC team has made clear the deficiencies in this area to Government officials and developers during consultations and in our roundtable on private power. 2. Our appreciation of this barrier has informed all our activities being conducted under the IPP task. In addition, it has informed the development of the energy law and power sector restructuring. 	<ol style="list-style-type: none"> 1. To address this issue in the current institutional framework we have presented a model implementation agreement to power sector policymakers and domestic developers. 2. To work towards the long term resolution of this barrier, as it affects private power development, we have injected this issue into our work with officials at the Ministry of Justice, the Ministry of Energy, and the Ministry of Economy, as well as with domestic Armenian developers.

**IPP Barrier #4 (1 of 5)
Inadequate Regulatory Environment for IPPs**

<i>Problem</i>	<i>Explanation</i>	<i>HBC Strategy</i>	<i>Status</i>
Lack of a regulatory body.	There has been significant disagreement within the Armenian Government about the need for and role of a regulatory body.	<ol style="list-style-type: none"> 1. The USAID-sponsored draft energy law includes the establishment of a regulatory body. 2. The HBC team in close coordination with the World Bank continues to push for regulatory reform. The World Bank has required at a minimum that a regulatory body be established within the Ministry of Economy in the near term with eventual independence. 3. The HBC team has established relationships with the Ministry of Economy and has received the acceptance of the Ministry to work with it to improve the present de facto regulatory processes in Armenia. Further, the team will work to help set up the “core” regulatory institution within the Ministry even if the effort to establish a regulatory body as part of the energy law should fail. 4. The HBC team will conduct a study tour to the U.S. on regulation for two deputy ministers. It is hoped that this study tour will help to further clarify the need for appropriate regulation in the power sector. 	<ol style="list-style-type: none"> 1. This will continue to be an area where much effort is required. 2. Recently, an advisor to the Ministry of Energy has said that the Ministry supports the development of an independent regulatory body but the actual characteristics of such a body are not yet clear (e.g. relationship to Ministries, roles and responsibilities, commissioners or Ministry appointees). 3. The First Deputy Minister of the Ministry of Economy has agreed to support the establishment of a regulatory body initially housed within the Ministry of Economy with eventual independence tied to market conditions.

**IPP Barrier #4 (2 of 5)
Inadequate Regulatory Environment for IPPs**

<i>Problem</i>	<i>Explanation</i>	<i>HBC Strategy</i>	<i>Status</i>
Lack of assured open access for private power producers	Armenergo has been willing to grant open access for private power producers and to wheel power; however, there is no legal basis for requiring that such open access be provided.	<ol style="list-style-type: none"> 1. Open access provisions have been included in the Draft Energy Law to formalize the rights of private power providers and end-users to open access. 2. The need for open access provisions so as to create an environment in the power sector appropriate for private power investment, is induced in HBC's restructuring activities. 	As mentioned previously, an Energy Law, that includes appropriate provisions on open access has been drafted and will hopefully be enacted by early 1996.
Inadequate licensing process	The process by which licenses are issued lacks transparency and is deficient in a number of ways (i.e. with regard to transferability, renewability, etc.)	<ol style="list-style-type: none"> 1. The HBC team has done much work in this area already, in terms of diligence as to the process and suggestions for improvement. 2. The Energy Law, if passed in its present form, will address this issue, because the granting of licenses will be the responsibility of the proposed independent regulatory commission which will then develop appropriate regulations in connection therewith that will, presumably, be investor-friendly. 	<ol style="list-style-type: none"> 1. The HBC team has been asked by the Ministry of Economy to provide guidance on licensing in general, in conjunction with the Ministry's preparation of a new law on licensing. In this area, the HBC team is well-poised to make a considerable positive impact. 2. The HBC team is currently working with the Ministry of Energy to re-engineer and streamline the private hydropower producer licensing process. A memorandum on this will be produced in November, 1995.

**IPP Barrier #4 (3 of 5)
Inadequate Regulatory Environment for IPPs**

<i>Problem</i>	<i>Explanation</i>	<i>HBC Strategy</i>	<i>Status</i>
End-user tariff is not cost-based.	<p>1. This makes it difficult for private power projects to sell to end-users because of the artificially low Armenergo tariff with which they are forced to compete. However, there have been recent tariff increases:</p> <p>2. Government has allowed tariff to increase from 1 to 10 drams per kWh effective January 1, 1995.</p> <p>3. Government raised end-user tariff to 12 drams (\$0.03 per kWh) effective October 1, 1995.</p>	<p>1. The TACIS program is working on the development of a retail electricity pricing strategy. A working group may be formed.</p> <p>2. The World Bank is pushing for the development of a pricing reform strategy including a time line.</p> <p>3. The HBC restructuring team is also encouraging end-user tariff reform.</p>	<p>The HBC team is meeting with the Minister of Energy to review a proposed restructuring plan. A recommendation within the plan includes tariff reform. Specifically, the development of more transparent prices within the different power sector functional areas are recommended, along with the development of wheeling tariffs and the removal of the uniform end-user tariff.</p>
Uniform tariff.	<p>The retail tariff is the same throughout the nation, irrespective of actual regional cost differences.</p>	<p>The HBC project team has discussed this issue with the World Bank. The HBC restructuring task is addressing the uniform tariff and pushing for its removal. The World Bank has agreed to support such an effort.</p>	<p>(See entry immediately above)</p>

**IPP Barrier #4 (4 of 5)
Inadequate Regulatory Environment for IPPs**

<i>Problem</i>	<i>Explanation</i>	<i>HBC Strategy</i>	<i>Status</i>
Inadequate basis for determining PPA pricing. Lack of a wholesale tariff.	<ol style="list-style-type: none"> 1. Armenergo needs to demonstrate that it is calculating tariffs in accordance with accepted standards and that there is a rational basis to its decisions to execute a PPA with any given developer. 2. The pricing arrangements for proposed private power have been handled on a case-by-case basis; there is no indication that the Government or Armenergo is evaluating the economics of such options in reference to other possible projects. 3. Decree 114 of the Government specified that a wholesale tariff was to be developed for handling the transfer pricing between Armenergo's generation daughter enterprises and Armenergo's transmission/pooling function. To date, however, little apparent progress has been made. 	<p>The TACIS and USAID programs continue to stress the importance of having a systematic evaluation and planning framework of investments. Such a framework would allow a determination of what Armenergo would be willing to pay for private power. The EBRD/Lahmeyer International report provides a sufficient basis for developing an initial estimate of the long run marginal costs for the generation subsector.</p>	<ol style="list-style-type: none"> 1. The HBC restructuring and private power tasks are both specifically examining the wholesale tariff issue; the restructuring team is examining the contractual and pricing provisions for output from Armenergo's existing plants. 2. The private power team is developing recommendations on how pricing for private power projects should be determined. Basically, standard offers will be developed for small projects while pricing for larger projects will be determined by way of a bid. A specific private power tariff structuring approach is scheduled to be identified in a report submitted in February 1996. Furthermore, counterparts are to be trained as part of this effort. 3. The proposed Energy Law will help address this issue, in that it will establish a regulatory commission staffed by competent personnel with access to western resources in regulating tariffs and performing other functions.

**IPP Barrier #4 (5 of 5)
Inadequate Regulatory Environment for IPPs**

<i>Problem</i>	<i>Explanation</i>	<i>HBC Strategy</i>	<i>Status</i>
Absence of a transmission tariff.	Decree 114 of the Government should have established a more transparent transmission tariff for transfer pricing within Armenergo's daughter enterprises. However, to date, little progress has been made.	The transmission tariff issue and contractual provisions are being addressed by the HBC restructuring team. Additionally, a model contract for transmission service has been developed.	As stated previously, the HBC team is currently meeting with the Minister of Energy to review a proposed restructuring plan. This plan contains a specific recommendation for the development of a wheeling tariff.

**IPP Barrier #5 (1 of 4)
Inadequate Commercial Environment for IPPs**

<i>Problem</i>	<i>Explanation</i>	<i>HBC Strategy</i>	<i>Status</i>
High level of uncertainty in the country's macroeconomic environment.	The Armenian economy is in a crisis condition. Output has stalled and unemployment is very high. Economic activity centers on short-term trading; there is virtually no long-term investment or credit, no industry, and no banking. Demand for electricity has dropped precipitously from the 1988 level.	The HBC team is proposing alternatives for the mitigation of financial risks for investors, including appropriate project finance structuring strategies. Essentially this will mean bridging the risk gap by the development assistance organizations or the Government of Armenia until wholly commercial private power is viable.	This is an ongoing task. Further recommendations are to be proposed in a report issued in February 1996.

**IPP Barrier #5 (2 of 4)
Inadequate Commercial Environment for IPPs**

<i>Problem</i>	<i>Explanation</i>	<i>HBC Strategy</i>	<i>Status</i>
Foreign commercial financing and insurance is difficult to acquire.	Armenia's commercial climate is rated as one of the riskiest in the world. In a recent "Euromoney" index Armenia was rated 140 out of 187.	In addition to its activities with implementation agreements, the HBC team is seeking innovative financing mechanisms to fill this financing gap. The HBC team does not consider achieving financing for private power to be impossible in Armenia assuming that the concerns raised elsewhere in this report are suitably resolved.	<ol style="list-style-type: none"> 1. This is an ongoing task for which formal recommendations are to be proposed in report form in February, 1996. 2. A major recommendation of this report, and an activity underway to facilitate the development of Armenia's domestic small hydropower resources, is the packaging of a group of these projects and the establishment of an investment fund to pay for their construction. To achieve full financing for these projects, a significant share of the fund would be made up of concessionary financing from the development assistance community. It is hoped that such concessionary contributions would leverage other foreign financing.

**IPP Barrier #5 (3 of 4)
Inadequate Commercial Environment for IPPs**

<i>Problem</i>	<i>Explanation</i>	<i>HBC Strategy</i>	<i>Status</i>
Domestic commercial financing and insurance for power project financing is not forthcoming.	<ol style="list-style-type: none"> 1. Reform in Armenia's banking sector is needed. A positive aspect is that the Dram has been fairly stable. 2. Domestic developers have no domestic banks from which they may obtain small loans on reasonable terms. However, recently a development assistance organization with USAID capital started a loan program that offers loans of up to \$25,000 over a one year term at 15 annual percent interest. Beyond these loans only trade financing is available, for very short terms (up to six months) and at very high interest rates (75% per year, down from 360% per year last year). 3. There are no negotiable instruments in Armenia (i.e. no check-writing). Financial transactions are thus cumbersome and time-consuming, though the process is better now than it was six months ago. 	The HBC is seeking alternative financing sources as a means of overcoming this issue.	It is hoped that the establishment and availability of financing from a fund, as described above, would leverage domestic investment for power project financing.

**IPP Barrier #5 (4 of 4)
Inadequate Commercial Environment for IPPs**

<i>Problem</i>	<i>Explanation</i>	<i>HBC Strategy</i>	<i>Status</i>
Armenergo is not financeable.	Armenergo is probably insolvent, though appropriate accounting procedures to measure this are not in place. Furthermore, uncertainty over the enforceability of contracts with Armenergo (given, among other things, the possibility of utility-wide restructuring) injects a significant element of risk with regard to PPAs in which Armenergo is the purchaser.	HBC is developing viable project structuring alternatives and means for guarantying Armenergo's performance. These include Implementation Agreements, lender guarantees, and power sales to financeable power purchasers.	1. The HBC team is encouraging domestic private power producers to enter into direct contracts for power with financeable large consumers of electricity, preferably with those having hard currency revenues and the potential to establish security accounts outside Armenia. 2. Specific recommendations on this are to be proposed in a report in February 1996.
Domestic developers are unfamiliar with required aspects of private power development.	Unfamiliarity with adequate and appropriate commercial practice appears to be the case in all areas of the Armenian economy.	HBC has evaluated IPP proposals, advised domestic license-holders on project development, identified and helped structure other projects, and developed model contracts for private power producers.	A report on the HBC team's ongoing promotion of domestic private power development is to be issued in February 1996.
Physical Infrastructure not conducive to private power development.	Roads are in disrepair; telephones, water, and electrical service are sporadic and unreliable. Investors and developers can work around these issues, but at some cost.	The HBC team is not addressing this area.	Not applicable.

4. CONCLUSION

It is clear from the preceding analysis that there exist significant barriers to private power in Armenia. Nevertheless, the HBC team is optimistic that private power projects can be constructed and commissioned in Armenia. The recent signing of a PPA by the U.S.-based ESI hydropower development company is evidence for optimism.

Although many barriers exist, there is a strategy being pursued by one or more HBC project teams to address each barrier. The work aims at overcoming the existing barriers to private power development by both changing the macro-level power sector institutional environment in which private power projects must operate and by working with developers and Government officials to facilitate the implementation of private power as soon as possible.

A critical next decision-point for the HBC IPP team will be whether the USAID-sponsored Energy Law is approved by the Ministry of Energy by mid-December. If it is approved in an amended form, it will be necessary to evaluate any changes that detract from the major provisions of importance to private power. These provisions include regulatory reform, protection against expropriation, mandatory open access and direct access provisions.

The work with Government officials and developers on the “nuts and bolts” of private power implementation, such as contracts and PPAs, is much needed and is considered by the HBC team, the Government of Armenia, and domestic Armenian developers to be of extreme importance. In this area results are being achieved that should facilitate the financing and commissioning of Armenia’s first private power plant in the not-too-distant future.

In addition, the efforts to change the overall institutional and legal framework of Armenia’s power sector are of the utmost importance. This is because a new energy law, power sector restructuring, and the establishment of an independent regulatory body are the reform actions that will establish an environment truly conducive to investing in, and the development of, private power in Armenia.