

## POWER SECTOR POLICY DIRECTIONS MINISTRY OF IRRIGATION AND POWER

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Description: Traditionally, power sectors were monopolies which were generally state-owned. During the last decade this situation has changed significantly, and the power sectors all over the world are being restructured and reformed in order to create competition, attract private investment, and also improve operational efficiency. Sri Lanka is no exception, and there is a need to develop a policy package in keeping with the current trends.

#### Introduction

Cost of electricity is a key element in attracting foreign investments into the country for its economic development. Further, electricity has a direct bearing on the competitiveness of local industry in international markets. Therefore, the power prices should be comparable and have a competitive edge in relation to prices in the region including South Asia and South East Asia.

This document sets out the basic principles on which the power sector may be restructured and reformed.

#### 1. Sector Objective

The basic goal of the sector is to meet the demand for energy services at all times at least economic, social and environmental cost and thereby promote economic development and social well-being.

#### 2. Present Status

It is almost one hundred years since the introduction of electricity to Sri Lanka. For a short period, the electricity supply industry was in the hands of the private sector. Subsequently, the management of the sector passed on to the hands of the public sector with the establishment of the Department of Government Electrical Undertakings (DGEU) in 1927. In 1951, the Electricity Act was promulgated.

Sri Lanka's power system comprises 1140 Megawatts (MW) of hydro power (including 2.23 MW Private) and 486.7 MW of installed thermal capacity (including 81.7 MW Private). Transmission of electricity is carried out at 220 kilovolts (kV) and 132 kV. The 66 kV system installed in the early fifties is now obsolete. Primary distribution voltage is 33 kV, and 11 kV is used in some areas. Low voltage distribution is carried out at 400 volts. About 2.3 million consumers are provided with electricity which is about 50.1% of the total households in the country. In 1997, the demand for electricity was 4039 Gigawatt-hours (GWh). CEB generated 4911 GWh to satisfy this demand. The energy consumed by the different sectors are approximately: domestic 38%, industrial 40%, commercial 22%.

#### 2.1 Organization

The power sector is organized under the Ministry of Irrigation and Power. The CEB is responsible for generation and transmission of electrical power in the whole country and distribution in areas other than those served by LECO.

#### 2.2 Governance

The sector presently exhibits the characteristics of classic closed command-and-control governance. CEB is a vertically integrated government-owned monopoly with a centralized management structure. Although CEB was set up as a publicly-owned independent autonomous body, both investments and tariff require government approval.

#### 2.3 Sector Regulation

The Regulatory framework for the sector is provided by the Electricity Act. The Act was promulgated in 1951 and assumes that generation and transmission is carried out by a public utility and distribution to consumers by local authorities. The office of the Chief Electrical Inspector, officer charged with the administration of the Act, does not function effectively. Technical regulation of the sector is almost absent and economic regulation is a consequence of loan investments.

#### 2.4 Financing

The sector's investments have so far been financed through domestic resource mobilization through tariffs, soft loans from multilateral and bilateral sources, and Government grants for rural electrification.

#### 2.5 Sector Operation

The CEB is expected to function on sound commercial principles, as stipulated in the CEB Act. However, tariff formulation is severely affected by conflicting social and commercial objectives of the Government. The CEB is also expected to expand the electricity supplies to rural areas where the returns are low. As a government-owned entity it is also required to provide a variety of ancillary services such as maintenance of electrical installations in Government buildings, security lighting and street lighting.

#### 3. Future Demand and Investment

The demand for electricity is expected to grow at around 10% per annum up to the middle of the next decade. This implies that the present generation capacity has to be doubled in seven years time requiring an investment of the order of US\$ 1.5 billion in generation. Approximately, another US\$ 1 billion would be required for concomitant transmission and distribution expansion. As living standards rise the consumers will insist on a higher reliability and a better quality of supply and improved customer service.

#### 4. Vision

The country will have an efficient and a dynamic power sector which would facilitate economic growth. A reliable supply of grid electricity will be available to at least 80% of the population at affordable prices. The industrial sector will have reasonably priced reliable power supply to sustain their competitiveness in the international markets. There will be transparent regulatory processes where interests of consumers, investors and environmentalists will be adequately safeguarded. There will be a non-monopolistic situation in the power sector and it will operate on sound commercial and business principles. The private sector will have substantial investments in the sector. There will be a reliable distribution and transmission system with losses reduced to internationally accepted levels.

#### 5. Basic Policy

The Government has been actively pursuing the primary objectives of accelerated economic growth and fair distribution of the benefits of such growth. Restoration of price stability, improving international competitiveness, promoting private investment, and addressing directly the problems of poverty and unemployment are the main elements of this strategy. Within this strategy, special emphasis is placed on public enterprise reforms including commercialization and privatization, reform of the public administration system, progressive reduction of the budget deficit, fiscal reforms, trade reforms and rationalization of the poverty alleviation and social welfare payments.

In the context of the above national policy framework, the new policy package for the power sector aims to lower prices to the consumer and ensure a high level of service and supply reliability and to sustain an adequate level of investments in the power sector at all times, by harnessing the private sector investment particularly into the power generation sector.

These policies will ensure the realization of the sector's main objective to meet the demand for energy services at all times at least economic, social and environmental cost and thereby promote economic development and social well-being.

##### 5.1 Private Sector Participation

The private sector is expected to play a key role in power sector development activities. Future thermal power generation projects will be utilizing private sector finance on BOO/BOT basis. Therefore, soft loans and other types of public financing will not be utilized for the purpose of investments in thermal power generation except for projects already committed as at 01st July 1997. However, the Power Committee shall have the discretion, on case by case basis to recommend the allocation of concessionary finance to large scale power projects where:

(a) the Concessionary Loan is utilized for the improvement of general infrastructure of the project, contributing to a reduction in development costs (and therefore the price of power) to the private sector (eg. Construction of coal handling facilities and dock for coal fired plant, construction of access roads etc.)

or

(b) the Concessionary Loan is made available by the Government to the Project Development Company as an alternate to loan financing at commercial rates from the private sector in circumstances where the per unit cost generation of the Power Plants is higher due to financing cost as a result of developing the required infrastructure facilities. Under this structure strategic private sector investors will be invited through a competitive process to contribute equity into the Project Company which will construct, operate and maintain the infrastructure facility as a joint venture partner separated from the Generation Component (building, operating and maintaining the Power Plant) through private sector financing. This approach is expected to be considerably advantageous to the Government in terms of price in relation to allocation of risks.

For the purpose of using private sector financing for power generation, an enabling environment will be created. Developers will be invited to build power generation plants that are elements of the approved plan. The selection will be through competitive bidding procedures. In selecting future power generation projects, the unit cost of generation will be the principal criterion. The Government will ensure competition in power generation sector and also take steps to safeguard against the formation of monopolies.

Only solicited proposals will be considered for future generation projects on a BOO/BOT basis. Procedures outlined in the guidelines on Government tender procedures shall be adopted for solicited power projects.

However, the Power Committee on a case by case basis may consider unsolicited proposals for thermal power generation if such a proposal is accompanied by:

(a) an investment proposal to set up an industrial park.  
and/or

(b) an investment proposal to set up a large scale manufacturing project of national significance.

The CEB shall not enter into Power Purchase Agreements (PPA) unless the above guidelines are adopted and after PPA is cleared by the Power Committee prior to approval of the Cabinet.

Unsolicited proposals for alternate sources of energy may be considered if such a proposal is based on new technology and is more cost effective in other forms of energy.

Hydro power generation potential of the country will be developed to its full potential as it is a major indigenous resource for power generation. All large scale hydro generation facilities will remain under Government control for the foreseeable future. Private sector financing will be utilized for mini hydro generation. Transmission system shall remain within the management of the public sector.

## 5.2 Restructuring of the Sector

The power sector will be restructured to accommodate competition and to facilitate private sector participation in order to create a non-monopolistic situation within the power sector. The roles of the Government as owner, regulator and operator will be clearly defined and separated. Sector entities will be allowed to operate as independent autonomous bodies. The presently vertically integrated power sector will be decentralized. The decentralized units will be responsible for their profit and loss and they will be fully accountable. During this process generation, transmission and distribution functions will be separated. In the case of generation and distribution, the function will be sub-divided horizontally to form a number of entities to form strategic business units in accordance with the structure outlined above.

## 5.3 Transparent Regulatory Process

Regulation of the sector operations is important in view of the inherent natural monopolistic nature of transmission and distribution and also because of the critical role electrical power plays in all economic activities. An important function of the regulatory framework is to ensure an appropriate balance between the interest of the producers and those of the consumers. The Government will establish a transparent regulatory framework and enact the enabling legislation. The regulatory framework will provide a sound basis for the establishment of power sector economic, financial, environmental and service policies.

## 5.4 Commercialization and Corporatization

The power sector will operate on sound commercial and business principles after identifying and removing constraints to achieving this objective. This means they will pay interest and taxes, earn commercially-competitive rates on equity capital, and have responsibility for their own budgets, borrowing, procurement, pay, and staff conditions. Power sector entities, as commercial enterprises, will be allowed to recover their costs. The Government will explore the possibility of employing other means to address social equity issues rather than power sector subsidies. However, when financially unattractive activities have to be undertaken in pursuance of Government policy, the Government will fully compensate the entities. For example, when services such as maintenance of electrical installations in Government-owned buildings are provided by the CEB, it will be given the option of charging the respective organization for the service provided.

## 5.5 Planning

Power sector planning for resource acquisition will follow the paradigm for integrated resource planning:

Improve supply side efficiency

e.g. transmission and distribution loss reduction programmes.

Improve demand side efficiency

e.g. replace incandescent lamps with fluorescent lamps, cogeneration.

Employ decentralized sources where they are cost effective

e.g. development of renewable energy sources.

Expand generation.

All these options will be examined on a level playing field and the least cost strategy will be selected for meeting the demand for electricity.

The least-cost expansion planning methodology for the generation subsector will be used to identify the most economic generation options. Subsequently, these options will be revised using other planning methodologies, if necessary, to prepare expansion plans. Investment, whether public or private, in the sector will only be in accordance with the plan. It is necessary that the plan takes into account the important issues concerning the security of supply and the optimization of the fuel mix.

## 5.6 Security of Supplies

The system will be so planned to ensure reliability even during drought years when the energy capability of the hydro system is low. The fuel mix will be optimized to ensure security of supplies so that there is no undue dependence on one fuel – oil, coal, or gas. Development of hydro resources will be encouraged because it is the only indigenous resource.

## 5.7 Tariff Policy

Even though electricity is a “non-traded” service, the tariff (price) charged should have some relationship to tariff levels in other countries, since it has an important bearing on our competitiveness in international trade. In making tariff the relationship between the demand and the price need to be kept in mind.

The tariff policy should be based on the following guiding principles:

The tariff structure will be based on sound commercial principles which would take into account a commercially based allocation of costs among consumers according to the burdens they impose on the system.

Assure reasonable degree of price stability.

Provision, where economically feasible, of a minimum level of service to low-income consumers.

Power prices that generate sufficient revenues to meet the financial requirements of the sector.

A tariff structure simple enough to facilitate metering and billing.

#### 5.8 Transmission

Transmission of electricity will be handled by a separate publicly-owned transmission authority. It will be the responsibility of the authority to provide for easy exit and entry for generators and to satisfy the demand from distribution entities. They will also be responsible for load dispatching, system operation and control.

#### 5.9 Distribution

A number of distribution entities will be set up. These entities will be responsible for distributing power within a franchised area and for providing all other consumer services within the area. Distribution reforms will take into account the need to continue with on-going rural electrification projects and the attendant need for subsidies.

#### 5.10 Rural Electrification

A rural electrification policy directed towards the improvement of the quality of life and acceleration of economic development in rural areas will be adopted. For this purpose, the Government will make the necessary institutional and financial arrangements in order to compensate the distribution entities as such schemes may not be commercially viable.

### 6. Implementation of Proposed Policies

Implementation of proposed policies must necessarily involve the setting up of detailed and intricate procedures, and the necessary legal provisions. Failure to do so could result in a serious breakdown in sector operations. Therefore, the process shall be sequenced for orderly implementation. Whilst the involvement of the private sector in power generation can proceed without hindrance priority should be given to put in place the regulatory framework as a matter of urgency. In the meantime, the restructuring of the existing power sector will commence.

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The future Hydro/Thermal mix in Sri Lanka