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**ARMENIA:
HYDROPOWER LAW AND REGULATION SUPPORT**

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1. Existing Declaration Implementing new Water Use Permit from Ministry of Natural Preservation
2. Excerpts from US Hydropower Law

HYDROPOWER LAW AND REGULATION SUPPORT

1. BACKGROUND

The Government of Armenia, through the Ministry of Energy, has requested that the US Agency for International Development through its contractor, Hagler Bailly, provide assistance in drafting a hydropower law. This document has been assembled as a support document for the governmental bodies drafting the law. It includes:

- ◆ a compilation of related studies that have been previously conducted;
- ◆ an assessment of the current situation;
- ◆ identification of issues that must be addressed prior to or during the law-making process;
- ◆ recommendations on the structuring of a program consistent with the reforms that are taking place within the Armenian Power Sector.

Armenia is a land where water resources are generally scarce. Since there are competing uses of water, any new hydropower law must recognize and be consistent with other uses of water. In order to be consistent, the other uses and their regulation must be understood.

Armenia is a country with a very long history of management of scarce water resources. Some of the oldest irrigation facilities in the world are in Armenia and are still in service. In the twentieth century, competition for the scarce resource has resulted in overuse of the stored waters in Lake Sevan. As a result, the lake level is far below that of recent history, further stressing the need for careful conservation and management of whatever water is available.

In addition to the long time historic irrigation use, water for power generation, municipal use and environmental purposes have also become critical considerations. Although these primary uses are not always in conflict, they sometimes are competing. For example, the required release of water from Lake Sevan for irrigation and power purposes is inconsistent with the consensus desire to protect the lake from further reduction in the lake's level. Generally, the release of water from Lake Sevan for irrigation purposes also provides the opportunity for power generation, but flows released for generation during non-growing months results in water not available for irrigation.

The use of water resources in most any area of the country is related to use elsewhere in Armenia. This relationship is particularly true where the water distribution system is tied in to power generation or there are trans-basin transfer facilities available. The diversion of water from the Arpa River to Lake Sevan by the existing tunnel reduces the water available in the Arpa

downstream from the Kechut Reservoir. The expected transfer of water from the Vorotan River by completion of the Vorotan-Arpa Tunnel will have a substantial impact on the potential generation by the Vorotan Hydropower Cascade. The reduction could be in excess of 25% of the typical annual generation of the Vorotan Cascade.

2. STATUS OF THE HYDROPOWER RESOURCE AND REGULATORY FRAMEWORK

In Armenia, there are four categories of projects that would be affected by any new hydropower legislation. These include:

- ♦ The Existing Cascades – the Vorotan and Sevan-Hrazdan Cascades make up by far the bulk of the hydroelectric power capacity in the system. Both cascades are currently operated as separate stock corporations, although they remain owned by the government. Currently, the cascades use water on a somewhat mixed system of agreements between the different interests.
- ♦ Existing Small Projects – Existing small projects are composed primarily of the 12 privatized former Armenergo projects, as well as one or two new projects constructed by private parties. The Dsorages project that is owned and operated by Armenergo may also fit this category, although it is a larger project.
- ♦ New Large Projects. The licensing process would define how the government would deal with a new proposal such as Loriberd, Snokh, Megri or some of the other larger projects that could be developed in the future to meet growing load or retirement of other sources. The number of these projects is fairly limited, according to studies done by the hydropower sector.
- ♦ New Small Projects. There are a large number of small projects that could be developed within Armenia, depending on the value of the generated power, the ultimate cost of building the project and the availability of capital. These projects would need to go through licensing before construction.

Over 300 hydroelectric projects have been identified by ArmHydroProject Institute as part of a master plan for project development. This plan covers most of the country and most water resources where any size development could be completed. These projects are open for development by any private entity at this time. Other potential projects are also open for development, however any other projects must not interfere with the national master plan projects.

In the mid-1990's, a form of licensing was started by the Government of Armenia. Under this system, small, new proposed projects were issued seven year licenses by the Ministry of Economy, after consultation with the Ministries of Energy and Agriculture, as well as several other governmental consultations. The license did not contain many clear rights and restrictions. Most of the projects that were licensed were not constructed. Existing projects were not licensed.

With the establishment of the Energy Regulatory Commission (ERC), a separate licensing process emerged. Under the authority of the Energy Law, the ERC licenses plants for generation of electricity. As such, the ERC has granted licenses to the current hydroelectric generators and several potential unconstructed projects.

The licensing process for hydroelectric project is basically the same as for any generating project. The procedures are provided to potential applicants in Resolution No. 39 of the ERC, dated August 28, 1998. The application process includes submittal of project definition information to the ERC. The applicant must also publish a public notice of its proposed activity. Upon receipt of an application, the ERC will notify the applicant within 10 days of the adequacy of the submittal. If the application is found to be sufficient, an analysis period of 90 days follows. A resolution of issuance or denial is completed at the end of the period. For a favorable outcome, a license is issued 10 days later.

Currently, licenses are issued for a period of fifteen years. Separate construction and operations licenses are issued, with the operations permit issued after the construction is complete.

In addition to the current licensing process, *Armenergo* has several functions that impact the water use of hydroelectric projects, particularly the cascades. This is primarily exercised through the dispatch of the plants and includes:

- ♦ Management of the timing of water releases from hydropower plants;
- ♦ Management of water consumption through diversion channels and water levels at all HPP reservoirs, including daily, weekly and seasonal;
- ♦ Acquisition and registration of data pertaining to water consumption and power production.

These responsibilities may conflict with other legislative directions and authorities. The ability of *Armenergo* to make dispatching decisions should be subject to water use and operational rules established by the licensing and water use authorities.

3. NEED FOR A HYDROPOWER LAW

While there currently is an orderly process in place, the current process has deficiencies that will serve to inhibit the full development and orderly management of the hydroelectric resources within Armenia. While some of the concerns listed below are being addressed on an informal basis, there may be no legal basis for doing so and application of the same principles to all projects is not a certainty.

1. The licensing process is limited in its scope, when the potential exists for a project to have impacts on, or be impacted by activities outside of the energy sector. There is no opportunity to view the project comprehensively, or for the other agencies of the government to have a formal role to complete an approval or resolve possible problems with the project. There is no formal requirement for projects to make the best use of the water resource, nor fit in to any comprehensive development plan.
2. The process does not treat hydroelectric projects any different from other generating projects, even though the issues of water and land use are quite different.
3. The period of licensing is only fifteen years. The actual life of the facility should exceed 30 years, with moderate maintenance. Due to the capital intensive nature of hydroelectric projects, payback of capital would take far longer than fifteen years. With only fifteen years to complete design, financing, construction and commissioning, a new project could have as little as 10-12 years remaining to operate for payback revenues. This item alone could make private development nearly impossible. While there is a possibility for renewal of the license, there is no orderly manner to guarantee such renewal, allowing for political or legal shifts to change the entire process.
4. The actual license rights are somewhat questionable. There is no certainty what will happen after expiration. The license could be acquired by other parties and land ownership, water rights and other elements could come together to make the project feasibility questionable.
5. A Water Use Permit, while required by the ERC, does not treat hydroelectric projects any different from water consuming projects. Further, current law does not adequately protect the water rights of the hydroelectric project operators.
6. The process is not clear as to the development priorities. If there are several applicants for the same license, who gains approval? The priority is given to that legal entity that first announces its decision to build in a national newspaper. Currently, it would appear that such rights would go to the development entity who first gains land rights. However, this may or may not be the best criteria for issuing the license. While land rights may be the priority to be set, some other criteria may be better established.

- ♦ There is neither full transparency nor any set scheduling for the development process. The licensee has no responsibilities to actually construct the project. There are no milestones or conditions that must be met to maintain the license. There are also no set circumstances or process specifying when or how the license could be revoked. This provides no protection to either the Government nor the license holder. Further, the developer is not protected from having the license revoked for unsuspecting reasons. Upon obtaining a construction license for a set period of time a licensee is obliged to construct within that time framework. For a small hydro power plant (HPP) construction is often about one year. However, the time for financing, engineering and equipment procurement can often be much longer. If a licensee has not accomplished construction in accordance with the construction plan submitted in order to obtain the license, it may expire.
- 7. The current process has separate construction and operation licenses. This implies that the project could be constructed, yet be denied the right to operate. Combining the licenses would remove the risk of not gaining the operations permit from the developer.
- 8. There is no formal provision for monitoring the license to ensure developer compliance with requirements.
- 9. Public safety concerns are not addressed.

The reasons for regulating hydroelectric projects differ between countries. Some countries use hydroelectric power regulation to control development, others use it to ensure compliance with environmental and safety standards. Generally, there are five objectives that could be considered of importance in establishing a regulatory program for private hydroelectric projects. Depending on the importance of each of these objectives placed by Armenian decision-makers, the program should do the following:

1. Provide a Stable System for Licensees and Regulators.

The current system falls short in this regard, as evidenced by the weaknesses described above. In order to enable and encourage investment, the system must provide for clear and articulate project rights and responsibilities, for reasonable periods of time. The investment in a hydroelectric project requires a very large percentage of capital in the beginning. While operating costs are very low, compared to other traditional generating alternatives, it takes a relatively long period of time to repay the initial investment and earn a reasonable profit.

2. Orderly Development and Management of Resources

Most countries regard rivers and water resources as public resources to be allocated in a manner consistent with the public interest. Further, most countries have a history of allocating the rights for water for irrigation and other purposes. Armenia has a very long history of irrigation and contains some of the oldest water diversion works in the world.

3. Environmental Protection and Public Safety

Protection of the environment is an important element. The environmental aspects of regulations should ensure that impacts are minimized and mitigated to the extent possible on:

- ▶ People in the project area and downstream
- ▶ River flows and aquatic life
- ▶ Adjacent lands and wildlife

Since impacts are unavoidable as any project imposes change, some basis for applying sound environmental planning and mitigation and making final decisions must be established. A single entity should be made responsible for issuing a license based on the priorities established for balancing competing interests and protecting resources. Further, some mechanism for monitoring impoundment and other structure safety and stability should be instituted.

4. Comprehensive Development of Resources

In countries where hydroelectric power is an important resource, it is important to protect the development of the resource and ensure that comprehensive and efficient development takes place. Competing projects could be making use of the same resource. Development of a small project could eliminate the possibility of developing a large and important project in the future. Thus, the country has an interest in making sure a project is consistent with a comprehensive development plan.

5. Compatibility with Other Water Resource Uses

While hydroelectric projects do not consume water, certain operations or diversions could be incompatible with other water resource uses. Diversion of water or releases during certain times of the year may be inconsistent with agricultural uses or local domestic or industrial water supply needs. These needs must be reconciled during the licensing process with clearly established operating rules for the licensee spelled out. The licensing process is also a mechanism to establish clear and long term guidelines for the use of water from Lake Sevan and the Vorotan River.

To illustrate the problems with the existing legal framework, one need look no further than the existing cascades. Both are subject to water use restrictions of some sort, but these are not clearly articulated. Thus, there is no independent mechanism to monitor operations in accordance with the requirements. Under the Water Code, the cascades are required to have a Water Use Permit from the Ministry of Agriculture/Natural Preservation, which is currently in progress. Note that the Ministry of Agriculture and the Ministry of Natural

Preservation have recently been combined. The final organization of this combined ministry has not yet been completed.

Currently, the Vorotan Cascade makes water use decisions by meeting the supply requests of Armenergo dispatchers or storing the water upstream in Spandaryan Lake or one of the smaller downstream storage facilities. However, there are no formal system rules for water use or management of reservoir storage. The management of water resources in the Vorotan River is going to become much more complex if and when the Vorotan-Arpa tunnel is completed. There must be some decision made then as to how much water to divert and how much must remain in Spandaryan Lake. For example, the decision might be made to divert the same volume of water every year, no matter what the hydrologic condition. Alternatively, the decision might be made to only divert large volumes of water during wet years. Such a decision should be made during a licensing/water use process for the cascade. Without certainty of water management rules for the long term, privatizing the cascade or financing needed rehabilitation works on a project finance basis is not possible.

The Sevan-Hrazdan Cascade management is even much more complex as energy generation needs are balanced with the mandate to maintain water in Lake Sevan and meet irrigation requirements. Since the crisis periods of 1993-1995, the attempt to stop the reduction in the lake level has been unsuccessful. Licensing of the cascade would force an analysis of the situation of the water release situation, and result in a more conscious use of the water and place clear limits on the use of water for generation. It would also provide for review of operations by an independent body.

4. ONGOING PROGRAMS

Armenia is currently examining water resource programs that must be considered in developing any new hydropower law. These programs include specific studies that have been conducted for the use of domestic water and an overall water master plan.

4.1 Integrated Water Resources Plan

The World Bank developed in 1999 a Lake Sevan Action Program. The program included a number of measures, both physical and policy related to help save the Lake. One of these was the integrated water resources master plan for the Lake Sevan basin. It was believed that this plan would be coordinated with a national master plan.

The development of such a plan was initiated in 1999 and is currently underway with the assistance of the World Bank. The Integrated Water Resources Master Plan is being coordinated within the Ministry of Natural Preservation. One of the early recommendations of the plan participants will be in the establishment of a Commission to work on water allocation and management.

During the development of the plan and after it is enacted, the consideration of hydropower resources should be balanced with other competing and compatible water uses.

4.2 Water Code and Water Use Permits

The Armenian Water Code (Code) establishes the need to have a permit for any use of water resources, including hydropower. It also requires that the water user compensate the government for its use. Currently the compensation rate for hydropower is zero; in other words, there is no charge imposed on hydro power facilities for water use.

In accordance with the Code, users must receive permission from the Ministry of Natural Preservation (now combined with Ministry of Agriculture). By a decision dated 14 July 1999, endorsed by the Ministry of Justice, there is a process for receiving this permit. All users including irrigation, power, etc must have the permit. A copy of the order is attached. Prior to 1998, the water use permit was handled by the Ministry of Agriculture, due to the high degree of consumption by irrigation uses.

As of February 2000, 11 small hydro power producers have the permit/permission. The Vorotan Cascade is currently working with the Ministry to receive a permit. Through this process, the allocation of waters to the Vorotan Cascade, as well as possible future transfers to Lake Sevan through the Vorotan-Arpa tunnel, should be addressed. However, how this will be addressed, and how the other key interests will be involved is not clear.

The license/permit issued is for three to five years. While the code allows for a longer permit, the longer permit is not being issued at this time due to uncertainty. Thus, the permit length is now shorter than the license. There is a statement in the Code that provides for the government to serve as a judge in case of disagreements between water users from different regions of Armenia. Legally there may be a conflict of jurisdiction if licensing is not done with this concern in mind.

4.3 Dam Safety and Public Safety

The ability of dams within Armenia to meet appropriate safety and stability criteria is an issue. Currently, the World Bank has established a program to study dam safety and stability within Armenia. The total costs of the program are \$30.3 million. The program has three components:

- ◆ Rehabilitation of 20 primary irrigation dams, for \$22 million. Apparently there was an overall survey and these were found to be in the worst condition.
- ◆ Dam safety sustainability, \$7.3 million; this includes 53 secondary irrigation dams and six power dams. The scope includes hazard classification, monitoring warning systems, etc.
- ◆ Project management, which is incremental support to the Program Implementation Unit.

The project is also trying to develop a complete system of training for the Dam Maintenance Enterprise (DME) that is part of the former Ministry of Agriculture. The DME is to be trained for gaining long term responsibility of the technical aspects of dam safety. If this program is successful, it is logical that future dam safety work or review that is done by the government as part of power licensing, should go through the DME. Otherwise, there would be two centers of expertise for no good reason.

Currently, the Ministry of Agriculture owns the irrigation dams in Armenia. It is likely that small hydro projects would make use of these dams to some degree. The other impoundment structures that comprise the two hydro cascades are not under the Ministry of Agriculture. New facilities built for hydro projects would also not be part of the Ministry of Agriculture safety program.

5. ALTERNATIVE LICENSING APPROACHES

There are a number of different methods to implement a hydropower law and licensing program. No two countries have addressed the issue in exactly the same method. Further, most programs have continual small changes to the program. For example, the United States has had a consistent regulatory body and set of laws and regulations in place since the 1920's. However the system and rules have changed on numerous occasions. These changes were in response to external developments, such as the evolving nature of the hydropower industry, the increased focus on environmental conditions and the shifting responsibilities of federal government agencies. The changes did not impact existing licenses; only the licensing process and licenses issued in the future were affected.

In the remainder of this section five alternative approaches are discussed here with some examples of the systems adopted in different countries systems that have been adopted, with the advent of private hydropower projects.

5.1 Multiple Permitting

Currently, the Armenian hydropower regulatory system is closest to a multiple permitting system. Permission is required from two ministries, prior to requesting a license from the ERC. The shortcomings of this type of system are that the developer is working with a number of agencies. The agencies have no method to resolve differences of interest or problems with the project. There is no balancing of these interests.

Under a multiple permitting system, each of the agencies with a regulatory interest will act independently, or only after the actions of another agency. The process can become protracted and adds a very significant risk to the developer of a project due to the possibility of difficult and time consuming activities to gain the necessary permits.

5.2 One-Step Approval

Under a one-step approval process, the licensing is handled primarily by one lead agency. The license applicant must provide all information to this agency and a single permit or license is issued for the project that takes into account all of the concerns and conditions which have been successfully raised by the other agencies.

The one-step approval should not preclude the participation of all the specific agency interests outside of the lead agency. What it should do, however, is move the entire outside agency interests inside of the licensing process. The lead agency must consult with other agencies (depending on their particular expertise) regarding water rights, comprehensive planning, environmental impacts, and safety and stability of the project. The lead agency will take these concerns and conditions and

make a decision whether to license a project and the conditions that shall be imposed on the licensee.

5.3 Multi-Stage Licensing

A system requiring multiple stages is a linear process that requires a project developer to proceed through several steps to gain final approval for a license. The stages are usually at different agencies and require the developer to gain approval from one agency in order to access another. The existing Armenian system is also a multi-stage system, as there is a linear process of gaining approval of the project concept, then approvals from several agencies, then approval from the Ministry of Energy and then from the Energy Regulatory Commission. While these stages allow for participation from the key agencies, it is cumbersome, time consuming and inefficient, as actions by the agencies cannot be taken simultaneously.

5.4 Comprehensive License/Power Tariff

Under this system, the granting of a license also provides the rights to a power contract. In the reverse, the power contract would also provide the developer with the rights to construct the project and use the water for power generating purposes.

If there is a single potential market for the power, this system also provides the utility with the capability of limiting and managing the power which is going to be available to the system. Under a "free market" system or a system with multiple power purchasers, the market will determine what projects will be constructed, as no power contracts will be available for less competitive projects.

Currently, the tariff issue is not formally combined with the licensing, although both are done by the ERC. To assist small hydro projects, the ERC provides for the tariff in place at the time of license issuance as a tariff to "floor" for 10 years.

5.5 Separate License/Power Contract or Tariff

Most countries with private hydroelectric power, have a separate system of governmental regulation and utility power purchasing. However, even in many of these countries, the utility, if nationally owned, has some influence on which projects (and amount capacity) are going to be licensed and available for the utility.

Additionally, in some systems, having a power contract is necessary to gain permits, while in others, having the permits is necessary before negotiating a power contract.

6. CASE HISTORIES OF PRIVATE HYDROPOWER REGULATORY SYSTEMS

For the purposes of illustration, the systems in three different countries are presented. Each system has a different process and set of approval elements. There are advantages and disadvantages in each system. Each of the cases has some similarity to Armenia, in the availability of resources and history of utility ownership and operation.

There are elements of each system which may be attractive for Armenia in reforming the licensing process.

6.1 United States

In the United States, non-national government (non-federal) hydroelectric projects are almost all licensed by a single body, the Federal Energy Regulatory Commission (FERC). This Commission was established as the Federal Power Commission in the 1920's to be the licensing group for non-federal hydroelectric projects. Although there have been changes, the FERC remains today as the primary licensing agency for such projects. At the request of the Ministry of Energy, some of the actual power law enabling the FERC's activities in this area is attached to this report (see attachment B).

The licensing process at the FERC is complex. Although originally set up with the authority to be a single permitting agency for licensing hydro projects, evolution of environmental laws has brought about conflicting authority and multiple permitting in the past 20 years. Difficulty in permitting projects is one significant reason for the decline in hydroelectric project development in the United States over the past decade.

In simplified terms, the US system provides for a dual stage of licensing. As the requirements for developing a license application are quite rigorous, a developer may apply at its option for a Preliminary Permit. The application for a preliminary permit is simple and contains a brief description of the developer and the project. The permit is reviewed by the FERC and either issued or denied. If issued, the developer has the exclusive right to file a full license application before the FERC for a set time period, either two or three years usually.

The Preliminary Permit concept allows the developer to perform the design and environmental studies necessary to submit a license application, without concern of losing the site to possible competitors. If, at the end of the permit time schedule, the developer has failed to submit a license application, the permit expires and the developer's rights to the site lapse.

During development of the license application, the developer must coordinate the project plans with the interested environmental and land use agencies. The agencies review and

comment on the plans. These comments must be addressed in the license, and submitted as part of the license application.

During the review of the license by the FERC, the application is again reviewed by the agencies. Comments and concerns are submitted in writing and the FERC drafts a license with terms and conditions that require the developer to construct and operate the project in accordance with plans and agreed parameters. In states that have water allocation or water rights permits, the FERC almost always requires the applicant to secure the allocation permit before granting a final license. This would be similar to getting a water use permit from the Ministry of Natural Preservation in Armenia.

The license issued by the FERC is usually valid for a period of 30 to 50 years, depending on circumstances.

The US system is similar to a "one-stop" approval. It has several advantages of a clear process, a comprehensive federal permit and clear license conditions. There is also a single agency that is responsible for balancing power development interests with environmental and water use interests.

The US/FERC system however has some disadvantages. In recent years, conflicts have arisen that have compromised the one stop nature of the permitting. Some states and certain other federal agencies have overlapping authority, sometimes requiring numerous other permits to be obtained by the developer which may be inconsistent with the FERC license. The process has also become extremely lengthy and adversarial and very expensive for a developer to enter, particularly with a small project.

The FERC process does not guarantee a market for the project's power. While the need for the project and the economics of the project are reviewed by the FERC prior to license issuance, the license does not guarantee any market for power. It is the responsibility of the developer to find a market for the power and arrange contracts.

6.2 Costa Rica

Costa Rica is a country with limited electrical generating resources outside of hydroelectric power. The electrical system developed as a nationally owned, monopoly utility, ICE. The utility constructed, owned and operated virtually all-electrical generating, transmission and distribution lines in the country. The hydropower development was similar in size and scope to the resources in Armenia. However, Costa Rica does not have the substantial water needs for irrigation as does Armenia and the concern for development is more for comprehensive use of resources, rather than managing a scarce resource.

In the late 1980's, Costa Rica decided to allow private power into the system. Laws were passed and a procedure with regulations was developed to allow private developers to

The Costa Rican system was a multi-stage system that required the developer to sequentially acquire rights and permits prior to gaining a power contract from ICE. The process was then controlled by ICE in order to limit the amount of power to be purchased. This also meant that if the permits were obtained, the developer would receive a power contract from ICE, under standard terms and prices. Individual projects were limited to 20 MW.

In recent years, the process for selecting projects has changed. Small projects do not get a target tariff rate, but are selected on the basis of a bid process that is conducted by ICE. This system was instituted after the development of a number of small projects and interest in having the private sector develop several larger projects. ICE has not been privatized, but is also not constructing new projects.

The process of gaining a concession (or license for generation) has not markedly changed. The first step in the process is to gain a Certificate of Eligibility. This is issued by ICE. The Certificate of Eligibility provides the developer with the rights to the site during the time it takes to gain land rights, perform environmental and feasibility studies and successfully acquire necessary permits. The application for eligibility is obtained after performing pre-feasibility studies and showing the project location, size and generation output. The Certificates are currently issued based on bidding. Yet it is not clear how successful this process will be.

The next step is to acquire the Environmental Permit, issued by the Ministry of Mines and the Environment (MIRENEM). This is a two-stage procedure. The first stage involves the submittal of technical data on the project and a first stage environmental report. MIRENEM returns comments on the project and the environmental report, which must be addressed in the second stage. After successful completion of the second stage, the MIRENEM Permit and the feasibility study are submitted to ICE for approval. The MIRENEM Permit and ICE feasibility study approval are then submitted to the Water Concession authority, SNE. After review, SNE provides a concession for the use of the water for a limited period of time.

This system also has some advantages. The process is clear, although numerous changes have taken place during its development. Second, the process has time constraints during which the agencies and the developer are expected to take action. A third advantage is that the developer knows that after the process is complete, the project will have a power contract with certain tariffs and conditions. This means that commercial and operating conditions are known, eliminating another risk from the developer and encouraging investment in the process.

The system also has disadvantages. The process does not always work as stated. A large disadvantage is that there are multiple steps at different agencies. While a linear process, any delay at any point will hold up the project. Third, the process has become very lengthy. Finally, there are a limited amount of projects allowed for development. Some developers who do not have the resources to carry a project through the process can tie up space and allowable capacity for a project that will not be built.

Overall, the Costa Rica system has been a success in that a number of projects have achieved financial closing and are either in operation or construction. However, the number of projects has been smaller than expected and its long term success is still open to question.

6.3 Pakistan

Pakistan is a country with considerable hydroelectric resources that were historically developed by the Water and Power Development Agency (WAPDA), a national utility. Pakistan decided several years ago to pursue private power for most of its future resources. In order to enhance development, a Private Power and Infrastructure Board was established. This Board crafted policies for the development of hydroelectric resources in the private sector and provided overall coordination. The Board was originally established to be a one-stop approval agency that would coordinate with WAPDA and local authorities before granting rights to the project. In the development of the hydropower policy, local authorities have become more involved in the process.

In order to secure project rights, a developer must apply to a provincial power board for a project. If the application is accepted, the Provincial Board issues a Letter of Interest (LOI). This gives the developer the rights to perform studies and prepare plans for later approval. A fixed period of time is set by the LOI. Upon submittal and approval of the plans, a Letter of Support is issued by the Provincial Board. The developer then goes to the Private Power and Infrastructure Board for an Implementation Agreement and Power Purchase Contract.

The land rights must be secured at the local level. An environmental approval must also be secured; however, the procedure for this approval is not well defined.

The process in Pakistan has been a failure in that there are no new private power projects under construction, despite the existence of a clear public policy. The problems can be related to inconsistency in governmental support for the policy and overall financial and political instability.

6.4 Peru

Peru is one of the South American countries that is in the process of privatizing its existing generating resources, including hydroelectric projects. At the same time, the Peruvian market is changing to a market based supply system. This means that all generating resources will be in a price-competitive supply situation. A new project, or a continued operating project, will be selling in to a price-bid market. However, like Armenia, Peru is a semi-arid country that makes careful use of the waters flowing from the mountains to the dry areas below.

Existing projects are being privatized with contracts that basically have the rights and responsibilities spelled out. New projects must go through a permitting process that includes performing appropriate studies and coordinating them with environmental and other appropriate agencies.

The concession issued for a project is usually a permanent concession. The owner of the concession will own both the water rights and property to the project. Both of these must be obtained independently. There is no power contract that comes with the concession and the owner takes the risk of selling power to the existing system economically, or they can sign a supply contract with a third party buyer.

The concession is a comprehensive document that serves as the agreement between the government and owner/developer. The concession essentially outlines all of the requirements of the project for the developer and the rights that the owner has.

The process in Peru includes gaining a Water Use Permit. The Ministry of Energy and Mines has little to say about this permit, but requires it for the final concession to be issued.

Several projects have been developed in Peru on this basis. However, in recent years the government has suspended the concession process, in the hope that a gas field will be developed. If the hydro projects that are in planning are all developed, there would not be sufficient market for the gas field to pay for development costs. Thus, the market system is being manipulated, away from hydro projects.

7. RECOMMENDED LEGAL/REGULATORY CHANGES for ARMENIA

Based on the identified weaknesses and successful elements of other private hydropower development policies, a program to change the existing Armenian process is recommended. The law and regulatory program is intended to provide the Armenian government with an appropriate level of regulation, without placing an undue burden on owners. It also will provide owners/developers with a known, clear process to follow and establish rights and responsibilities of license holders. It can also serve as part of the mechanism that will help decide the allocation of water resources for the future use of Armenia.

The regulatory aspects of the proposed plan would include regulation at the national level of:

- ▶ Use of national lands
- ▶ Water use rights
- ▶ Environmental protection
- ▶ Public safety
- ▶ Comprehensive development

The proposed process would have a single issuing agency for a hydropower license at the national level. This agency would continue to be the Energy Regulatory Commission. The ERC would have a small, defined staff to administer the hydroelectric licensing program, with the actual Commissioners making final licensing decisions and issuing or denying the license. The ERC, acting through its staff, would have the responsibility for seeking approval from key Ministries and resolving inter-ministerial issues. The structure will be designed to streamline bureaucratic procedures and establish a predictable, transparent and structured licensing process. The elements of the proposed plan are detailed below.

7.1 Process

Under the proposed licensing scheme, the process would have two stages, with a one-stop, comprehensive license application at the national level with the ERC. However, the actual water rights would be issued by the Ministry of Natural Protection (or a successor group) before the final license was issued. The two-stage process would be similar to the US system. The first stage would be a preliminary license with the second being a license for construction and operation.

The first stage of the preliminary license would involve a simple and summary application to the ERC that identifies the project, the landowners and the developer. The ERC would review the project proposal, notify the landowners and examine the project consistently with the Comprehensive Hydropower Plan and Integrated Water Resources Plan and any other appropriate

plans. If the project is consistent with the plans and the developer meets the criteria established by the ERC, the developer would be issued a one year preliminary license. This license would establish the rights to the site for the applicant to develop the data necessary to file an application for licensing. For small and simple projects, the developer may not file for the preliminary license, as the investment of money and time for license preparation would be small. Small projects would be those approximately 5 MW or less and/or those projects where the primary facilities are already constructed.

Existing projects would follow a similar process to gain new licenses. After the preliminary license, a more comprehensive and certain water use permit would be procured that would coincide with the term of the power license.

Whether acting under a preliminary license or not, the developer would need to develop a license application for their project in accordance with standards set by the ERC. The applicant/developer would need to provide a design for the project and also address a number of issues which are currently addressed by the multiple agencies who must approve the project. Prior to submitting the application, the applicant/developer would provide copies of the application to appropriate ministries or agencies for comment for a period of 45 days. The commenting agencies would be required to write a letter stating their comments and/or objections to the project. The applicant would need to address these comments in the final license application.

The agencies to receive the application would be the following, with specific areas of expertise noted:

- ♦ Ministry of Natural Preservation: Issue water use permit and comment on the environmental impacts of the project and recommend measures for mitigation or changes to the project to minimize land, water, human and archeological impacts.
- ♦ Ministry of Agriculture: Review to ensure consistency with existing water rights and other uses; review dam safety aspects.
- ♦ Ministry of Energy: Identify the project's consistency with the comprehensive development plan.
- ♦ Regional Council: Comment on the availability of land and land use where nationally owned lands are involved.

ERC Staff: Consider the tariff and overall need for, and desirability of, the project.

It is anticipated that the process for license application development would take approximately two to six months. If large reservoirs are involved in the project, a longer time period of planning and license preparation may be necessary. Due to complexities situations involving cascade system, the process for a cascade would likely take longer.

Upon submittal of the license application, the ERC staff would review the application and coordinate it with the appropriate agencies. These agencies would then submit their final comments, recommend license approval denial, and propose license conditions. If it is recommended that the project be denied, the reasons for denial and changes to the plan which would make the project acceptable would be required. Reviews and recommendations would be required from the agencies within 60 days.

After receipt of the comments, the ERC staff will present the comments to the applicant and allow the applicant to respond in writing. At this point, the developer may decide to change the project somewhat to respond to agency concerns.

The ERC would be required to address the agency concerns in the license conditions. It would have the authority to balance the competing resource uses; however, it could not override existing water rights at other projects, conflicting land use issues or a finding of unacceptable environmental impacts. If a project were found to be unacceptable, the ERC staff could negotiate with the developer and the agencies to find an acceptable alternative plan to develop the site.

Upon the completion of the process, the ERC would either issue or deny the license.

7.2 License Contents

The license to be issued would have clear terms and conditions for the licensee. The terms and conditions would address the following items, at a minimum:

- ♦ Term: The term of the license should be for a minimum of 20 years or the expected life of the facility.
- ♦ Rights of the licensee: The rights provided by the license would include, the use of national lands, the rights to divert water, the right to construct and operate the project in accordance with the approved plans for a fixed period of time. It would also state the remaining rights of ownership of the licensee after the expiration of the license.
- ♦ Responsibilities of the licensee: The licensee would be responsible for meeting the conditions of the license during construction and operation, including environmental restrictions, continued operation and maintenance of the project, maintenance of project features (particularly dams and penstocks) to ensure public safety, and milestone schedules.

7.3 Development Milestones

The license would be conditioned on the meeting of certain milestones in the development of the project. The milestones must be met so that the site is not idle for many years due to the licensing by a party not capable of completing development.

License milestones would include:

- ♦ Initiation of construction (or other improvements) within a certain timeframe after issuance of the license. The start of construction would be defined as substantial new civil work on the proposed site or fabrication of equipment.
- ♦ Completion of construction in accordance with a schedule in the license. The actual schedule would be project specific.
- ♦ Continued operations during the life of the license. If normal operations are stopped or the project is abandoned, the license can be revoked by the ERC.

These milestones would be monitored by the ERC staff, who would consider revocation of the license if the schedules were not met as specified.

7.4 Regulations

The ERC would establish a set of regulations for the licensing of hydroelectric projects, including the details of the process, the contents of the license application and procedures for implementation.

The new procedures would be separate from other generating projects and include:

- ♦ Filing procedures including setting priorities for competing applications, fees for filing, and the process for filing.
- ♦ Definition of who may file an application, including citizens, corporations, utilities or other legal entities, as appropriate.
- ♦ A method for addressing deficient information in the license application.
- ♦ Procedures for the processing, coordination and action on license applications, including time schedules for the ERC and agencies.
- ♦ Clear procedures for license transfers, termination or revocation.
- ♦ Dam and project safety review procedures for water impoundment or conveyance structures that could effect public safety.

7.5 ERC Structure and Staff

The ERC would establish a hydroelectric division to be responsible for the administration of the program. A staff would administer the licensing program, monitor compliance of operating projects with license conditions, as well as ongoing safety and stability of project features.

It is likely that the ERC staff assigned to hydro licensing would be small, given the number of expected licenses. The ERC should be able to utilize other agency's competencies such as the Dam Maintenance Enterprise within the Ministry of Agriculture for dam safety, as well as expertise within the Ministry of Energy.

The staff should consist of a few experienced and trained individuals who could perform a number of tasks, including coordinating and negotiating with the developers and agencies, inspecting the projects to determine construction status and compliance with plans, performing safety inspections, or arranging for safety inspections to be made.

Initially, only one or two individuals would be assigned to the hydropower staff, until sufficient activity developed to warrant additional staff. Key expertise in environmental, planning and engineering would be provided by other Ministries as appropriate.

8. IMPLEMENTATION ISSUES

8.1 Plan Issues

This proposed plan provides Armenia with a framework to address the weaknesses in its existing licensing program. It addresses the problems with the existing licenses, the lack of transparency and clarity in the current process and provides the government and private developer with a clear understanding of the rights and responsibilities of the parties. However, there are many ways to implement the regulation of hydropower. This program should provide a basis for discussion for developing a plan acceptable to the varied interests.

This proposed plan does not provide the license holder the rights to a power contract or the right to demand a sale of power to any party. It leaves the problem of marketing the power and the appropriate rate open for further consideration.

The plan also does not account for the acquisition of land rights from private land holders. If a large project is proposed that requires the purchase of land from many individuals, a single individual could hold up the project by refusing to sell. The priority of these land rights is not addressed in this plan. The plan leaves the issue of acquisition of private land rights to the developer, with the national land rights issued with the license. The hydropower law may want to address this problem in some fashion.

The proposed plan will take further work to clarify authority of the ERC and existing agencies including the Ministries of Agriculture, Energy and Natural Preservation. There are also some questions regarding the potential role of proposed but yet to be established agencies such as a new Water Regulatory Commission, and a possible new Lake Sevan Commission or agency, and other environmental groups.

Finally, it is recommended that the ERC remain as the regulatory agency for hydropower projects, while relying on environmental and technical expertise from other agencies and ministries. While this has not always worked well in other regulatory bodies, the size of the overall market in Armenia does not dictate the requirement for the ERC to house such specialized expertise.

8.2 Legal Implementation

New legislation implementing a hydroelectric regulation process could be implemented by either having a separate hydroelectric law, or through modification of the existing Energy Law. There is currently an effort to amend and reform the Energy Law in a number of areas. It is possible to include a hydropower section in the proposed new law.

Alternatively, hydropower could have its own separate legislation. However, it is likely that quicker passage could be achieved including the hydropower regulation process in the amendments to the Energy Law. The preferred legislation approach should be discussed

between the Ministry of Energy and the ERC.

Attachment C is a proposed section to be added to the Energy Law. It includes enough specificity to clearly establish the regulatory process. At the same time, it permits the working details of the program to be approved by the ERC (similar to the procedures approved in ERC Resolution No. 39.)

LIST OF SPECIAL WATER USE OPTIONS

Water (surface or underground) utilized for consumer, agricultural, industrial, power engineering, water transportation and other economic purposes, as well as for industrial, public, drainage and other waste water discharge purposes, belongs to special water use options, if water utilization is carried out with the help of the following structures and equipment:

- a) portable, stationery or floating structures, designed for mechanical or gravity intake of surface or underground water;
- b) underground water pumping equipment;
- c) underground water wells and captation structures, designed to operate without forced decrease of water level;
- d) water intake structures, intended for surface water discharge from industrial, public, drainage and rain water waste, as well as for water discharge from mines;
- e) waste water pumping structures for agricultural soils;
- f) dams and other water regulating structures;
- g) hydraulic plants (derivational, hydroaccumulative);
- h) water structures of thermal and nuclear plants, designed for water supply, water intake and cooling;
- i) irrigation and drainage systems.

ISSUANCE OF SPECIAL WATER USE AUTHORIZATIONS

1. General Provisions

- 1.1 Special Water Use Authorization (SWUA) is issued to individuals listed in the special water users list, whose activities do not violate the requirements of Environment Protection Legislation of RoA.
- 1.2 SWUA is issued by the Ministry of Environment Protection of RoA. SWUA issuance for water intake and waste water discharge of surface water companies is provided by Water Resources Protection Department, and SWUA issuance for water intake of underground water companies is provided by Subsoil Protection Department.
- 1.3 For implementation of water intake from mines full of underground water resources SWUAs are issued pursuant to the signed contract on subsoil utilization stipulated in RoA Government's No. 374 Decree as of August 15, 1994.

2. Required Documents for SWUA Registration

- 2.1 Following documents are submitted to the Ministry of Environment Protection by water users in order to obtain SWUA:
 - Application addressed to deputy minister, specifying the purpose of water use, water source and water demand;
 - Approved layout of the site;
 - Individual norms of water use and drainage, and in case of wastewater accumulation in the result of operations, limitation standards of hazardous substance emissions;
- 2.2 Water users shall submit the following documents for SWUA extension to the Ministry of Environment Protection:
 - Application addressed to deputy minister, specifying the purpose of water use, water source and water demand (in the event of changes);
 - Expired SWUA;
 - Well passport and regular observation materials;
 - Water use and drainage individual norms, and in case of wastewater accumulation in the result of operations, limitation standards of hazardous substance emissions;
 - Certificate on the payment of environmental fees coordinated with the regional Environment Protection State Inspection.

3. SWUA Registration and Coordination

- 3.1. Applications received by water users are registered in the Ministry of Environment Protection.
- 3.2. SWUA forms are filled out and submitted to the applicant within three working days after receipt of the application (hydro-geological official conclusion is obtained from Geological Department for underground water drainage) in order to obtain underwritten agreements with:
 - State hygiene and anti-epidemic branches, in all instances of underground water utilization,
 - State veterinary branches for water utilization by stockraising, fishfarming and food processing companies;

- Ministry of Health of RoA for water utilization for treatment purposes;
- ArmMountainInspection for water utilization by mining companies;
- Ministry of Urban Development of RoA for underground drainage systems construction;
- Ministry of Agriculture of RoA for water utilization for agricultural purposes.

3.3 Upon availability of respective agreement, the Ministry of Environment Protection passes a resolution for adjustment or rejection of the application. The applicant shall be informed about the resolution within three days.

3.4 First copy of the approved SWUA is provided to the water user, the second copy stays in the respective department of the Ministry of Environment Protection and the third one is provided to the water resource protection department for registration and archiving.

3.5 Issuance of SWUA is rejected in the event of:

- a) incomplete set of documents as stipulated by this procedure;
- b) non-compliance of documents with requirements of acting legislation.

**PROCEDURE
OF SECONDARY WATER USE AUTHORIZATION ISSUANCE BY
THE MINISTRY OF ENVIRONMENT PROTECTION OF ROA**

This procedure aims at regulation of Secondary Water Use Authorization.

1. General Provisions

- 1.1 According to article 19 of the RoA Water Code, the primary water users, authorized to use special water, have the right of a secondary water use, coordinating it with the Ministry of Environment Protection of RoA.
- 1.2 Secondary water use authorization is issued to those water users, implementing water intake or waste water discharge, fed from water supply and drainage system of centralized or primary water user. These conditions are not applicable to those water users, fed from centralized water supply and drainage systems, extremely for potable or utility waste water discharge purposes.
- 1.3 Secondary water use authorization is issued by the Ministry of Environment Protection of RoA.

Secondary water use authorization registration is performed by Water Resources Protection Department (for all instances), Subsoil Protection Department (for mineral water usage) based on Primary Water Use Authorization.

2. Issuance of Secondary Water Use Authorization

- 2.1 Water users shall submit the following documents to the Ministry of Environment Protection of RoA in order to obtain Secondary Water Use Authorization:
 - Application addressed to deputy minister, specifying the purpose of water use, water supply and drainage system and water demand.
 - Individual norms of water use and drainage, and in case of wastewater accumulation in the result of operations, limitation standards of hazardous substance emissions;

3. Issuance of Secondary Water Authorization

- 3.1 Applications received by water users are registered in the Ministry of Environment Protection of RoA.
- 3.2 Upon receipt of application, Secondary Water Use Authorization form shall be filled out within three days and submitted to deputy minister for coordination, who takes a decision to adjust or reject the application within five days. The applicant shall be informed about the decision within three days.
- 3.3 First copy of the approved Secondary Water Use Authorization is provided to the water user, the second copy stays in the respective department of the Ministry of Environment Protection for registration.
- 3.4 Secondary Water Use Authorization issuance is rejected in the event of:
 - a) incomplete set of documents as stipulated by this procedure;
 - b) non-compliance of documents with requirements of acting legislation.

ATTACHMENT B
EXCERPTS FROM FEDERAL POWER ACT
UNITED STATES CODE

Sec. 792. Federal Power Commission; creation; number; appointment; term; qualifications; vacancies; quorum; chairman; salary; place of holding sessions

A commission is created and established to be known as the Federal Power Commission (hereinafter referred to as the "commission") which shall be composed of five commissioners who shall be appointed by the President, by and with the advice and consent of the Senate, one of whom shall be designated by the President as chairman and shall be the principal executive officer of the commission. Each chairman, when so designated, shall act as such until the expiration of his term of office.

The commissioners first appointed under this section, as amended, shall continue in office for terms of one, two, three, four, and five years, respectively, from June 23, 1930, the term of each to be designated by the President at the time of nomination. Their successors shall be appointed each for a term of five years from the date of the expiration of the term for which his predecessor was appointed and until his successor is appointed and has qualified, except that he shall not so continue to serve beyond the expiration of the next session of Congress subsequent to the expiration of said fixed term of office, and except that any person appointed to fill a vacancy occurring prior to the expiration of the term for which his predecessor was appointed shall be appointed only for the unexpired term. Not more than three of the commissioners shall be appointed from the same political party. No person in the employ of or holding any official relation to any licensee or to any person, firm, association, or corporation engaged in the generation, transmission, distribution, or sale of power, or owning stock or bonds thereof, or who is in any manner pecuniarily interested therein, shall enter upon the duties of or hold the office of commissioners. Said commissioners shall not engage in any other business, vocation, or employment. No vacancy in the commission shall impair the right of the remaining commissioners to exercise all the powers of the commission. Three members of the commission shall constitute a quorum for the transaction of business, and the commission shall have an official seal of which judicial notice shall be taken. The commission shall annually elect a vice chairman to act in case of the absence or disability of the chairman or in case of a vacancy in the office of chairman.

Each commissioner shall receive necessary traveling and subsistence expenses, or per diem allowance in lieu thereof, within the limitation prescribed by law, while away from the seat of government upon official business.

The principal office of the commission shall be in the District of Columbia, where its general sessions shall be held; but whenever the convenience of the public or of the parties may be promoted or delay or expense prevented thereby, the commission may hold special sessions in

any part of the United States.

Sec. 797. General powers of Commission

The Commission is authorized and empowered -

(a) Investigations and data

To make investigations and to collect and record data concerning the utilization of the water resources of any region to be developed, the water-power industry and its relation to other industries and to interstate or foreign commerce, and concerning the location, capacity, development costs, and relation to markets of power sites, and whether the power from Government dams can be advantageously used by the United States for its public purposes, and what is a fair value of such power, to the extent the Commission may deem necessary or useful for the purposes of this chapter.

(b) Statements as to investment of licenses in projects; access to projects, maps, etc.

To determine the actual legitimate original cost of and the net investment in a licensed project, and to aid the Commission in such determinations, each licensee shall, upon oath, within a reasonable period of time to be fixed by the Commission, after the construction of the original project or any addition thereto or betterment thereof, file with the Commission in such detail as the Commission may require, a statement in duplicate showing the actual legitimate original cost of construction of such project addition, or betterment, and of the price paid for water rights, rights-of-way, lands, or interest in lands. The licensee shall grant to the Commission or to its duly authorized agent or agents, at all reasonable times, free access to such project, addition, or betterment, and to all maps, profiles, contracts, reports of engineers, accounts, books, records, and all other papers and documents relating thereto. The statement of actual legitimate original cost of said project, and revisions thereof as determined by the Commission, shall be filed with the Secretary of the Treasury.

(c) Cooperation with executive departments; information and aid furnished Commission

To cooperate with the executive departments and other agencies of State or National Governments in such investigations; and for such purpose the several departments and agencies of the National Government are authorized and directed upon the request of the Commission, to furnish such records, papers, and information in their possession as may be requested by the Commission, and temporarily to detail to the Commission such officers or experts as may be necessary in such investigations.

(d) Publication of information, etc.; reports to Congress

To make public from time to time the information secured hereunder, and to provide for the publication of its reports and investigations in such form and manner as may be best adapted for public information and use. The Commission, on or before the 3d day of January of each year, shall submit to Congress for the fiscal year preceding a classified report showing the permits and licenses issued under this subchapter, and in each case the parties thereto, the terms prescribed, and the moneys received if any, or account thereof.

(e) Issue of licenses for construction, etc., of dams, conduits, reservoirs, etc.

To issue licenses to citizens of the United States, or to any association of such citizens, or to any

corporation organized under the laws of the United States or any State thereof, or to any State or municipality for the purpose of constructing, operating, and maintaining dams, water conduits, reservoirs, power houses, transmission lines, or other project works necessary or convenient for the development and improvement of navigation and for the development, transmission, and utilization of power across, along, from, or in any of the streams or other bodies of water over which Congress has jurisdiction under its authority to regulate commerce with foreign nations and among the several States, or upon any part of the public lands and reservations of the United States (including the Territories), or for the purpose of utilizing the surplus water or water power from any Government dam, except as herein provided: Provided, That licenses shall be issued within any reservation only after a finding by the Commission that the license will not interfere or be inconsistent with the purpose for which such reservation was created or acquired, and shall be subject to and contain such conditions as the Secretary of the department under whose supervision such reservation falls shall deem necessary for the adequate protection and utilization of such reservations: Provided further, That no license affecting the navigable capacity of any navigable waters of the United States shall be issued until the plans of the dam or other structures affecting the navigation have been approved by the Chief of Engineers and the Secretary of the Army. Whenever the contemplated improvement is, in the judgment of the Commission, desirable and justified in the public interest for the purpose of improving or developing a waterway or waterways for the use or benefit of interstate or foreign commerce, a finding to that effect shall be made by the Commission and shall become a part of the records of the Commission: Provided further, That in case the Commission shall find that any Government dam may be advantageously used by the United States for public purposes in addition to navigation, no license therefor shall be issued until two years after it shall have reported to Congress the facts and conditions relating thereto, except that this provision shall not apply to any Government dam constructed prior to June 10, 1920: And provided further, That upon the filing of any application for a license which has not been preceded by a preliminary permit under subsection (f) of this section, notice shall be given and published as required by the proviso of said subsection. In deciding whether to issue any license under this subchapter for any project, the Commission, in addition to the power and development purposes for which licenses are issued, shall give equal consideration to the purposes of energy conservation, the protection, mitigation of damage to, and enhancement of, fish and wildlife (including related spawning grounds and habitat), the protection of recreational opportunities, and the preservation of other aspects of environmental quality.

(f) Preliminary permits; notice of application

To issue preliminary permits for the purpose of enabling applicants for a license hereunder to secure the data and to perform the acts required by section 802 of this title: Provided, however, That upon the filing of any application for a preliminary permit by any person, association, or corporation the Commission, before granting such application, shall at once give notice of such application in writing to any State or municipality likely to be interested in or affected by such application; and shall also publish notice of such application once each week for four weeks in a daily or weekly newspaper published in the county or counties in which the project or any part hereof or the lands affected thereby are situated.

(g) Investigation of occupancy for developing power; orders

Upon its own motion to order an investigation of any occupancy of, or evidenced intention to occupy, for the purpose of developing electric power, public lands, reservations, or streams or

other bodies of water over which Congress has jurisdiction under its authority to regulate commerce with foreign nations and among the several States by any person, corporation, State, or municipality and to issue such order as it may find appropriate, expedient, and in the public interest to conserve and utilize the navigation and water-power resources of the region.

Sec. 797a. Congressional authorization for permits, licenses, leases, or authorizations for dams, conduits, reservoirs, etc., within national parks or monuments

On and after March 3, 1921, no permit, license, lease, or authorization for dams, conduits, reservoirs, power houses, transmission lines, or other works for storage or carriage of water, or for the development, transmission, or utilization of power within the limits as constituted, March 3, 1921, of any national park or national monument shall be granted or made without specific authority of Congress.

Sec. 797b. Duty to keep Congress fully and currently informed

The Federal Energy Regulatory Commission shall keep the Committee on Energy and Commerce of the United States House of Representatives and the Committee on Energy and Natural Resources of the United States Senate fully and currently informed regarding actions of the Commission with respect to the provisions of Part I of the Federal Power Act (16 U.S.C. 791a et seq.).

Sec. 797c. Dams in National Park System units

After October 24, 1992, the Federal Energy Regulatory Commission may not issue an original license under Part I of the Federal Power Act (16 U.S.C. 791a et seq.) (nor an exemption from such Part) for any new hydroelectric power project located within the boundaries of any unit of the National Park System that would have a direct adverse effect on Federal lands within any such unit. Nothing in this section shall be construed as repealing any existing provision of law (or affecting any treaty) explicitly authorizing a hydroelectric power project.

(Sec. 798. Purpose and scope of preliminary permits; transfer and cancellation

Each preliminary permit issued under this subchapter shall be for the sole purpose of maintaining priority of application for a license under the terms of this chapter for such period or periods, not exceeding a total of three years, as in the discretion of the Commission may be necessary for making examinations and surveys, for preparing maps, plans, specifications, and estimates, and for making financial arrangements. Each such permit shall set forth the conditions under which priority shall be maintained. Such permits shall not be transferable, and may be canceled by order of the Commission upon failure of permittees to comply with the conditions thereof or for other good cause shown after notice and opportunity for hearing.

Sec. 799. License; duration, conditions, revocation, alteration, or surrender

Licenses under this subchapter shall be issued for a period not exceeding fifty years. Each such license shall be conditioned upon acceptance by the licensee of all of the terms and conditions of this chapter and such further conditions, if any, as the Commission shall prescribe in conformity with this chapter, which said terms and conditions and the acceptance thereof shall be expressed in said license. Licenses may be revoked only for the reasons and in the manner prescribed under the provisions of this chapter, and may be altered or surrendered only upon mutual agreement between the licensee and the Commission after thirty days' public notice.

Sec. 800. Issuance of preliminary permits or licenses

(a) Preference

In issuing preliminary permits hereunder or original licenses where no preliminary permit has been issued, the Commission shall give preference to applications therefor by States and municipalities, provided the plans for the same are deemed by the Commission equally well adapted, or shall within a reasonable time to be fixed by the Commission be made equally well adapted, to conserve and utilize in the public interest the water resources of the region; and as between other applicants, the Commission may give preference to the applicant the plans of which it finds and determines are best adapted to develop, conserve, and utilize in the public interest the water resources of the region, if it be satisfied as to the ability of the applicant to carry out such plans.

(b) Development of water resources by United States; reports

Whenever, in the judgment of the Commission, the development of any water resources for public purposes should be undertaken by the United States itself, the Commission shall not approve any application for any project affecting such development, but shall cause to be made such examinations, surveys, reports, plans, and estimates of the cost of the proposed development as it may find necessary, and shall submit its findings to Congress with such recommendations as it may find appropriate concerning such development.

(c) Assumption of project by United States after expiration of license

Whenever, after notice and opportunity for hearing, the Commission determines that the United States should exercise its right upon or after the expiration of any license to take over any project or projects for public purposes, the Commission shall not issue a new license to the original licensee or to a new licensee but shall submit its recommendation to Congress together with such

information as it may consider appropriate.

Sec. 801. Transfer of license; obligations of transferee

No voluntary transfer of any license, or of the rights thereunder granted, shall be made without the written approval of the commission; and any successor or assign of the rights of such licensee, whether by voluntary transfer, judicial sale, foreclosure sale, or otherwise, shall be subject to all the conditions of the license under which such rights are held by such licensee and also subject to all the provisions and conditions of this chapter to the same extent as though such successor or assign were the original licensee under this chapter: Provided, That a mortgage or trust deed or judicial sales made thereunder or under tax sales shall not be deemed voluntary transfers within the meaning of this section.

Sec. 802. Information to accompany application for license; landowner notification

(a) Each applicant for a license under this chapter shall submit to the commission -

(1) Such maps, plans, specifications, and estimates of cost as may be required for a full understanding of the proposed project. Such maps, plans, and specifications when approved by the commission shall be made a part of the license; and thereafter no change shall be made in said maps, plans, or specifications until such changes shall have been approved and made a part of such license by the commission.

(2) Satisfactory evidence that the applicant has complied with the requirements of the laws of the State or States within which the proposed project is to be located with respect to bed and banks and to the appropriation, diversion, and use of water for power purposes and with respect to the right to engage in the business of developing, transmitting and distributing power, and in any other business necessary to effect the purposes of a license under this chapter.

(3) ^[1] Such additional information as the commission may require.

^[1] See Codification note below.

(b) Upon the filing of any application for a license (other than a license under section 808 of this title) the applicant shall make a good faith effort to notify each of the following by certified mail:

(1) Any person who is an owner of record of any interest in the property within the bounds of the project.

(2) Any Federal, State, municipal or other local governmental agency likely to be interested in or affected by such application.

Sec. 803. Conditions of license generally

All licenses issued under this subchapter shall be on the following conditions:

(a) Modification of plans; factors considered to secure adaptability of project; recommendations for proposed terms and conditions

(1) That the project adopted, including the maps, plans, and specifications, shall be such as in the judgment of the Commission will be best adapted to a comprehensive plan for improving or developing a waterway or waterways for the use or benefit of interstate or foreign commerce, for the improvement and utilization of water-power development, for the adequate protection, mitigation, and enhancement of fish and wildlife (including related spawning grounds and habitat), and for other beneficial public uses, including irrigation, flood control, water supply, and recreational and other purposes referred to in section 797(e) of this title ^{III} if necessary in order to secure such plan the Commission shall have authority to require the modification of any project and of the plans and specifications of the project works before approval.

(2) In order to ensure that the project adopted will be best adapted to the comprehensive plan described in paragraph (1), the Commission shall consider each of the following:

(A) The extent to which the project is consistent with a comprehensive plan (where one exists) for improving, developing, or conserving a waterway or waterways affected by the project that is prepared by -

(i) an agency established pursuant to Federal law that has the authority to prepare such a plan; or

(ii) the State in which the facility is or will be located.

(B) The recommendations of Federal and State agencies exercising administration over flood control, navigation, irrigation, recreation, cultural and other relevant resources of the State in which the project is located, and the recommendations (including fish and wildlife recommendations) of Indian tribes affected by the project.

(C) In the case of a State or municipal applicant, or an applicant which is primarily engaged in the generation or sale of electric power (other than electric power solely from cogeneration facilities or small power production facilities), the electricity consumption efficiency improvement program of the applicant, including its plans, performance and capabilities for encouraging or assisting its customers to conserve electricity cost-effectively, taking into account the published policies, restrictions, and requirements of relevant State regulatory authorities applicable to such applicant.

(3) Upon receipt of an application for a license, the Commission shall solicit recommendations from the agencies and Indian tribes identified in subparagraphs (A) and (B) of paragraph (2) for proposed terms and conditions for the Commission's consideration for inclusion in the license.

(b) Alterations in project works

That except when emergency shall require for the protection of navigation, life, health, or property, no substantial alteration or addition not in conformity with the approved plans shall be made to any dam or other project works constructed hereunder of an installed capacity in excess of two thousand horsepower without the prior approval of the Commission; and any emergency alteration or addition so made shall thereafter be subject to such modification and change as the Commission may direct.

(c) Maintenance and repair of project works; liability of licensee for damages

That the licensee shall maintain the project works in a condition of repair adequate for the purposes of navigation and for the efficient operation of said works in the development and transmission of power, shall make all necessary renewals and replacements, shall establish and maintain adequate depreciation reserves for such purposes, shall so maintain, and operate said works as not to impair navigation, and shall conform to such rules and regulations as the Commission may from time to time prescribe for the protection of life, health, and property. Each licensee hereunder shall be liable for all damages occasioned to the property of others by the construction, maintenance, or operation of the project works or of the works appurtenant or accessory thereto, constructed under the license and in no event shall the United States be liable therefor.

(d) Amortization reserves

That after the first twenty years of operation, out of surplus earned thereafter, if any, accumulated in excess of a specified reasonable rate of return upon the net investment of a licensee in any project or projects under license, the licensee shall establish and maintain amortization reserves, which reserves shall, in the discretion of the Commission, be held until the termination of the license or be applied from time to time in reduction of the net investment. Such specified rate of return and the proportion of such surplus earnings to be paid into and held in such reserves shall be set forth in the license. For any new license issued under section 808 of this title, the amortization reserves under this subsection shall be maintained on and after the effective date of such new license.

(e) Annual charges payable by licensees; maximum rates; application; review and report to Congress

(1) That the licensee shall pay to the United States reasonable annual charges in an amount to be fixed by the Commission for the purpose of reimbursing the United States for the costs of the administration of this subchapter, including any reasonable and necessary costs incurred by Federal and State fish and wildlife agencies and other natural and cultural resource agencies in connection with studies or other reviews carried out by such agencies for purposes of administering their responsibilities under this subchapter; for recompensing it for the use, occupancy, and enjoyment of its lands or other property; and for the expropriation to the Government of excessive profits until the respective States shall make provision for preventing excessive profits or for the expropriation thereof to themselves, or until the period of

amortization as herein provided is reached, and in fixing such charges the Commission shall seek to avoid increasing the price to the consumers of power by such charges, and any such charges may be adjusted from time to time by the Commission as conditions may require: Provided, That, subject to annual appropriations Acts, the portion of such annual charges imposed by the Commission under this subsection to cover the reasonable and necessary costs of such agencies shall be available to such agencies (in addition to other funds appropriated for such purposes) solely for carrying out such studies and reviews and shall remain available until expended: Provided, That when licenses are issued involving the use of Government dams or other structures owned by the United States or tribal lands embraced within Indian reservations the Commission shall, subject to the approval of the Secretary of the Interior in the case of such dams or structures in reclamation projects and, in the case of such tribal lands, subject to the approval of the Indian tribe having jurisdiction of such lands as provided in section 476 of title 25, fix a reasonable annual charge for the use thereof, and such charges may with like approval be readjusted by the Commission at the end of twenty years after the project is available for service and at periods of not less than ten years thereafter upon notice and opportunity for hearing: Provided further, That licenses for the development, transmission, or distribution of power by States or municipalities shall be issued and enjoyed without charge to the extent such power is sold to the public without profit or is used by such State or municipality for State or municipal purposes, except that as to projects constructed or to be constructed by States or municipalities primarily designed to provide or improve navigation, licenses therefor shall be issued without charge; and that licenses for the development, transmission, or distribution of power for domestic, mining, or other beneficial use in projects of not more than two thousand horsepower installed capacity may be issued without charge, except on tribal lands within Indian reservations; but in no case shall a license be issued free of charge for the development and utilization of power created by any Government dam and that the amount charged therefor in any license shall be such as determined by the Commission: Provided however, That no charge shall be assessed for the use of any Government dam or structure by any licensee if, before January 1, 1985, the Secretary of the Interior has entered into a contract with such licensee that meets each of the following requirements:

(A) The contract covers one or more projects for which a license was issued by the Commission before January 1, 1985.

(B) The contract contains provisions specifically providing each of the following:

(i) A powerplant may be built by the licensee utilizing irrigation facilities constructed by the United States.

(ii) The powerplant shall remain in the exclusive control, possession, and ownership of the licensee concerned.

(iii) All revenue from the powerplant and from the use, sale, or disposal of electric energy from the powerplant shall be, and remain, the property of such licensee.

(2) In the case of licenses involving the use of Government dams or other structures owned by the United States, the charges fixed (or readjusted) by the Commission under paragraph (1) for

the use of such dams or structures shall not exceed 1 mill per kilowatt-hour for the first 40 gigawatt-hours of energy a project produces in any year, 1 1/2 mills per kilowatt-hour for over 40 up to and including 80 gigawatt-hours in any year, and 2 mills per kilowatt-hour for any energy the project produces over 80 gigawatt-hours in any year. Except as provided in subsection (f) of this section, such charge shall be the only charge assessed by any agency of the United States for the use of such dams or structures.

(3) The provisions of paragraph (2) shall apply with respect to -

- (A) all licenses issued after October 16, 1986; and
- (B) all licenses issued before October 16, 1986, which -

- (i) did not fix a specific charge for the use of the Government dam or structure involved; and
- (ii) did not specify that no charge would be fixed for the use of such dam or structure.

(4) Every 5 years, the Commission shall review the appropriateness of the annual charge limitations provided for in this subsection and report to Congress concerning its recommendations thereon.

(f) Reimbursement by licensee of other licensees, etc.

That whenever any licensee hereunder is directly benefited by the construction work of another licensee, a permittee, or of the United States of a storage reservoir or other headwater improvement, the Commission shall require as a condition of the license that the licensee so benefited shall reimburse the owner of such reservoir or other improvements for such part of the annual charges for interest, maintenance, and depreciation thereon as the Commission may deem equitable. The proportion of such charges to be paid by any licensee shall be determined by the Commission. The licensees or permittees affected shall pay to the United States the cost of making such determination as fixed by the Commission.

Whenever such reservoir or other improvement is constructed by the United States the Commission shall assess similar charges against any licensee directly benefited thereby, and any amount so assessed shall be paid into the Treasury of the United States, to be reserved and appropriated as a part of the special fund for headwater improvements as provided in section 810 of this title.

Whenever any power project not under license is benefited by the construction work of a licensee or permittee, the United States or any agency thereof, the Commission, after notice to the owner or owners of such unlicensed project, shall determine and fix a reasonable and equitable annual charge to be paid to the licensee or permittee on account of such benefits, or to the United States if it be the owner of such headwater improvement.

(g) Conditions in discretion of commission

Such other conditions not inconsistent with the provisions of this chapter as the commission may require.

(h) Monopolistic combinations; prevention or minimization of anticompetitive conduct; action by Commission regarding license and operation and maintenance of project

(1) Combinations, agreements, arrangements, or understandings, express or implied, to limit the output of electrical energy, to restrain trade, or to fix, maintain, or increase prices for electrical energy or service are hereby prohibited.

(2) That conduct under the license that: (A) results in the contravention of the policies expressed in the antitrust laws; and (B) is not otherwise justified by the public interest considering regulatory policies expressed in other applicable law (including but not limited to those contained in subchapter II of this chapter) shall be prevented or adequately minimized by means of conditions included in the license prior to its issuance. In the event it is impossible to prevent or adequately minimize the contravention, the Commission shall refuse to issue any license to the applicant for the project and, in the case of an existing project, shall take appropriate action to provide thereafter for the operation and maintenance of the affected project and for the issuing of a new license in accordance with section 808 of this title.

Waiver of conditions

In issuing licenses for a minor part only of a complete project, or for a complete project of not more than two thousand horsepower installed capacity, the Commission may in its discretion waive such conditions, provisions, and requirements of this subchapter, except the license period of fifty years, as it may deem to be to the public interest to waive under the circumstances: Provided, That the provisions hereof shall not apply to annual charges for use of lands within Indian reservations.

(j) Fish and wildlife protection, mitigation and enhancement; consideration of recommendations; findings

(1) That in order to adequately and equitably protect, mitigate damages to, and enhance, fish and wildlife (including related spawning grounds and habitat) affected by the development, operation, and management of the project, each license issued under this subchapter shall include conditions for such protection, mitigation, and enhancement. Subject to paragraph (2), such conditions shall be based on recommendations received pursuant to the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.) from the National Marine Fisheries Service, the United States Fish and Wildlife Service, and State fish and wildlife agencies.

(2) Whenever the Commission believes that any recommendation referred to in paragraph (1) may be inconsistent with the purposes and requirements of this subchapter or other applicable law, the Commission and the agencies referred to in paragraph (1) shall attempt to resolve any such inconsistency, giving due weight to the recommendations, expertise, and statutory responsibilities of such agencies. If, after such attempt, the Commission does not adopt in whole or in part a recommendation of any such agency, the Commission shall publish each of the following findings (together with a statement of the basis for each of the findings):

(A) A finding that adoption of such recommendation is inconsistent with the purposes and requirements of this subchapter or with other applicable provisions of law.

(B) A finding that the conditions selected by the Commission comply with the requirements of paragraph (1). Subsection (i) of this section shall not apply to the conditions required under this subsection.

Sec. 806. Time limit for construction of project works; extension of time; termination or revocation of licenses for delay

The licensee shall commence the construction of the project works within the time fixed in the license, which shall not be more than two years from the date thereof, shall thereafter in good faith and with due diligence prosecute such construction, and shall within the time fixed in the license complete and put into operation such part of the ultimate development as the commission shall deem necessary to supply the reasonable needs of the then available market, and shall from time to time thereafter construct such portion of the balance of such development as the commission may direct, so as to supply adequately the reasonable market demands until such development shall have been completed. The periods for the commencement of construction may be extended once but not longer than two additional years and the period for the completion of construction carried on in good faith and with reasonable diligence may be extended by the commission when not incompatible with the public interests. In case the licensee shall not commence actual construction of the project works, or of any specified part thereof, within the time prescribed in the license or as extended by the commission, then, after due notice given, the license shall, as to such project works or part thereof, be terminated upon written order of the commission. In case the construction of the project works, or of any specified part thereof, has been begun but not completed within the time prescribed in the license, or as extended by the commission, then the Attorney General, upon the request of the commission, shall institute proceedings in equity in the district court of the United States for the district in which any part of the project is situated for the revocation of said license, the sale of the works constructed, and such other equitable relief as the case may demand, as provided for in section 820 of this title.

• **Sec. 807. Right of Government to take over project works**

(a) Compensation; condemnation by Federal or State Government

Upon not less than two years' notice in writing from the commission the United States shall have the right upon or after the expiration of any license to take over and thereafter to maintain and operate any project or projects as defined in section 796 of this title, and covered in whole or in part by the license, or the right to take over upon mutual agreement with the licensee all property owned and held by the licensee then valuable and serviceable in the development, transmission, or distribution of power and which is then dependent for its usefulness upon the continuance of the license, together with any lock or locks or other aids to navigation constructed at the expense of the licensee, upon the condition that before taking possession it shall pay the net investment of the licensee in the project or projects taken, not to exceed the fair value of the property taken, plus such reasonable damages, if any, to property of the licensee valuable, serviceable, and dependent as above set forth but not taken, as may be caused by the severance therefrom of property taken, and shall assume all contracts entered into by the licensee with the approval of the Commission. The net investment of the licensee in the project or projects so taken and the amount of such severance damages, if any, shall be determined by the Commission after notice and opportunity for hearing. Such net investment shall not include or be affected by the value of any lands, rights-of-way, or other property of the United States licensed by the Commission under this chapter, by the license or by good will, going value, or prospective revenues; nor shall the values allowed for water rights, rights-of-way, lands, or interest in lands be in excess of the actual reasonable cost thereof at the time of acquisition by the licensee: Provided, That the right of the United States or any State or municipality to take over, maintain, and operate any project

licensed under this chapter at any time by condemnation proceedings upon payment of just compensation is expressly reserved.

(b) Relicensing proceedings; Federal agency recommendations of take over by Government; stay of orders for new licenses; termination of stay; notice to Congress

In any relicensing proceeding before the Commission any Federal department or agency may timely recommend, pursuant to such rules as the Commission shall prescribe, that the United States exercise its right to take over any project or projects. Thereafter, the Commission, if its ^[1] does not itself recommend such action pursuant to the provisions of section 800(c) of this title, shall upon motion of such department or agency stay the effective date of any order issuing a license, except an order issuing an annual license in accordance with the proviso of section 808(a) of this title, for two years after the date of issuance of such order, after which period the stay shall terminate, unless terminated earlier upon motion of the department or agency requesting the stay or by action of Congress. The Commission shall notify the Congress of any stay granted pursuant to this subsection.

- **Footnotes**

- [1] So in original. Probably should be "it".

Sec. 809. Temporary use by Government of project works for national safety; compensation for use

When in the opinion of the President of the United States, evidenced by a written order addressed to the holder of any license under this chapter, the safety of the United States demands it, the United States shall have the right to enter upon and take possession of any project or part thereof, constructed, maintained, or operated under said license, for the purpose of manufacturing nitrates, explosives, or munitions of war, or for any other purpose involving the safety of the United States, to retain possession, management, and control thereof for such length of time as may appear to the President to be necessary to accomplish said purposes, and then to restore possession and control to the party or parties entitled thereto; and in the event that the United States shall exercise such right it shall pay to the party or parties entitled thereto just and fair compensation for the use of said property as may be fixed by the commission upon the basis of a reasonable profit in time of peace, and the cost of restoring said property to as good condition as existed at the time of the taking over thereof, less the reasonable value of any improvements that may be made thereto by the United States and which are valuable and serviceable to the licensee.

Sec. 817. Projects not affecting navigable waters; necessity for Federal license, permit or right-of-way; unauthorized activities

(1) It shall be unlawful for any person, State, or municipality, for the purpose of developing electric power, to construct, operate, or maintain any dam, water conduit, reservoir, power house, or other works incidental thereto across, along, or in any of the navigable waters of the United States, or upon any part of the public lands or reservations of the United States (including the Territories), or utilize the surplus water or water power from any Government dam, except under and in accordance with the terms of a permit or valid existing right-of-way granted prior to June 10, 1920, or a license granted pursuant to this chapter. Any person, association, corporation, State, or municipality intending to construct a dam or other project works, across, along, over, or in any stream or part thereof, other than those defined in this chapter as navigable waters, and over which Congress has jurisdiction under its authority to regulate commerce with foreign nations and among the several States shall before such construction file declaration of such intention with the Commission, whereupon the Commission shall cause immediate investigation of such proposed construction to be made, and if upon investigation it shall find that the interests of interstate or foreign commerce would be affected by such proposed construction, such person, association, corporation, State, or municipality shall not construct, maintain, or operate such dam or other project works until it shall have applied for and shall have received a license under the provisions of this chapter. If the Commission shall not so find, and if no public lands or reservations are affected, permission is granted to construct such dam or other project works in such stream upon compliance with State laws.

(2) No person may commence any significant modification of any project licensed under, or exempted from, this chapter unless such modification is authorized in accordance with terms and conditions of such license or exemption and the applicable requirements of this subchapter. As used in this paragraph, the term "commence" refers to the beginning of physical on-site activity other than surveys or testing.

Sec. 820. Proceedings for revocation of license or to prevent violations of license

The Attorney General may, on request of the commission or of the Secretary of the Army, institute proceedings in equity in the district court of the United States in the district in which any project or part thereof is situated for the purpose of revoking for violation of its terms any permit or license issued hereunder, or for the purpose of remedying or correcting by injunction, mandamus, or other process any act of commission or omission in violation of the provisions of this chapter or of any lawful regulation or order promulgated hereunder. The district courts shall have jurisdiction over all of the above-mentioned proceedings and shall have power to issue and execute all necessary process and to make and enforce all writs, orders and decrees to compel compliance with the lawful orders and regulations of the commission and of the Secretary of the Army, and to compel the performance of any condition imposed under the provisions of this chapter. In the event a decree revoking a license is entered, the court is empowered to sell the whole or any part of the project or projects under license, to wind up the business of such licensee conducted in connection with such project or projects, to distribute the proceeds to the parties entitled to the same, and to make and enforce such further orders and decrees as equity and justice may require. At such sale or sales the vendee shall take the rights and privileges belonging to the licensee and shall perform the duties of such licensee and assume all outstanding obligations and liabilities of the licensee which the court may deem equitable in the premises; and at such sale or sales the United States may become a purchaser, but it shall not be required to pay a greater amount than it would be required to pay under the provisions of section 807 of this title at the termination of the license.

Sec. 821. State laws and water rights unaffected

Nothing contained in this chapter shall be construed as affecting or intending to affect or in any way to interfere with the laws of the respective States relating to the control, appropriation, use, or distribution of water used in irrigation or for municipal or other uses, or any vested right acquired therein.

SECTION X

REGULATION of HYDROELECTRIC GENERATING FACILITIES

Article W. Application for Licensing and Licensing Process

The Commission shall establish appropriate procedures and filing requirements for Hydropower Licenses consistent with this section. Such procedures and requirements shall include:

- (a) The content of applications, including requirements for sufficient maps, plans, specifications and estimates of cost as may be required for a full understanding of the project;
- (b) Methods for amending deficient applications;
- (c) Proof that the application (including the elements required in part a of this article) has been provided for review and comment by the public and by appropriate agencies of the Government of Armenia and local governments.
- (d) Proof that the approved project construction and operation has been determined by the Government of Armenia to be consistent with:
 - (i) requirements of Water and Land Use laws of the Republic of Armenia;
 - (ii) any comprehensive water resource plans of governmental bodies of Armenia;
 - (iii) other approved water and land resource uses;
 - (iv) protection and preservation of the environment, including public health and preservation of fish and wildlife; and
 - (v) public safety practices, including adequate dam safety review procedures.
- (d) Proof that the applicant possesses or is reasonably assured of possessing the water and land rights necessary for the proposed project
- (e) Procedures for processing, inter-governmental coordination and action on licensing applications, including time schedules;

Article X. General Conditions of Hydropower License

All Licenses issued under this section shall be on the following conditions:

- (a) Licenses shall be issued for a period not exceeding fifty years. Each license shall be conditioned upon acceptance by the licensee of all the terms and conditions of the license as prescribed by the Commission and stated in such license.
- (b) Consistency with the maps, plans and specifications set forth in Article W(a) above.
- (c) Except in case of emergency, no substantial alteration or addition to any dam or project works shall be made without prior approval of the Commission.

- (d) The licensee shall maintain the project works in a condition adequate for public safety and other water resource uses and efficient operation of said works for production of power.

Article Y. Superseding of other Licenses

As to matters within the Commission's authority, a Hydropower License as issued by the Commission shall supersede inconsistent provisions in any licenses previously issued by other bodies.

Article Z. Water and Land Rights

Nothing contained in this Section shall be construed as affecting or intending to affect the laws of the Republic of Armenia relating to control, appropriation, use or distribution of water used in irrigation or for municipal or other uses or other existing rights.