Progress in the privatization of water-related public services: a country-by-country review for Mexico, Central America and the Caribbean.

*This document has been prepared by the Environment and Development Division. Document not subjected to editorial revision.

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Abstract

Since the seventies, the governments of the region have been transferring, in one form or another, public companies and other state institutions to the private sector. Private sector participation has now extended to all sectors of the economy, including water-related public utilities and to increase private participation in the provision of water-related public utilities is the announced policy of almost all governments in Latin America and the Caribbean.

This "Progress in the privatization of water-related public services: a country-by-country review for Mexico, Central America and the Caribbean" examines recent developments in private sector participation in the provision of public water-related services in Belize, Costa Rica, Cuba, Dominica, Dominican Republic, El Salvador, Guatemala, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Puerto Rico, and Trinidad and Tobago. The information given for each country includes a brief description of the status of private participation in the drinking water supply and sanitation, electricity, irrigation and drainage, and inland water transport sectors; and statistical data on the sectors discussed.

Private sector participation is still incipient in most countries and the greater part of the infrastructure is still managed by the public sector, but some examples can be found and there are ambitious plans. These examples are few in the provision of drinking water supply and sanitation services, where they are largely limited to Dominica, Mexico, Puerto Rico, and Trinidad and Tobago, while in other countries the main forms of private sector participation are small private companies and subcontracting. Reforms are much more advanced in the power sector, where many countries follow an evolutionary process of reform by gradually introducing competition in generation.

This is the first part of the third of a series of papers discussing different aspects of private sector participation in the provision of water-related public services in Latin America and the Caribbean; the second part covers the countries of South America. The first paper of the series (LC/R.1576, 8 September 1995) is on the alternatives available for private sector participation in the provision of water-related public services and the experience of governments with these different alternatives. The second paper (LC/R.1635, 8 April 1996) outlines the principles believed to be essential in formulating an adequate regulatory framework for the water sector; its focus is on the issues to be confronted in developing a regulatory framework for water-related public utilities.
Introduction

Increasing private participation in the provision of water-related public utilities is the announced policy of almost all governments in Latin America and the Caribbean. The specific nature of the policy varies enormously from country to country both in content and, even more so, in execution. Moreover, policies encouraging private participation began very much earlier in some countries and, in consequence, these countries are more advanced in their application. Even, however, in countries where privatization has gone furthest, this has not always included water-related public services. These differences and other factors, such as the level of government undertaking the privatization of the service and the variations in regulatory systems suggest the convenience of a country by country guide of the kind presented here.

Variations in privatization policies

Other than the earlier start of privatization in Chile, the major differences among the countries of the region reside in whether, and to what extent, public services related to water have been included in the privatization process. Only in a few countries has the management function for water supply and sanitation services been transferred to the private sector, although other more technical functions within the services have been transferred in many countries. Even electricity generation and distribution have only been extensively privatized in Argentina, Bolivia, Chile and Peru, elsewhere the bulk of the electricity sector remains in government hands. There are, therefore, only four countries of Latin America in which management responsibilities for water-related public utilities have been transferred to the private sector. Only in one of the four, Argentina, has management responsibility for major water supply and sanitation systems been also passed on to private companies.

It is important, therefore, in discussing private participation in water-related public services not to exaggerate its extent. In general terms, for the region as a whole, private participation remains incipient and in most countries, the greater part of the infrastructure is still managed by the public sector. The experience in managing private participation in management is, in consequence, very limited. It is limited both in time and space and, because of this, the lessons of the existing experience, which on the whole has been very promising, may not be applicable
generally within the region. Experience with more limited private participation in operational activities through service contracts is much more widespread.

Examples include, contracting out of installations and infrastructure maintenance and of billing activities, often to former employees, the use of consultants for design and to oversee construction works and even of system management. This type of private participation does not provide the same kind of challenge to the public administration as that caused by the transferring of management responsibility under concession or by direct sale.

The sale of existing infrastructure to private investors has been the chosen policy for most electricity generation in Argentina, Chile and Peru, and seems to be the likely choice in many other countries, including Brazil and Colombia. Sale has not been used for the transfer of water supply and sanitation services, although the Government of Chile is proposing to sell two-thirds of the shares in its regional water companies. In Argentina, concession arrangements have been used and the Government of Peru is considering a concession for the operation of the Lima service, SEDAPAL. In Mexico City, management contracts are the medium used, although the policy contemplates these to be converted into concession arrangements in the future. A similar policy has been adopted in Trinidad and Tobago. A further example is the extensive use of BOT contracts in Mexico for waste treatment plants.

A number of countries have adopted policies allowing private investment in new facilities, particularly in electricity generation. Private investment is also increasingly common in small water supply and sanitation systems, especially in isolated resorts in the Caribbean and in new high income suburban developments almost everywhere.

**Regulation policies**

The opening of water-related public services to private participation has been restricted, in part, by the lack in most countries of a regulatory framework to govern the operation of monopoly activities. In most countries, with such activities in public hands, it was not thought necessary to regulate provision. This opinion has now changed and regulatory systems are being developed, although, outside Argentina and Chile, few have as yet much real experience in their operation.

In most countries, it is proposed to regulate each industry separately, but in water supply and sanitation services in Argentina, regulation is basically company by company, as the responsibility for regulation lies with each province. In some smaller countries, as exemplified by Costa Rica and Jamaica, one regulator is proposed for
all public services. The development of regulatory systems is not easy and it has been proved necessary to develop systems which can readily incorporate the lessons of experience, as it is not possible to foresee all problems from the beginning. The major obstacle is the lack of experience and a relatively steep learning curve for the regulators once in operation.

The decentralization of operating responsibilities and the establishment of a well-structured regulatory system can be a powerful tool for improving the functioning of public services even within the public sector. Without any transfer of ownership or management responsibility to the private sector, a marked improvement in the efficiency of the management of water supply and sanitation services has been achieved in Chile over the six years since such a system was established. A key to the success of regulation in Chile has been the design and application of an effective tariff system.

Undeniably, regulating private monopolies is very challenging for the public administrations of the region and the regulatory policy must make the most of competition, anticipate the need to renegotiate with providers to adjust the regulatory framework and rules to the lessons of experience and to place emphasis on tariff design and not to underestimate the problems that this can involve. The importance is illustrated by the experience in Buenos Aires where despite the general success of the transfer of the water supply and sanitation system to private management under concession, problems remain with the design of an efficient tariff system.

It is clear, however, that the transfer of management responsibility for public services to the private sector cannot succeed without an adequate and functioning regulatory framework. The attempt to privatize water supply and sanitation services in Caracas failed largely because of the absence of a sufficiently well defined regulatory structure.

**Irrigation**

The evolution of policy towards private participation in irrigation deserves separate treatment given its distinct characteristics. In irrigation, the policy trends in the region are strikingly uniform. Since 1990, nearly all countries have adopted policies to transfer the responsibility for the management, operation and maintenance of irrigation infrastructure to the farmers.

This has involved considerable changes in related policy areas, for example, the major modifications to the ejido land holding system in Mexico. It has also lead
to the development of new markets for the provision of the products and services required to manage and operate irrigation systems. Services once provided from within government departments responsible for irrigation management are now open to the private sector. In Peru, it has led to proposals for complete reform of the water law.

As yet, however, there has been no sale or transfer of irrigation systems as units to private investors in any country. The infrastructure has either been transferred totally to the farmers or the secondary works have been transferred leaving the major control works in the public sector. Only in Chile do the users control the total water management process from the distribution of river flows to the delivery of water to the farm or other ultimate user. This requires that the users also invest in major control structures, but even in Chile many large structures are still being built by the public sector.

**Investment opportunities**

The opening of the water-related public services to private participation has created a large number of different investment opportunities. The most interesting of these may well be the possibility of taking responsibility for the service either through direct purchase or through a concession arrangement, but the opportunities are not limited to these possibilities. Management contracts can also provide significant opportunities particularly for companies specializing in the provision of specific services with the larger number of companies participating in the market. The break up of former central government monopolies and the transfer to provincial, regional or municipal operators within the public sector has created in many countries a large new market for the private providers of services to the electricity and water supply and sanitation industries.

Investment in infrastructure in Latin America and the Caribbean according to World Bank data dropped markedly in the 1980s from the 1970s especially in drinking water supply and sanitation. It also has been lower than in the Asia and Pacific region. It can be expected that investment demands will grow substantially, as the economies of the region finally recover from the recession of the 1980s and the impact of the 1992 Mexico devaluation.

So far, most of the interest shown by the private sector has been concentrated on the possibilities provided by the sale or concession of electricity generation and distribution. These investment opportunities have attracted many companies from outside Latin America and the Caribbean. Perhaps one of the most interesting phenomenon has been, however, the expansion of Chilean electricity companies
outside Chile. They have become major operators of both distribution and
generation companies in Argentina and Peru, and are now beginning to enter the
Brazilian and Colombian markets. As in all cases, these companies tend to operate
in consortium with other investors both foreign and local. Two of these companies
have also ventured into the operation of water supply and sanitation services in
Chile and have announced an interest in investing in other countries.

In water supply and sanitation the offerings for private participation of whole
systems has been limited to Argentina and to Mexico City. These contracts have
generally been taken by consortia of local and foreign companies, mainly led by large
European water supply and sanitation operators. In general, it can be expected that
given the size of the companies that are likely to be opened for private participation
that the consortia approach will continue to dominate. Should, however, smaller
municipal-run systems be opened to private operators a large market could be
created for smaller investors in a number of countries.

* * *

This is a country by country report summarizing for each country both the current
policies towards private participation in water-related public services and recent
experience in the process of privatization. It does not attempt to provide information
on the progress of the privatization of specific assets as this is a too rapidly changing
phenomenon to report on through this medium. It is offered as a rapid means of
obtaining the essence of what is happening in this area in Latin America and the
Caribbean and as a reference for all those interested in increasing the effectiveness
of private participation in water-related public services so that these services can be
provided efficiently to the whole population of the region.
Explanatory note

Any reader wishing to supplement this report with new data and/or encountering errors please inform the Division of Environment and Development, Economic Commission for Latin America and the Caribbean (ECLAC).

The material, on which this report is based, has been taken from a large variety of sources, some not widely available. An attempt has been made to prepare this report from the best available sources, but access to detailed information on the privatization programmes and regulatory framework for water-based public utilities has not always been available. Due to the pace of change in institutional structure in many countries, some information is no doubt already out of date.

Statistical data used in sector boxes have been complied by ECLAC from national, international, and professional literature, including publications of the Pan American Health Organization (PAHO), the United Nations Department for Economic and Social Information and Policy Analysis, the United States Central Intelligence Agency (CIA), and the Latin American Energy Organization (OLADE). Data are based on differing sources, dates and definitions, and comparisons can therefore be misleading.
1. Belize

The Government of Belize pursues an active privatization policy, which has resulted in the privatization of several state-owned enterprises, including the partial privatization of the electricity company in 1993. The Electricity Act of 1992 restructured the electricity industry, introducing private participation and competitiveness in the sector.

(a) Drinking water supply and sanitation

The participation of the private sector in the provision of drinking water supply and sanitation services is small and no information is available on the plans to expand it. A few private subdivision and housing development agencies pay for the installation of facilities whose cost is in turn passed on to buyers. The government’s strategy for the drinking water supply and sanitation sector includes: (i) institutional strengthening through the enactment of appropriate legislation; (ii) decentralization of service provision in rural areas; and (iii) sustainability through the application of an appropriate cost recovery system.

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<th>Estimated coverage</th>
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<tr>
<td>83 per cent of the population has access to a safe and adequate supply of drinking water, 100 per cent in urban areas and 69 per cent in rural areas. 39 per cent of the population has adequate sanitation facilities, 59 per cent in urban areas and 22 per cent in rural areas. In Belize City, unaccounted-for-water is estimated in the 45 to 67 per cent range.</td>
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(b) Electricity

The Belize power sector was reformed under the “Electricity Act” of 1992, which: (i) transferred the assets and liabilities of the former Belize Electricity Board (BEB), a government agency, to a successor company, Belize Electricity Limited (BEL), a private company incorporated under the Companies Act of Belize on October 5, 1992 (the transfer was effected on January 7, 1993); (ii) provides for the regulation of electricity services; (iii) establishes a mechanism for the granting of licenses authorizing any person or company to generate, transmit or distribute electricity in a specified “authorized area”; and (iv) defines the duties and responsibilities of license holders.

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<th>Sector statistics</th>
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<td>Net installed capacity in 1994 (MW):</td>
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<td>• thermal .................... 23</td>
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<td>• TOTAL ....................... 23</td>
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<td>Percentage of population with residential connections in 1989 ....... n/a</td>
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The Minister of Energy and Communications, assisted by the Director General of Electricity Supply, is responsible for all matters concerning the power sector, including regulation.

BEL is the only commercial generator, transmitter and distributor of electricity in the country, although some businesses have their own generation facilities. There is some privately owned generation capacity, including two small scale - 150 KW and 60 KW - hydro plants. BEL holds a 15 year licence to generate, transmit and distribute electricity in all the areas where BEB operated. The government partially privatized BEL in March 1993 retaining 51 per cent of its shares, while the private sector and the state-owned Social Security Board hold the remainder. The government has indicated that it will deal with the shares as an investor and not as a manager. It is currently considering options to transfer the remaining shares to the private sector. This is expected to occur in 1997 or 1998.

The Belize Electricity Company Limited (BECOL), 95 per cent owned by the two United States companies - Dominion Energy of Richmond, Virginia and International Energy of Denver, Colorado (the Belize Social Security Board owns the remaining 5 per cent of the shares), is developing the Mollejon hydroelectric project under a BOT arrangement. BECOL will sell the electricity to BEL under a power purchasing agreement. After the expiration of the term of the agreement, the ownership of the hydroelectric plant will be transferred to the government or such parties as it may designate. The 25 MW plant is a run-of-river plant at Mollejon on the Macal river.
2. Costa Rica

The Government of Costa Rica initiated limited public sector reforms in the eighties. It is considering decentralizing public services and eliminating a number of state monopolies. The Instituto Costarricense de Acueductos y Alcantarillados (AyA), the national water utility, now contracts some operations from private suppliers. The government - at least for the time being - has decided against the outright sale of the Instituto Costarricense de Electricidad (ICE), the national electricity utility, but the power sector is being opened to private participation.

The government's privatization administration is the Ministerio de Planificación Nacional y Política Económica (MIDEPLAN).

The Servicio Nacional de Electricidad (SNE) is responsible for the regulation of the provision of public services. It sets tariffs and quality standards, in the electric power, irrigation, and drinking water supply and sewerage sectors. It is also the administrator of the national waters of Costa Rica, responsible for enforcing the water law. The SNE grants rights for the use of water resources. It also grants concessions for power plants. Under legislation before the National Assembly, the SNE would become the Autoridad Reguladora de Servicios Públicos (ARESEP), which would be assigned regulatory, concession, rate-making, oversight and enforcement functions for all public services.

(a) Drinking water supply and sanitation

AyA, an autonomous public agency has the responsibility to decide all matters related to drinking water supply and sewerage, including policy formulation, standard setting, planning, financing and development.

The municipal authorities directly administer drinking water supply systems in some 40 towns and about 1 500 rural communities. The Instituto de Fomento y Asesoría Municipal (IFAM) provides financial and technical assistance and cooperates in projects which interest one or more municipalities.

Estimated coverage

In Costa Rica, all population, both urban and rural, has access to drinking water supply, although not all water is chlorinated. Virtually all urban population has access to sanitation, about 30 per cent with sewerage, including 70 per cent in the capital, San José. There are only 8 wastewater treatment plants, treating an estimated 10 per cent of wastewater. The expansion of sewerage and wastewater treatment systems is being considered in a number of priority areas, including the San José metropolitan area.
AyA has been recently reorganized. Many levels of management have been eliminated, and areas of operation that might be taken over by the private sector have been identified. This reorganization represents a first stage in preparation for the adoption of a new institutional structure for the management and operation of drinking water supply and sewerage services. As the sphere of responsibility of AyA is more clearly defined, it will be possible to identify the policy and regulatory functions that should remain under state control, and the functions which can be transferred to the private sector. Given the cost of waste treatment works, in particular, alternative forms of financing are being considered, including concessions, the formation of mixed companies through capitalization, etc.

As part of AyA reorganization, some of its former employees have become private contractors for the provision of services previously performed by AyA itself. This approach relies on Law Nº 7407 "Ley de Asociaciones Anónimas Laborales" of 12 May 1994 under which employees may form a Sociedad Anónima Laboral (SAL) to provide services under a contract.

The creation of a separate regulation agency, the Instituto Rector de Agua y Saneamiento y Regulación de Empresas Operadoras, has been proposed. This agency would set standards and monitor, make policy and draw up guidelines for the provision of public services of drinking water supply and sanitation. Under this proposal, the service operators could be public service companies (100 per cent state participation), mixed-capital public service companies (at least 50 per cent state participation), private public service companies (majority private ownership), companies or institutions created by special laws, cooperatives or associations. Other proposed reforms, specifically reforms to Law Nº 7404 "Ley General de Concesión de Obra Pública" of 12 May 1994, would allow the granting of concessions in the sector.

(b) Electricity

The Instituto Costarricense de Electricidad (ICE), an autonomous state owned vertically integrated power utility, carries out all activities related to the power sector, including research, generation, transmission and distribution.

ICE is also responsible for telecommunications services. It announced the separation of its energy

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<tr>
<td>- hydro .................. 790</td>
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<tr>
<td>- geothermal .................. 50</td>
</tr>
<tr>
<td>- TOTAL .................. 1 094</td>
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Percentage of population with residential connections in 1989 ....... 90
and telecommunications operations, measure expected to help streamline internal accounting, in particular regarding costs and cross-subsidies of services. This separation has not yet materialized, although the two services have been administratively divided within ICE.

Other utilities operating in the sector mainly provide distribution services purchasing power from ICE, although some of them have a little generating capacity. In the San José metropolitan area and some nearby towns, the Compañía Nacional de Fuerza y Luz, S.A. (CNFL), a former privately owned utility, created by Law N° 2 of 8 April 1941, acquired by ICE in 1968, operates as an ICE subsidiary. There are also two small municipally-owned generating and distribution utilities and four rural electrification cooperatives. Some large users buy power directly from ICE and CNFL. There is also considerable self-generation.

The Ministerio de Recursos Naturales, Energía y Minas (MIRENEM) is responsible for the overall energy policy formulation at the national level.

The government opened the power sector to private participation in the late eighties. In 1989, MIRENEM issued Decree N° 18947 "On Private Power Production in Costa Rica" which specified conditions for private participation in generation projects and for ICE's purchase of power from them. The Decree also set up the Comisión para la Generación Independiente de Electricidad (COGIP) to study and recommend further action to promote private participation in the public power system. Law N° 7200 - "Ley que Autoriza la Generación Eléctrica Autónoma o Paralela" - of 28 September 1990 provides a legal basis for most of the measures included in the Decree. Decree N° 20346-MIRENEM of 21 March 1991 contains regulations of the Law.

Law N° 7200 allows private investors and rural electrification cooperatives to build hydroelectric plants and plants using non-conventional energy sources of up to 20 MW of capacity under concessions granted by the SNE for up to fifteen years, but limits total private installed capacity to 15 per cent of total installed capacity. Domestic investors must provide at least 65 per cent of the capital. The Law also authorizes ICE to buy, in whole or in part, the output of these projects. The approval of a project requires that the developer obtains the necessary concession from the SNE and the determination by ICE that the project is "eligible" to confirm its feasibility. In addition, the developer must prepare an environmental impact study, to be evaluated by MIRENEM, and negotiate a power purchasing agreement with ICE. Tariffs are regulated by the SNE on the basis of avoidable costs, among other factors.
The Law was modified by Decree N° 7508 - "Reformas de la Ley que Autoriza la Generación Eléctrica Autónoma o Paralela" - of 31 May 1995. The ceiling on foreign participation was raised to 65 per cent, the maximum term of concessions was increased to twenty years, and the percentage of electricity produced by private parties was increased to 30 per cent of the total national installed capacity (the additional 15 per cent may be contracted in blocks of up to 50 MW of maximum capacity). Contracts to supply electricity are awarded through a bidding process, with competition on prices and evaluation of the technical, economic and financial capacity.

These reforms have attracted considerable interest from private companies and at present several independent power producers supply electricity under power purchasing agreements with ICE. The producers have formed the Asociación Costarricense de Productores Privados de Energía (ACOPE). Contracts for the first 15 per cent of total installed capacity have already been granted, some already in operation and others at the construction stage. Most all projects are for hydroelectric generation. Contracts for the second 15 per cent are expected to be awarded in the near future.

A recently adopted executive decree authorizes ICE to contract services from private bidders under arrangements such as BOT, "build, lease and transfer" (BLT), leasing, and "shared capital, shared risk and shared profits".

Other legislation initiatives, currently under consideration in Congress, include the "Law for Modernization and Strengthening of ICE", aimed at transforming ICE into a publicly-held corporation, granting it greater autonomy, and restructuring it into two separate companies, a telecommunications company and an energy company, operating under the same board of directors; and the "General Law of Electricity", aimed at further opening the power sector to private participation and competition. The latter Law would also provides for setting up a fund, financed by charges for the use of ICE owned transmission lines by private companies, to subsidize projects providing service of social interest. ICE would also be allowed to buy more power - 40 per cent of total energy production - from private generators.

Under Law N° 5961 of 1976, ICE has responsibility to develop and explore geothermal resources and to operate related facilities. ICE is considering the installation of one, or possibly two, 27.5 MW geothermal power plants at the Miravalles Geothermal Project under a BOT arrangement. The operating contract would be for 15 years.
3. Cuba

The Government of Cuba has a programme of economic reforms aimed at introducing more market-oriented incentives and increasing foreign investment, particularly in tourism, mining and other foreign exchange generating and import substitution industries. Although these reforms have so far been modest in character and the provision of water-related public services remains completely public, the participation of external capital cannot be entirely ruled out, subject to the condition that this participation is developed in ways viable within the conditions of Cuba’s economy.

(a) Drinking water supply and sanitation

The Instituto Nacional de Recursos Hidráulicos (INRH) and the Ministerio de Salud Pública (MINSAP) share responsibility for the drinking water supply and sanitation. The former is responsible for directing, executing and monitoring state policy on all matters pertaining to water resources. It operates through the Dirección Nacional de Acueductos y Alcantarillados. MINSAP is responsible for drinking water quality. INRH and the Ministerio de Finanzas y Precios propose water tariffs.

The Dirección Nacional de Acueductos y Alcantarillados operates through provincial water supply and sewerage systems bureaus - Dirección Provincial de Acueductos y Alcantarillados - in each of the 14 provinces and municipal water supply and sewerage systems bureaus - Dirección Municipal de Acueducto y Alcantarillado - in each of the 169 municipalities of the country. The provision of services depends financially on the State budget; resources are channelled through the budget units of the provincial water supply and sewerage systems bureaus, which control the expenditures of their municipal establishments.

**Estimated coverage**

In Cuba, 64 per cent of the urban population has adequate drinking water supply service, including 51 per cent by means of household connections. In the rural areas, 73 per cent of the population has adequate service, including 27 per cent through house connections. Two-thirds of the urban population has adequate sanitation, 35 per cent through sewerage connections, while in the rural areas, 52 per cent of the population has adequate service, including 5 per cent through sewerage connections. About 22 per cent of urban wastewater receives treatment. Recently, however, as a result of the difficult economic situation of the country, service quality has progressively declined, including a reduction in service continuity and water potability indexes. Unaccounted-for-water is estimated to range between 30 to 40 per cent.
Steps are being taken to modernize service provision. As part of the reorganization of the sector, funding mechanisms will be improved and technical and administrative procedures will be implemented that will ensure greater efficiency in the utilization and operation of the drinking water supply and sanitation systems. The introduction of a new tariff system for residential users was announced starting in October 1994. The participation of external capital in the provision of drinking water supply and sanitation services has not been ruled out.

(b) Electricity

The Unión Eléctrica Nacional (UNE), under the Ministerio de la Industria Básica (MINIBAS), a state-owned vertically integrated monopoly, operates the electric system of Cuba. Some large electric power stations are operated, however, by industrial companies, especially in the sugar industry. Excess energy is transferred to UNE. There are also some small decentralized systems which are not connected to the grid.

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<tr>
<th>Sector statistics</th>
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<tbody>
<tr>
<td>Net installed capacity in 1994 (MW):</td>
</tr>
<tr>
<td>• thermal ...................... 3 939</td>
</tr>
<tr>
<td>• hydro ...................... 49</td>
</tr>
<tr>
<td>• TOTAL ...................... 3 988</td>
</tr>
<tr>
<td>Percentage of population with residential connections in 1989 ........ n/a</td>
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</table>

No information is available on the plans to encourage private participation in the power sector, although the recent passage of decree-law № 165 authorizing the establishment of free zones and industrial parks could open the way.
4. Dominica

The Government of Dominica privatized the provision of drinking water supply and sewerage services in the eighties and has partially privatized the power sector.

(a) Drinking water supply and sanitation

The government was forced, due to its large financial deficit, to take over the semi-autonomous Dominica Central Water Authority (CWA) in the eighties. Not being able to assume the responsibility for the administration of the drinking water supply and sanitation sector, the government requested assistance from Canada.

The Canadian International Development Programme (CIDA) provided assistance for the creation of a new private company, the Dominica Water and Sewerage Company Limited (DOWASCO). DOWASCO operates under the “Water and Sewerage Act” of 1989, which grants it an exclusive licence for the development and control of water supply and sewerage facilities in Dominica. Under the Act, DOWASCO is responsible for maintaining and developing the waterworks and providing a safe, adequate and reliable water supply, and for water conservation.

(b) Electricity

Under the 1976 “Electricity Supply Act”, the Dominica Electricity Services Limited (DOMLEC), previously a state-owned corporation incorporated under the Companies Ordinance in 1975, holds a sole and exclusive 25 year licence to generate, transmit, distribute and sell electricity on the island. Up to 1983, the Commonwealth Development Corporation (CDC) had a majority interest in the company. The government bought the shares from CDC and

<table>
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<th>Estimated coverage</th>
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<tr>
<td>In Dominica 100 per cent of the urban population has access to drinking water supply, half through house connections; and 78 per cent of the rural population, 18 per cent through house connections. Only a small part of Roseau and Canefield, the main towns, is sewered. The majority of the population uses septic tanks and latrines. Much of the sewage does not receive any treatment, but a sewerage project, which will include a treatment plant, is being considered for Roseau.</td>
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<th>Sector statistics</th>
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<tr>
<td>Net installed capacity in 1994 (MW):</td>
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<tr>
<td>• thermal .......................... 5</td>
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<tr>
<td>• hydro .............................. 3</td>
</tr>
<tr>
<td>• TOTAL .............................. 8</td>
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<tr>
<td>Percentage of population with residential connections in 1989 .......... n/a</td>
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</table>
DOMLEC became a state-owned corporation. The government decided to encourage private sector participation in the ownership of the company and has offered 60 per cent of its shares for public subscription.

The option of generating electricity from geothermal resources with private sector participation is being explored. A geothermal power project was announced in 1995. Caribbean Powers, a United States company, will invest almost US$ 10 million in the construction of a geothermal power plant at Soufrière which is expected to come on stream in 1998. It will hold a 51 per cent stake and the government the remaining 49 per cent.
5. Dominican Republic

The Government of the Dominican Republic is committed to economic reforms, including greater deregulation and the privatization of state-owned enterprises. Some privatizations have occurred in recent years. In the case of services, they primarily took the form of operation agreements with private companies. A bill to privatize the country's electricity industry is under discussion. There is a growing popular and political consensus that private participation in state-owned enterprises is needed to improve the provision of public services and to end the drain on the budget.

(a) Drinking water supply and sanitation

The Instituto Nacional de Aguas Potables y Alcantarillados (INAPA) administers drinking water supply and sewerage services in urban and rural areas except in the two largest cities, Santo Domingo and Santiago, served by separate state-owned utilities, the Corporación de Acueducto y Alcantarillado de Santo Domingo (CAASD) and the Corporación del Acueducto y Alcantarillado de Santiago (CORAASAN). INAPA has the overall responsibility for the sector.

<table>
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<th>Estimated coverage</th>
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<tr>
<td>76 per cent of the population has access to drinking water supply, 92 per cent of the urban population, but only 58 of the rural population. The level of service quality is poor and unaccounted-for-water is estimated to exceed 50 per cent. Only 20 per cent of the population has sewerage connections, 40 per cent uses septic tanks and latrines, while the remaining 40 per cent does not have adequate means of sanitary excreta disposal.</td>
</tr>
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The Secretaría de Estado de Salud Pública y Asistencia Social (SESPAS) and the Oficina Coordinadora y Fiscalizadora de Obras del Estado build drinking water supply and sanitation programmes for small rural communities.

The government programme for the period 1996-2000 includes a strategy for the modernization of the drinking water supply and sanitation sector, which proposes to encourage private participation in the sector by: (i) ensuring that users pay for the services they receive; (ii) transforming sector agencies into public companies subject to the same legislation as privately-owned companies; (iii) opening the sector to private participation through service, management and leasing contracts in existing systems and by means of global and partial concessions for new systems; (iv) establishing an adequate regulatory framework to regulate natural monopolies and to protect the rights of consumers; and (v) ensuring that the companies operating in the sector earn a reasonable rate of return on their capital.
(b) Electricity

The Directorio de Desarrollo y Reglamentación de la Industria de la Energía Eléctrica (DDRIE) has responsibility to facilitate private sector participation in the electricity industry; it also has regulatory functions.

The state-owned vertically-integrated Corporación Dominicana de Electricidad (CDE), an autonomous public service enterprise created by Law № 4115 of 21 April 1955, is responsible for electricity generation, transmission and distribution in the public grid. There is substantial self-generation accounting for about a third of the total installed generating capacity. CDE can cover shortages by purchasing available power from private generating facilities. It has power supply agreements with seven companies which supply about 400 MW of power.

The "Ley de Incentivo al Desarrollo Eléctrico Nacional" approved in 1990 (Law № 14-90 of 1 February 1990), and now revoked, promoted private sector participation in the expansion of installed capacity by granting incentives to investors and allowing privately owned generation to serve consumers either through CDE or directly, thus removing CDE's monopoly status. New and existing private projects continue to operate without restrictions.

The government has announced its intention to promote private sector participation in CDE. A new general electric bill, currently under discussion, is designed to restructure the energy sector so as to provide a regulatory framework and a basis for private participation. CDE would be divided into separate generation, transmission and distribution companies, these could be transferred, totally or partially, to the private sector. Two regulatory agencies would be established, one responsible for defining energy policies and undertaking indicative sector planning, and another for tariff setting and enforcing energy legislation. There would also be a special tariff regime for the electricity industry.

(c) Irrigation and drainage

The government is implementing a programme to make irrigation districts financially self-sufficient and to transfer responsibility for operation and maintenance to the users.
Under the Proyecto Manejo de Agua a Nivel de Finca (PROMAF), initiated to facilitate the transfer process, a number of pilot projects for farmer management have been undertaken. They have been so successful that the government has decided to turn over all irrigation systems to farmer management.

The Inter-American Development Bank (IDB) has approved a US$ 52 million loan to support the transfer. The programme, to be executed by the Instituto Nacional de Recursos Hidráulicos (INDRHI), created in 1965 by Law No 6, also finances equipment and infrastructure modernization. It will target some 40 irrigation systems covering 80 000 hectares, and benefit 20 000 producers.
6. El Salvador

The Government of El Salvador is implementing a programme of economic reforms aimed at modernizing the public sector, fostering private sector led growth and improving the efficiency of social services. As part of the reform effort, it plans to encourage private participation in the provision of drinking water supply and sewerage services and the power sector. The power sector is further along the road to privatization than the drinking water supply and sewerage sector. To facilitate the process, the government is currently elaborating a new legal, regulatory and institutional framework.

(a) Drinking water supply and sanitation

The Administración Nacional de Acueductos y Alcantarillados (ANDA) is responsible for the provision of drinking water supply and sewerage services. It serves about 40 per cent of the population and is primarily concerned with service provision in urban areas. ANDA operates and maintains drinking water supply systems in 177 municipalities of the 262 existing in the country and 80 sewerage systems. Of the remaining 85 municipalities, 72 administer and operate their own systems.

The Ministerio de Salud Pública y Asistencia Social plays an important role in the programmes for rural areas. The Fondo de Inversión Social (FIS) and the Secretaría de Reconstrucción Nacional provide financial assistance to small projects in rural and marginal urban areas, and to areas affected by the civil war.

The government, by executive decree № 62 of 9 August 1995, created the Comisión Coordinadora para la Reforma Sectorial de los Recursos Hídricos. The reforms aim at the separation of the institutional roles in the sector and provide for the creation of: (i) specialized agencies in charge of sector management, regulation, financing and technical assistance; and (ii) a group of operating companies. Service provision would be decentralized.

Private sector participation is still incipient. It is limited to the installation of infrastructure in new urban developments. The government wants to encourage
private participation in ANDA and tariffs have been adjusted to raise funds for the modernization programme. ANDA subcontracts some operations (e.g. new installations, detection of leaks and repairs, etc.) to cooperatives of former employees and small private companies.

(b) Electricity

The Comisión Ejecutiva Hidroeléctrica del Río Lempa (CEL), a government owned vertically integrated public utility created by Decreto Legislativo Nº 137 of 27 September 1948, is responsible for electricity generation and transmission at the national level, as well as distribution in rural areas and some towns. The Ministerio de Economía sets tariffs.

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<td><strong>Net installed capacity in 1994 (MW):</strong></td>
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<td>- thermal ..................</td>
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<td>- hydro .....................</td>
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<td>- geothermal .................</td>
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<tr>
<td>- TOTAL ......................</td>
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<tr>
<td><strong>Percentage of population with residential connections in 1989</strong></td>
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Electricity distribution and commercialization in the capital city and other towns until a few years ago had been in the hands of the private sector through concessions held by six distribution companies. When the 50 year concessions of four of them expired in 1986, they were acquired by the government and are now administered by CEL.

The government intends to liberalize and at least partly privatize the power sector, to foster competition in electricity generation and to reduce political intervention in the business functions of the publicly owned power companies. A bill is under discussion to separate planning, regulatory and operating functions in the sector; to establish open access for generators to the national grid and distribution networks subject to the payment of respective charges; and to define procedures for tariff regulation and for the participation of independent power producers in bidding to supply electricity.

The bill provides for the establishment of the Consejo Nacional de Energía (CNE), responsible for energy sector policy, strategies and standards, and indicative expansion planning; and the Comisión de Regulación de Electricidad e Hidrocarburos (CREH), an independent entity with the responsibility to enforce sectoral legislation and regulate rates for generation, transmission and distribution. CREH would deregulate some prices - sales from generators to "unregulated" consumers, and from generators to distribution companies, under long-term contracts - once an acceptable level of competitiveness is reached in generation.
CREH would also authorize the operation of geothermal and hydroelectric power plants. In addition, a Unidad de Transacciones (UT) would be set up with the responsibility to manage load dispatch and to undertake operation medium- and short-term planning.

It is currently envisaged that CEL would be restructured into separate generation and transmission companies; and the distribution and generation segments would be horizontally separated. CEL would own and operate the transmission system. The four distribution companies administered by CEL would be privatized. Several different scenarios have been presented for the future of its generation assets. CEL will have to compete with other generators. If the government decides to sell its assets, the thermoelectric generation plants would probably be sold individually, while its hydroelectric power assets would be sold as a unit.

The government has decided that while power sector reforms are in progress, the expansion of installed capacity should be covered mostly by independent power producers. In May 1994, CEL signed the first contract with an independent power producer and the plant came on stream in 1995.

(c) Irrigation and drainage

The objective of the agricultural policy of the government in the field of irrigation is to improve the operation and maintenance efficiency of existing irrigation districts through transfer to users and recovery of all operations and maintenance costs. User associations, with their own legal and institutional status, would be set up to plan the operation, maintenance and conservation of irrigation works and to collect all applicable tariffs.
7. Guatemala

The provision of public services, in Guatemala, still remains largely in the hands of the public sector. The Government of Guatemala intends to increase the role of the private sector, however, and there are plans for the privatization of the power sector.

(a) Drinking water supply and sanitation

The municipalities are directly responsible for the administration, operation and maintenance of drinking water supply and sewerage services. The Municipality of Ciudad de Guatemala operates the largest municipal company, the Empresa Municipal de Agua de la Ciudad de Guatemala (EMPAGUA). The Unidad Ejecutora del Acueducto Nacional Xayá-Pixcayá of the Ministerio de Comunicaciones, Transportes y Obras Públicas (MCTOP) administers, operates and maintains the Acueducto Nacional Xayá-Pixcayá which supplies water - about 1 m³/sec - to the capital.

Estimated coverage

It is estimated that 70 per cent of the population has access to drinking water, 55 per cent in rural areas, 90 per cent in the metropolitan area and 100 per cent in provincial cities. 70 per cent of the population has adequate sanitation, 61 per cent in rural areas, 70 per cent in the metropolitan area and 100 per cent in provincial cities. Water losses in the Ciudad de Guatemala system are estimated to exceed 40 per cent. There are few wastewater treatment plants and in general, these are not well run.

The Comité Permanente de Coordinación de Agua y Saneamiento (COPECAS), created in October 1985 by Acuerdo Gubernativo Nº 1036-85, coordinates activities of the different public agencies operating in the sector. The Instituto de Fomento Municipal (INFOM), created by Decree Nº 1132 of February 1957, provides assistance to the municipalities.

Rural drinking water supply and sanitation are the responsibility of two units of the Ministerio de Salud Pública y Asistencia Social (MSPAS) - the División de Saneamiento del Medio (DSM) and the Unidad Ejecutora del Programa de Acueductos Rurales (UNEVAR). At the local level, the comités administradores de agua potable (CAAP) administer, operate and maintain the systems.

There are several small private companies; some of them distribute water by tanker trucks. The largest is the Compañía Nacional de Agua de Mariscal which provides services to an estimated 14 per cent of the population of Ciudad de Guatemala.
It is expected that the sector will be reformed. The government is considering promoting private participation, through concessions or other means. There are, as well, some initiatives at the municipal level in Ciudad de Guatemala. The government also intends to improve cost recovery. The lack of an adequate regulatory framework and of an independent regulatory authority is hampering these efforts.

(b) Electricity

The Instituto Nacional de Electrificación (INDE), a state-owned national utility created through Decree Law Nº 1287 of 27 May 1959, is in charge of power generation and transmission at the national level, and distribution outside Ciudad de Guatemala.

The Empresa Eléctrica de Guatemala S.A. (EEGSA), created in 1894, formerly a subsidiary of Boise Cascade, but since 1972 with majority state ownership, distributes electricity in Ciudad de Guatemala and surrounding areas. EEGSA is also a generation company; it accounts for all new capacity installed since 1986 and has also signed contracts with independent power producers and co-generators.

There are also 12 small municipally owned distribution companies. These mostly buy from INDE, but have some generating capacity, including small hydroelectric plants.

The government began to encourage private participation in the electricity sector in the mid-eighties through Decree Law Nº 20-86 “Ley de Promoción de las Fuentes Nuevas y Renovables de Energía” which encouraged private participation in generation based on new and renewable resources. Additional initiatives (Acuerdo Gubernativo Nº 815-93 of 1993) offered new opportunities to private generation which resulted in several contracts. Finally, a law adopted in 1995, opens INDE’s transmission network to other generation and distribution companies, and allows it to buy and sell electricity under a contract with private parties. The creation of a regulatory framework is under discussion.
Private participation is growing in the sector and both INDE and EEGSA have negotiated power purchase agreements with independent power producers and intend to negotiate others.

INDE also intends to attract private sector investments for the development of the large geothermal potential of the country. It has recently granted a 25 year concession to Orzunil, S.A. for the 24 MW geothermal generation plant scheduled for completion in 1997.

It is expected that INDE will sell part of its assets to private parties, including several hydroelectric facilities as well as a substantial amount of its shares in EEGSA. Legislation is reportedly planned to privatize both generation and distribution.
8. Haiti

The Government of Haiti has announced plans for the privatization of several state-owned enterprises, including the Electricité d’Haïti (EdH), the national electric utility. The drinking water supply and sanitation sector will be restructured. The reforms seek to establish appropriate mechanisms for and to encourage private sector participation.

The government intends to allocate part of privatization proceeds to improving environmental infrastructure and social services, particularly in rural areas, which could include drinking water supply and sewerage facilities.

The IDB has recently approved a loan to support municipal reform, which will centre on achieving better public services through cost recovery, accountability, and efficiency at the municipal level.

(a) Drinking water supply and sanitation

The provision of drinking water supply is a primary responsibility of the municipalities, but in practice, the public works ministry, the Ministère des Travaux Publics, Transports et Communications, is the main operator through two public agencies: the Centrale Autonome Métropolitaine d’Eau Potable (CAMEP), created in May 1964, responsible for services in Port-au-Prince, and the Service National d’Eau Potable (SNEP), created in August 1977, responsible for the remainder of the country. The Ministry of Health is responsible for localities of fewer than 2,000 inhabitants, but most works have been constructed by non-governmental organizations. Local committees operate the systems.

The proposed reforms seek to establish a new legal and institutional framework for the sector, including undertaking the separation of provision from the regulatory function and opening up possibilities for private sector participation in operation and management.
Two new regulatory agencies are proposed, the National Water Council (CNE), responsible for water resources management, and the Drinking Water and Sanitation Council (CEPA), responsible for formulating policy for drinking water supply and sanitation, including setting technical standards in the sector, defining the criteria to be considered in tariff setting, developing sectoral investment policy, and supervising the activities of CAMEP and SNEP.

The proposals include the privatization of CAMEP, beginning with an institutional strengthening to improve productivity. Tariffs will be readjusted to better reflect actual costs. Technical assistance will be contracted through international competitive bidding.

At a second stage, CAMEP’s distribution business and commercial activities are to be transferred to the private sector under a 10-year renewable leasing contract. CAMEP will continue to be responsible for production and would own all facilities. The lessee will assume all responsibilities for service provision, including operation and maintenance, and staffing.

In other cities (more than 10,000 inhabitants), currently under SNEP’s responsibility, the reforms provide for transferring the ownership of the systems to the municipalities. Private companies, to be contracted through international competitive bidding, are to assume responsibility for system administration and maintenance. Local SNEP offices will be in charge of information, education and sanitary campaigns, and will supervise, on behalf of the municipalities, the operation of private companies to be selected through international competitive bidding.

In the smaller localities (less than 10,000 inhabitants), the local drinking water supply and sanitation committees (CAEPA) will be responsible for constructing, maintaining and managing the systems. They will receive technical assistance from the private companies responsible for service provision in the nearest city and from the local SNEP office.

(b) Electricity

Electricité de d’Haïti (EdH) is responsible for all electric power generation, transmission and distribution. When formed in 1971, it took over both the state-owned Peligre hydroelectric generating station and the privately owned Compagnie d’Eclairage Electrique. Large consumers generally have their own generating equipment.
The proposed privatization programme includes EdH. It is currently envisaged that the government will remain the majority shareholder, but will transfer management control to private investors with a substantial minority share. The government has also reportedly expressed interest in privatization by capitalization.

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<th>Sector statistics</th>
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<tr>
<td>Net installed capacity in 1994 (MW):</td>
</tr>
<tr>
<td>• thermal ......................... 83</td>
</tr>
<tr>
<td>• hydro ......................... 70</td>
</tr>
<tr>
<td>• TOTAL ......................... 153</td>
</tr>
<tr>
<td>Percentage of population with residential connections in 1989 ........ 10</td>
</tr>
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</table>
9. Honduras

Privatization began in Honduras in the second half of the eighties. Many companies have been successfully privatized and the country is entering a second phase with the privatization of public utilities. The Government of Honduras is considering numerous initiatives for private participation in the provision of infrastructure services and interest in these initiatives is growing. The new electricity law opened the way for private participation in generation and distribution and there are some initiatives in the drinking water supply and sewerage sector.

Decree N° 161-85 regulates the privatization process; it establishes the procedures to be followed for legal and financial restructuring, technical evaluations, transfer polices, etc. Decrees N° 03-93 and 04-93 established that the regulations contained in Decree N° 161-85 apply to all public agencies.

The office of decentralized institutions of the Ministerio de Hacienda y Crédito Público coordinates, directs and monitors the privatization process. The Consulting Commission for Privatization, created by Decrees N° 03-93 and 04-93, advises the government on privatization-related matters.

In September, 1996, the government and the private sector launched the “Plan de Transformación Nacional". The plan aims at attracting investments of US$ 18 billion over a 25 year period to finance a number of projects, including electricity generation, infrastructure and agriculture, among others. Planned developments include the construction of two hydroelectric power stations on the Patauca river.

The Comisión Nacional Supervisora de los Servicios Públicos (CNSSP), created by Decree N° 85-91 of 10 June 1991 (this decree was modified by Decree N° 137-91 of 11 November 1991; Acuerdo N° 002441 of 19 December 1991 contains CNSSP regulations), is in charge of the regulation of public services, including electricity and drinking water supply and sewerage. CNSSP is charged with overseeing compliance with operational and financial efficiency norms; approving and controlling tariffs for public services; and ensuring quality and efficiency of service provision.

(a) Drinking water supply and sanitation

Drinking water supply and sanitation is formally responsibility of the municipalities. The Servicio Autónomo Nacional de Acueductos y Alcantarillados (SANAA), however, plans, designs, builds, operates and maintains drinking water supply and
sewerage systems in Tegucigalpa, and elsewhere. In the rural areas, the administration of the systems constructed by SANAA is delegated to the users' boards (Junta Administradoras). There is also some small scale provision by private providers and communities in rural and low-income urban areas.

The Fondo Hondureño de Inversión Social (FHIS) finances social and economic infrastructure and other projects, including the installation of drinking water supply and sanitation systems, water tanks, and latrines. The final owner of the project, SANAA or the municipality, provides for operation and maintenance.

The private sector has had only a small role in the provision of drinking water supply and sanitation services, limited mainly to design and construction contracts. Some municipalities contract with the private sector for some tasks.

Reforms are proposed which would both open the sector to private participation and institute a tariff system based on cost recovery. The systems currently operated by SANAA would be transferred to the municipalities and SANAA restructured towards the provision of technical assistance. The private sector would be able to participate in service provision through service contracts, management contracts and concessions. The first areas where private sector participation is expected to materialize are in Tegucigalpa, and especially the city of San Pedro Sula where an interest has been expressed in forming a mixed-capital corporation for drinking water supply and sanitation services. Concessions and other forms of private sector participation in the provision of drinking water supply and sanitation services are being discussed as is the possibility of a BOT project for an aqueduct in the Sula Valley.

The Comisión Nacional de Agua Potable y Alcantarillado (CONAPA), under the Secretaría de Salud Pública, will be responsible for regulation and supervision. It will enjoy a high degree of operational and financial autonomy. The reforms also
provide for the creation of a specialized financial agency which will grant credits and channel non-reimbursable resources to the sector.

(b) Electricity

The Empresa Nacional de Energía Eléctrica (ENEE), an autonomous vertically integrated state agency created by Decreto Ley Nº 48 of 20 February 1957, is responsible for electricity generation, transmission and distribution. Under the “Contrato Plan” (Decreto Ejecutivo Nº 26-90), ENEE committed itself to maintain its investment programme within financial possibilities and not to undertake any investments which it cannot finance from revenues. The Comisión Nacional de Energía (CNE) oversees the implementation of the contact. CNE coordinates plans, policies and strategies in the energy sector, ensures compliance with them, and has advisory functions.

The Roatán Electric Company (RECO), a small private company with an installed capacity of about 6.6 MW, serves the island of Roatán. Some large companies generate their own power.

The government is reforming the electricity sector, to improve the performance of ENEE and to attract private capital. The “Ley Marco” for the electricity subsector (Decree Nº 158-94 of November 1994) provides the basis for regulating electricity generation, transmission and distribution, and for restructuring the sector. The law allows private sector participation in distribution and generation, sets the conditions for competition in the provision of services, and lays out the main regulatory framework for the sector. Transmission remains state-owned; generation is opened to public, private and mixed-capital companies; and distribution to private and municipally-owned companies, and cooperatives.

The law creates the Gabinete Energético, headed by the President of the Republic, with responsibilities for policy formulation and for the overall strategy for the sector, and the Comisión Nacional de Energía Eléctrica (CNEE), an expert committee under the Secretaría de Comunicaciones, Obras Públicas y Transportes, as a technical advisory body for the application of the law. The regulation of the sector remains with CNSSP. The whole sector will be initially regulated, but some

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<tr>
<td>Net installed capacity in 1994 (MW):</td>
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<tr>
<td>• thermal ................. 175</td>
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<tr>
<td>• hydro ...................... 130</td>
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<tr>
<td>• TOTAL ...................... 305</td>
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<tr>
<td>Percentage of population with residential connections in 1989 ........ 34</td>
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segments may be deregulated in the future on the recommendation of CNEE and subject to the approval by the Gabinete Energético.

It is currently envisaged that ENEE will be restructured, both vertically, separating the generation and transmission segments from the distribution segment, and horizontally, separating its generation and distribution segments in several units. Some of its assets, beginning with distribution systems, will be privatized. Some power station could be leased to the private sector. It will also transfer to the private sector ancillary jobs such as meter reading, billing and collection. A number of foreign companies have reportedly expressed an interest in investing in ENEE.

Some independent power producers are operating under BOO and "rehabilitate, operate and maintain" (ROM) arrangements; all projects are thermoelectric. The first private generator and supplier of electricity to the national grid was the Electricidad de Cortés, Sociedad Anónima (ELCOSA), a joint venture between local industries and foreign investors. The IDB has recently approved a loan - its first financing directly to a private sector firm without government guarantee - to enable ELCOSA to increase the capacity of its plant.

Another important development has been the proposal made by Osslow Associates Ltd. of Taiwan, tentatively accepted by the government, to develop a large hydroelectric project on a BOT basis. If the project is implemented, it would have a considerable excess capacity for export to other Central American countries.
10. Jamaica

The Government of Jamaica is carrying out a programme of economic reforms focusing on reducing the size and scope of the public sector in business activities while creating a competitive and facilitating environment to stimulate private investment in all sectors of the economy. Private sector participation in drinking water supply and sewerage is expected and reforms are already under way in the electric sector.

(a) Drinking water supply and sanitation

The National Water Commission (NWC), a parastatal agency with corporate status established in 1980 as a result of the merger of the Kingston and St. Andrew Water Commission and the National Water Authority under the National Water Authority (Change of Name and Amendment) Act, has island-wide responsibility for planning, construction, operation and maintenance of drinking water supply and sewerage works. NWC operates the drinking water supply and sewerage facilities for Kingston Metropolitan area and other cities.

There is a relatively high level of service coverage: 92 per cent of the urban population has access to drinking water supply, 59 per cent through house connections; but only 48 per cent of the rural population. Supply, however, is irregular in several areas and is characterized by high water losses, up to 70 per cent. 89 per cent of the urban population and 59 per cent of the rural population have sanitation. Many sanitary facilities are poorly maintained. Of the 107 sewage treatment plants, only 60 are functioning. Several projects are being implemented to improve drinking water supply and sanitation services.

The Parish Councils operate and maintain drinking water supply and sanitation systems in rural areas. Some areas are served by independent entities. The publically owned Carib Engineering Corporation Limited constructs major water supply projects.

The Ministry of Public Utilities and Transport (MPUT) sets the rates for water and sewerage. The governments's policy is that all utilities should be regulated within the framework of an across-industry agency, and with industry-specific legislation granting the necessary regulatory powers to the regulator and providing for the granting of licences for specific services. In keeping with this policy, the regulatory authority will be transferred to the Office of Utility Regulation (OUR), established during 1995 under the “Office of Utilities Regulation Act”, 1995. OUR is expected to become the country's main regulatory agency for utility services,
including energy and drinking water supply. It will regulate electricity rates and the rates for water and sewerage.

The government has decided to divest certain functions of NWC and NWC itself is expected to be privatized, although not in the short term. Potential exists to involve the private sector in the drinking water supply and sewerage sector through service contracting, including the operation of wastewater treatment plants. Proposals for the construction of wastewater treatment and effluent recycling plants for the Kingston metropolitan area on a BOT basis are being evaluated.

(b) Electricity

The Jamaica Public Service Company Limited (JPSCo) has sole responsibility for the generation, transmission and distribution of electricity for public supply. Since August 1978, it enjoys a 39 year "All Island Electric License", which gives it a monopoly. JPSCo became a state-owned company in 1971 when the government acquired Stone & Webster Corporation's controlling interest. The government continued acquiring JPSCo shares until it held 99 per cent in 1975.

There are a number of private generators of electricity who produce power for their own consumption and some of them are connected to the public grid and supply it with a limited amount of electricity. JPSCo may purchase power from self-generators.

The Electricity Lighting Act of 27 May 1890, as amended, constitutes the core of existing power sector legislation. Until 1975, the Public Utilities Commission was responsible for regulation. Since 1975, these functions have been carried out by the MPU. The government intends to establish an appropriate regulatory framework for the power sector and has already established OUR, which is expected to become the country's main regulatory agency for utility services, including the power sector.

The government has announced its intention to privatize JPSCo, and to deregulate and liberalize the sector. The National Investment Bank of Jamaica administers the privatization programme.
Pending the privatization of JPSCo, the government has decided to encourage private sector participation by allowing independent power producers to operate in the sector. They are expected to provide all new generating capacity. JPSCo has entered into a number of arrangements with independent power producers to supply electricity to the grid.

During 1993, JPSCo was restructured into two major divisions one for generation, and the other for transmission, distribution and customer service. The restructuring was intended to facilitate the introduction of independent power producers.

JPSCo is currently expected to be privatized as a single unit, particularly since some of the bidders have expressed an interest in buying it as a whole. Electricity generation will remain competitive. The government is considering bids for the purchase of JPSCo submitted by two United States companies, Southern Electric of Atlanta, Georgia and Houston Industries Energy of Texas, which joined forces with local companies. It is expected to sell approximately 56 per cent of JPSCo.
11. Mexico

The Government of Mexico has already privatized most state-owned companies. It is focusing on the modernization and reorganization of infrastructure services, including drinking water supply, sanitation, wastewater treatment, electric power, and irrigation and drainage. The power sector is being liberalized and deregulated; there is already private sector participation of some magnitude in the provision of drinking water supply and sanitation services, particularly wastewater treatment; and one of the most ambitious irrigation management transfer programmes in the world is being successfully implemented. Private sector participation in the provision of water-related public services is not through divestiture, but through concessions, BOT contracts, joint ventures, etc.

The privatization administration is the Unidad de Desincorporación de Entidades Paraestatales of the Secretaría de Hacienda y Crédito Público (SHCP). The Banco Nacional de Obras y Servicios Públicos (BANOBRA S) is the official infrastructure development bank. It also grants loans and has a guarantee programme.

In 1995, the government established the Fondo de Inversión en Infraestructura (FINFRA), an infrastructure investment fund, aimed at encouraging new private sector projects. BANOBRA S coordinates the programme, and a technical committee with representatives of SHCP, the Secretaría de Comunicaciones y Transportes (SCT), the Comisión Nacional del Agua (CNA) and the Secretaría de Contraloría y Desarrollo Administrativo (SECODAM), approves investments. FINFRA began operations with approximately US$ 250 million and will be financed by proceeds from privatization. It promotes private sector investment in infrastructure by providing both venture and subordinated capital. Among the projects FINFRA supports are environmental projects, water and waste-treatment plants, ports, and urban infrastructure. Together with BANOBRA S it will also provide other services, such as project promotion, guarantees, technical and financial assistance, etc.

(a) Drinking water supply and sanitation

The municipal governments are responsible for the provision of drinking water supply and sanitation services. In addition, there are state drinking water and sewerage commissions; some of these only provide technical assistance, while others - with the prior agreement of the municipalities concerned - are directly in charge of building, operating and administering drinking water supply and sewerage systems.
The CNA provides technical assistance for the realization of studies, the implementation of projects and the construction, operation and conservation of works.

Under the "Ley de Aguas Nacionales" of 1 December 1992 and its regulation ("Reglamento de la Ley de Aguas Nacionales" of 12 January 1994), the utilization of water resources for public water supply requires an assignment of water rights for urban water use - "asignación para uso público urbano" - from the CNA. The CNA grants rights to the municipalities and to the Government of the Federal District, or, in cases where the municipality cannot provide the services itself, to parastatal, para-municipal and other entities which administer the systems. Under the "Ley Federal de Derechos en Materia de Agua", those who use waters under federal jurisdiction for drinking water supply, are required to pay a charge for both extraction from a water body and for effluent disposal.

To improve the provision of drinking water supply and sanitation services, the CNA in collaboration with state and municipal governments, promotes the creation of administratively autonomous operating agencies or "organismos operadores", to administer systems. Operators have already been created in most cities and towns with more than 50,000 inhabitants. There are now 791 operating agencies proving drinking water supply and sanitation services in 22,444 localities. An Asociación Nacional de Organismos de Agua Potable y Alcantarillado (ANOAPA) has been created.

The government encourages private sector participation in the provision of services. The "Ley de Aguas Nacionales" declares that it is in the public interest to

<table>
<thead>
<tr>
<th>Urban and rural by region</th>
<th>Deficit of coverage (%)</th>
<th>Water supply</th>
<th>Sewerage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Centre</td>
<td>16</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td>Centre North</td>
<td>7</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td>Federal District</td>
<td>3</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Northeast</td>
<td>23</td>
<td>34</td>
<td></td>
</tr>
<tr>
<td>Northwest</td>
<td>11</td>
<td>33</td>
<td></td>
</tr>
<tr>
<td>Southeast</td>
<td>31</td>
<td>53</td>
<td></td>
</tr>
</tbody>
</table>

Estimated coverage

Approximately 84 per cent of the population has drinking water supply and about 67 per cent sewerage services, but there are large differences among the states and the level of sewage treatment is low. Service coverage suffers from important deficiencies in the rural areas where only some 53 per cent of the population has access to a drinking water supply and 21 per cent to sanitation. About 15.1 million people do not have drinking water services and some 30.2 million do not have sewerage. It has been proposed to raise coverage by drinking water supply, and sewerage and sanitation services to 88 per cent and 76 per cent, respectively, between 1995 and 2000. Wastewater treatment capacity has been expanded in recent years, and government plans call for the treatment of all urban domestic wastewater before the end of this decade.
promote and encourage private participation in the financing, construction and operation of federal water infrastructure, as well as in the provision of services. Accordingly, the law empowers the CNA to enter into contracts with the private sector to build and provide services and to grant concessions to operate, maintain, rehabilitate and expand the infrastructure.

In 1993, the Comisión de Agua del Distrito Federal (CADF), created under the Federal District Privatization Decree of July 1992, awarded 10-year contracts, which may be extended, to four private consortia to renovate and improve the drinking water supply and sewerage services in Mexico City. The Federal District has been divided into four similar-sized zones and contracts awarded to a separate contractor for each zone.

The contractors are responsible only for operations and commercial aspects of distribution, not for production. The District retains ownership of the infrastructure and control over policies. The contract is in three phases and entitles each contractor to negotiate separate contracts for each phase in its zone. The first phase involved preparing a census of customers, updating customer registers, installing meters, mapping the distribution system, determining the condition of the system, etc. The second phase includes developing and implementing a billing and collection system. It is currently envisaged that during the third phase, the contractors would buy bulk water from the District and assume total responsibility for distribution and commercial activities, but the decision to go forward with this phase, postpone or cancel it depends on CADF. The first two phases are structured as fee-based service contracts under which the contractors are compensated on a fee-for-service basis. In the third stage compensation would be linked to actual tariff collections. The process of incorporating private contractors has been slower than initially expected.

In other cities, contractual arrangements vary from BOT arrangements (usually for from ten to fifteen years), particularly for wastewater treatment, to a mix of concession-type, lease and service contracts. There is also interest in the concession of previously built plants. BOT and concession contracts have begun to materialize in the drinking water supply sector to supply bulk water to cities and industrial parks. Other business opportunities include industrial effluent treatment systems for large individual users or groups of users, such as industrial parks; and water reuse systems.

Contracts are awarded through public bids. The factors taken into account in awarding contracts include price, technical merit, and bidder's financial capability, experience and operations expertise. Federal, state and municipal governments all
participate in the process. The Federal Government, acting through the CNA, supervises the whole process and makes up the bidding packages, evaluates bids, etc. The municipalities, acting through operating agencies, administer the whole process and do the actual contracting. The state governments provide financial guarantees. Guarantees against municipal and state non-payment are provided by BANOBRA S.

Contracts have been awarded to local companies; to European companies, including Biwater of the United Kingdom and Degremont of France; and the United States companies, for example, United States Filter Corporation. Many foreign companies form joint ventures with local companies. The former provide much of the equipment and engineering services, and the latter the construction. Many wastewater treatment projects have attracted foreign equity participation from specialized environmental venture capital funds and large institutional investors.

The peso devaluation of December 1994 and ensuing economic difficulties have negatively affected some projects, forcing delays in construction and contract renegotiation. Some projects have been cancelled. BANOBRA S has announced a freeze on funding or guarantees for new projects. Private participation is expected to increase as the economy recovers.

(b) Electricity

The Comisión Federal de Electricidad (CFE), a decentralized parastatal entity coordinated by the Secretaría de Energía (SE), has exclusive responsibility for providing the public service. The CFE generates, transmits and distributes electricity on a country-wide basis, except for distribution in the Federal District and its environs which are served by its subsidiary, the Compañía de Luz y Fuerza del Centro, S.A. In recent years, as a measure to improve their efficiency, both utilities - the CFE since 1986 and the Compañía de Luz y Fuerza del Centro, S.A. since 1994 - have operated under "Convenios de Rehabilitación Financiera" which specify annual efficiency goals.

The SE, the main administrative authority, formulates national energy policy and is in charge of energy planning. It directs the activities of energy-related parastatal entities and establishes their economic and social goals and promotes
private sector participation in electricity generation. It has the authority to grant permits to the private sector for independent generation, small-scale production, co-generation, and for the import or export of electric energy. The Secretaría de Hacienda y Crédito Público determines the scope of private sector participation in different industries and approves tariffs.

While the CFE has sole authority for thermal electricity generation, for hydroelectricity it shares administrative authority with the CNA. The CNA grants water use rights - "títulos de asignación de agua" - to the CFE. The right specifies the volume to be used for the generation of electricity and for cooling, as well as the grounds on which it may be terminated. Any use of national waters for electricity generation, except small-scale generation, requires a concession from the CNA.

The CNA programmes water withdrawals from all water bodies so as to coordinate hydroelectric development with the other uses of the water; and sets the rules for the operation of dams. The Federal Executive decides whether it is the CNA or CNE which will build hydraulic works. The CNA and the CFE enter into agreements for the operation and administration of hydroelectric facilities. In addition, under the "Ley Federal de Derechos en Materia de Agua", those who use waters under federal jurisdiction, *inter alia*, for hydroelectricity generation, are required to pay a charge per each kilowatt hour generated.

The government has begun regulatory reforms to promote private sector participation in electricity generation. In line with this policy, it reformed the "Ley del Servicio Público de Energía Eléctrica". Although the CFE remains the sole agency authorized to sell electricity for public use, private sector parties now may, subject to the permission from the SE, generate electricity for activities that do not constitute public use. The Law provides for private sector participation in electricity generation through: independent power production for sale to the CFE; self-supply and co-generation schemes; small-scale power production (under 30 MW) for sale directly to the consumers when these are small rural communities or others in isolated areas; and power for export. The Comisión de Reglamento de Energía (CRE), a technical body with advisory and consulting responsibilities created in 1994, resolves the questions related to the applications of the new legislation and regulations.

Although private sector involvement in the electricity sector has been slow to develop, the new regulatory framework has succeeded in attracting private investments to the sector. In recent years, the CFE secured private sector financing to install, under a "build, lease and transfer" (BLT) approach, based on a lease-purchase arrangement, several generation projects. An important milestone was
the release of an international tender, in 1994 by the CFE, seeking local and foreign firms to bid on the 440 MM Merida III project valued at US$ 440 million, the first private sector independent power project. However, the bidding process to build, operate and own this facility was delayed due to lack of regulations. The process has been recently resumed.

The SE has recently invited local and foreign firms to express interest in participating in tenders and projects, including providing financing as independent power producers or under BLT terms. The deadline was July 15, 1996. According to press reports, about 100 firms, most of them foreign, expressed interest in the proposal and presented preliminary applications to the SE to participate in the development of five projects, one geothermal and four thermoelectric. The projects, with the total installed capacity of 1 600 MW, entail an estimated investment of US$ 1.6 billion. Several specialized firms expressed their interest to invest in the 100 MW Cerro Prieto geothermic project that is expected to be built in association with the CFE.

Although, at least in the short-term, the CFE is not expected to be privatized, it has started to decentralize and regionalize its generation and distribution operations and there have been press reports of the plans to sell some power facilities or to award them via concessions. Although these plans focus on thermal generation, they also include some hydroelectric and geothermal power plants. However, for now at least, these plans appear to have been shelved. A proposal has also been made to sell securities backed by future revenue from generating plants. In the longer-term, it is probable, that electricity transmission and distribution will remain a state monopoly, while the generation business could be privatized, possibly on a regional basis. New generation capacity would be installed by the private sector under independent power producers schemes or contracted on a BOT basis.

(c) Irrigation and drainage

The basis of the government's policy for irrigation is the promotion of private sector participation through the transfer of responsibility for investment, operation and maintenance to users' groups, the modification of the legal framework of the sector so as to promote private investment and management, a market in water use rights (within certain limits), and the reorientation of public investments from new works to rehabilitation.

<table>
<thead>
<tr>
<th>Sector statistics</th>
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<tbody>
<tr>
<td>Agricultural area in 1993 (1 000 ha):</td>
</tr>
<tr>
<td>• arable land .......... 23 150</td>
</tr>
<tr>
<td>• irrigated land .......... 6 100</td>
</tr>
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</table>
Irrigated areas in Mexico are classified into two broad groups, unidades de riego, approximately 27,000 small irrigation units and private developments covering 2.5 to 2.8 million hectares and distritos de riego, 78 irrigation districts containing 3.0 to 3.2 million hectares. The irrigation units, have been, and still are, operated and maintained by farmers. Irrigation districts, have been built, owned, operated, and maintained by the state and contain both large commercial farms and small farms.

The management transfer process for the districts was initiated at the end of the eighties. The "Ley de Aguas Nacionales" stipulates that in cases where the Federal Government participated in the financing, construction, operation and administration of the works necessary for the operation of an irrigation district, the CNA will proceed immediately to transfer its administration and operation to the users. The districts will then be administered, operated, preserved and maintained either by the users themselves, who will be organized according to the criteria defined in the Law, or by whom they designate. Each irrigation district will establish a "comité hidráulico" which will act as a collegiate decision-making body for the management of water and infrastructure.

The Law also stipulates that users must: (i) use the water and irrigation services according to the terms laid down by the regulations of the district; and (ii) pay the agreed charges. These charges must cover at least both administration and operating costs and the conservation and maintenance of the works. The charges must be approved by the CNA, which may reject them if they do not comply with these criteria.

Under the transfer process, irrigation districts are divided into irrigation units or subsystems, referred to as "modules", ranging from 5,000 to 20,000 hectares, and "Asociaciones Civiles" or users' associations are organized for each module. The associations receive a concession title for the use of water and a permission for using the infrastructure. The associations administer, operate and maintain their respective "modules" and contract the necessary staff.

The responsibilities of users' associations are limited to the secondary level and below, including the network of secondary channels, drains and roads. The CNA retains its guiding role in water use management, and continues to be responsible for the operation and conservation of the head works and principal canal and drainage networks, for which the association must pay. The CNA carries out the engineering works in irrigation and drainage, provides technical assistance, and is responsible for the general supervision of the district as a whole. During the transfer process, the Federal Government, through the CNA, provides financial support through investments in the rehabilitation and modernization projects, as well as in
the acquisition of equipment and machinery for district conservation. The CNA also transfers its maintenance equipment and machinery, although some associations have chosen to purchase their own.

The original intention had been to proceed, as a second step, with the creation of Sociedades de Responsabilidade Limitada e Interêsses Públicos (S de RL e IP), which would integrate all users' associations of the district. It would be responsible for the operation and maintenance of the main infrastructure, including the main network of channels, drains and roads, and would be authorized to use the rest of the machinery and equipment. The CNA remains responsible for the control, operation and maintenance of head works, delivering water in blocks to S de RL e IP, and carries out the supervision and ensures compliance with respective regulations. After the first districts have been transferred, the programme has been adjusted and it was decided to postpone the creation of S de RL e IP until users' associations have consolidated.

Between 1989 and June 1995, 80.3 per cent of the total area of the irrigation districts (2.584 million hectares) were transferred. In addition, seven S de RL e IP, grouping 98 users' associations covering an area of 705 592 hectares, were established. The results of the transfer process have so far been positive, and the general opinion of the users is that water management and the operation and maintenance of the infrastructure are improving.

(d) Water transport

A major canal concession has been awarded to Grupo Protexa of Mexico together with Boskalis of Holland to build, operate and maintain a 438 kilometre intra-costal canal, linking the port of Tampico, Mexico with the intracoastal waterways of the United States at Brownsville, Texas. The US$ 756 million project will create a direct water route between the port of Tampico and inland river ports of the United States, including Chicago, Kansas City and Pittsburgh. The route is expected to provide a cheaper alternative to other means of transportation, such as road or rail.
12. Nicaragua

The Corporaciones Nacionales del Sector Público (CORNAP), created through Decree Law N° 7-90 of 2 May 1990, oversees the privatization of state-owned companies. The Comité Ejecutivo para la Reforma de la Administración Pública (CERAP) is in charge of public sector reorganization and modernization. The Comisión de Reforma de Empresas Públicas has the same responsibilities for the infrastructure sector.

Several utility companies and ministries, including those in the energy and drinking water supply and sewerage sectors, are being reformed and restructured. The programme, financed by the IDB, includes a series of legal and institutional reforms which will provide for greater private sector participation in the provision of public utility services. The programme provides for the separation of the regulatory and policy-making function of the state from the business function of delivering services. Autonomous regulatory bodies will manage regulatory affairs, including tariff setting, while state ministries will be responsible for policy formulation.

(a) Drinking water supply and sanitation

The Instituto Nicargüense de Acueductos y Alcantarillados (INAA) is responsible for all aspects of the supply of drinking water and sewerage services. INAA operates, through six "Delegaciones Regionales", 148 drinking water supply systems, in 170 towns and villages, and 20 sewerage systems, 8 with treatment facilities.

The drinking water supply and sewerage sector is expected to be reformed. The proposed reforms provide for the separation of regulatory functions from production and commercial operations, the application of common legislation to public and private companies, and the establishment of a regulatory framework

<table>
<thead>
<tr>
<th>Estimated coverage</th>
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<tbody>
<tr>
<td>In Nicaragua, 81 per cent of the urban population has drinking water supply, but only 28 per cent of the rural population. 34 per cent of the urban population has sewerage. 21 per cent of wastewater is treated. The key challenge facing the sector is to improve coverage and service quality. Many systems are old, about a quarter are considered to be worn out and this affects the quality of the water they supply, 49 never satisfy demand and another 23 do not satisfy it during dry periods. 17 supply water which is not adequate for human consumption, water losses reach 41 per cent, 87 distribution networks have only partial coverage, and 30 per cent of the pipes in the distribution networks are deteriorated. Even in urban areas, many customers receive an intermittent supply.</td>
</tr>
</tbody>
</table>
and a tariff system that will promote efficiency and self-financing and give adequate signals to customers with subsidies for low-income groups.

The reforms require the approval of three bills to create a regulating body, "Ley Creadora del Ente Regulador", to provide for sector planning, "Ley Creadora para la Planificación Sectorial", and to establish the regulations for the provision of services, "Ley de Servicio y Reglamento de Agua Potable y Alcantarillado Sanitario". A new system of tariff regulation is being gradually implemented. A study is under way to determine the technical, economic, social and financial feasibility of establishing regional companies, referred to as Empresas Regionales de Prestación de Servicios de Agua Potable y Alcantarillado Sanitario, rather than maintaining one company operating at the national level. These regional companies would be formed as corporations, in which, initially, the central government would be the majority stockholder. The private sector could participate through service contracts, concessions, or in equity. The IDB has approved a grant to finance completion of the proposed new sector structure, including finalizing the drafting of laws governing the provision services, together with enabling regulations, model concession agreements, etc.

(b) Electricity

The Instituto Nicaragüense de Energía (INE) has been the sole agency responsible for electricity generation, transmission and distribution. It also had regulatory responsibilities. There has always been some self-generation.

The Government of Nicaragua has begun to restructure the power sector with the view to increase efficiency and improve the delivery of power and to attract private resources to the sector. The INE has been reformed and separated into a new INE responsible for regulation of the sector, and a new Empresa Nicaragüense de Electricidad (ENEL), a vertically integrated company responsible for electricity generation, transmission and distribution.

Further reforms are being considered, including the separation of generation, transmission and distribution, both vertically and horizontally. Distribution and generation would be opened to private participation, while a public company would be in charge of transmission and would operate the Centro Nacional de Despacho
de Carga. The transmission system would operate under an open access regime. The INE would regulate charges for transmission as well as the remuneration of the Centro Nacional de Despacho de Carga.

Distribution would be by concession. Distribution companies would be allowed to have generating capacity of up to 5 MW. Generation would require only a license and would be completely liberalized. Large consumers would be able to negotiate electricity prices with any generation company. Generators would be free to negotiate contracts to buy and sell electric energy with other generators, distributors and large consumers. Only the tariffs which distribution companies charge their small and medium consumers would be subject to regulation. The government would maintain responsibility for rural electrification.

Nicaragua has geothermal resources and the private sector participates in their development. One example is the El Hoyo-Monte Galán project which is to be developed as a privately owned and operated venture. The exploration stage began in 1996. The second stage envisages the installation of a 50 MW plant which is expected to come on stream in 1999. In the final stage, the plant will be expanded to 105 MW, which is intended to commissioned in 2001.
13. Panama

The Government of Panama’s economic policy places increased emphasis on social policies and measures to promote private sector participation in infrastructure and other sectors. There is a major programme of divestment of public utilities. Parts of the Instituto de Recursos Hidráulicos y Electrificación (IRHE), the state-owned electricity monopoly, are expected to be sold in the near future, the electricity sector has been opened to private participation, and the rapid privatization of several areas of the Instituto de Acueductos y Alcantarillados Nacionales (IDAAN), the water monopoly, has been announced. A law to allow the sale of both companies is expected in the first half of 1997.

The Ministerio de Planificación y Política Económica (MIPPE) advises the government regarding economic and social policies and provides assistance in the process of restructuring and privatization of public enterprises. The Unidad Coordinadora para el Proceso de Privatización (ProPrivat) of the Ministerio de Hacienda y Tesoro was created by Law Nº 16 of 14 July 1992 to facilitate the privatization programme and to oversee the sale of government assets.

Law Nº 26 of 29 January 1996 created the Ente Regulador de los Servicios Públicos (ERSP), a regulatory agency for public services, including drinking water supply and electricity. The agency will have a three member board - “Junta Directiva” - whose members are named by the President and ratified by the Legislative Assembly, and have the responsibility to promote competition in the provision of public utility services and to prevent abuse of monopoly power. Its main duties and powers include granting and revoking concession, licences and authorizations; monitoring the correct provision of public services and compliance with technical, commercial, legal and environmental requirements; monitoring compliance with service quality, expansion and maintenance obligations; defining efficiency criteria for the evaluation of public utilities; and regulating tariffs.

(a) Drinking water supply and sanitation

The Instituto de Acueductos y Alcantarillados Nacionales (IDAAN) is responsible for all aspects of drinking water supply and sewerage administration. Several other agencies, including the Ministerio de Salud and the Fondo de Emergencia Social (FES), play an important role in financing and executing drinking water supply and sanitation projects, particularly in rural areas.
The government has decided to encourage private sector participation in the provision of drinking water supply and sanitation services, and in 1995, announced its intention to privatize several areas of IDAAN. It is expected that the sector will be reformed. The proposal provides for the separation of the institutional roles in the sector, a new high-level entity under the Ministerio de Salud (MINSA) would be responsible for policy setting, ERSP for regulation, while service provision would be opened to the private sector, through the creation of a mixed capital company for Panama City, to be formed through the corporatization of IDAAN, and concessions in other cities.

(b) Electricity

The Instituto de Recursos Hidráulicos y Electrificación (IRHE) has operated as a vertically integrated monopoly for generation, transmission and distribution since 1972 when the Compañía Panameña de Fuerza y Luz which had been responsible for transmission and distribution in the principal urban areas was nationalized.

The IRHE operates under the Ministerio de Comercio e Industrias and is directed by a Board (Junta) of seven Directors, whose President is the Minister. The Board is responsible for the administrative, financial and operational management of the IRHE, as well as for expansion plans. The Comisión Nacional de Energía (CONADE) is responsible for national energy policy.

The IRHE needs to increase its installed generation capacity. Proposed strategies include investments in new plants, greater efficiency savings, conservation, improved plant maintenance, and purchasing excess supply from private sources and from abroad. The IRHE already buys excess energy from one private company and from the Panama Canal Commission (PCC). A contract has been awarded to build a thermal power plant and other contracts are expected to be negotiated in the future.
The government has announced plans for the privatization of the IRHE and its parts are expected to be sold in the near future. As the first step, it has been proposed to allow private investors to generate and sell electricity by building new power stations. Law N° 6 of February 1995 ended the IRHE's monopoly and allowed private companies to generate electric energy for self consumption or for sale to third parties. Private sector participation in electricity generation is limited to 45 per cent of the country's installed capacity; there is a further limitation of a maximum of 20 per cent of the national installed capacity for any individual project or company participating in private generation. The law calls for preference to be given to companies which will generate electricity from renewable sources, including hydropower. It also specifies that companies winning generation licenses must reinvest a minimum of 5 per cent of their profits in the communities around their new plant. Distribution can be either through the IRHE's network or through the new private networks.

Further reforms are being considered. The proposed reformed provide for the separation of the institutional roles in the sector; the promotion of competition in generation and sales to large consumers; privates sector participation in all activities, with the exception of transmission, through concessions, licences and participation in the capital of existing companies; the separation of generation, transmission and distribution; the creation of various companies, including one transmission company, to replace IRHE; and a transitional five year period, after which the electricity market would be deregulated and expansion planning would be indicative.

Panama has geothermal resources of some magnitude and has received a grant from the IDB for feasibility studies on projects to be developed by the private sector.

(c) Water transport

Panama is scheduled to take over the management of the Panama Canal on December 31, 1999. Privatization of the operations of the Canal has so far been ruled out, but there could be opportunities for service contracts for at least some of the day-to-day operation and maintenance functions.

A possible first step in this direction, was the adoption in November 1994 of a law creating the Panama Canal Authority, an administrative agency that will take charge of the Panama Canal. The agency is expected to enjoy a wide authority and autonomy, including setting tolls and operating with funds separate from the rest of the public budget.
In a another important development, in 1996, the government awarded management contracts for the two ports - the Balboa port on the Pacific side and the Cristóbal port on the Caribbean side - of the Panama Canal, for 20 years, and the concession to run the trans-isthmus railway.
14. Puerto Rico

The Government of Puerto Rico is in the process of privatizing state-owned enterprises in competitive industries and delegating or outsourcing other activities to the private sector. The drinking water supply and sewerage sector has already been opened to private sector participation and there are plans to privatize electricity generation.

The Puerto Rico Privatization Task Force (Comité de Privatización de Puerto Rico) coordinates privatization and promotes private sector participation in the provision of services currently supplied by governmental agencies.

(a) Drinking water supply and sanitation

The government has decided to privatize the Puerto Rico Aqueduct and Sewer Authority (Autoridad de Acueductos y Alcantarillados) (PRASA). PRASA operates 220 water supply systems and 71 wastewater collection and treatment systems on the island.

As a first step, PRASA negotiated the operation and maintenance of four wastewater treatment plants: Barceloneta, Bayamón, Carolina and Humacao.

As a second step, it has negotiated a contract with Professional Services Group, Inc. (PSG), a United States subsidiary of Compagnie Générale D'Eaux of France, to manage drinking water supply and wastewater services. PRASA will remain in charge of development and the financing of capital investment and will keep some 600 employees to oversee planning and other strategic operations, but will withdraw from the day-to-day running of the water system.

The most important current capital project is the “North Coast Superaqueduct”, a 80 kilometre long pipeline that will transfer water from Lake Dos Bocas to the capital San Juan and several northern municipalities. The project is expected to meet the San Juan metropolitan area’s water needs through 2050. In 1996, the government awarded a US$ 300 million contract for the construction of the “Superaqueduct” to Thames Dick of the United Kingdom.
(b) Electricity

The Puerto Rico Electric Power Authority (PREPA), a public corporation, is responsible for electricity generation, transmission and distribution. The bulk of electricity is thermally generated, although there are 21 small hydroelectric plants. Many businesses have their own stand-by generators.

<table>
<thead>
<tr>
<th>Sector statistics</th>
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<tbody>
<tr>
<td>Net installed capacity in 1994 (MW):</td>
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<tr>
<td>• thermal ................. 4 380</td>
</tr>
<tr>
<td>• hydro .................. 85</td>
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<tr>
<td>• TOTAL ................ 4 465</td>
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<td>Percentage of population with residential connections in 1989 ......... n/a</td>
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</tbody>
</table>

The government is considering the privatization of electricity generation. PREPA has been reported to be negotiating contracts for the purchase of power from private sector generators.
15. Trinidad and Tobago

In the second half of the eighties, the Government of Trinidad and Tobago initiated an economic adjustment programme. Its aim is to transform the oil dependent and public sector dominated economy of the country into one more diversified, market-oriented and private sector led. The provision of drinking water supply and sewerage services has recently been opened to private sector participation and electricity generation partially privatized.

(a) Drinking water supply and sanitation

The Water and Sewerage Authority (WASA) is responsible for the development and control of the drinking water supply and sewerage facilities in the country. It administers all matters related to water, sewage and overall sanitation. Oil companies produce water to satisfy both their domestic and industrial needs.

The government has announced its intention to transfer responsibility for the provision of the drinking water supply and sewerage services to a private operator. It would keep the assets of WASA and discharge regulatory and strategic planning functions. The transfer will be carried out in two stages. At the first stage, an interim operator will be contracted for the management of the service. At the second stage, a concession will be granted for the management, financing and implementation of a long term investment programme. The stage 1 operator would be given a preference in the concession.

The government advertised worldwide for applications from companies interested in managing WASA and a three year management contract has been negotiated with a consortium comprising Severn Trent Water International and George Wimpey Ltd. WASA and the consortium formed a new joint company, the Trinidad and Tobago Water Services (TTWS). A loan has been contracted to fund a capital works programme which will be implemented by TTWS. Under the terms of the contract, TTWS is required to meet specific performance targets. The company is expected to achieve financial viability within three years with no mandatory reduction in staffing and no increase in tariffs during the contract period.
Until 1994, the government-owned Trinidad and Tobago Electricity Commission (T&TEC) had been responsible for generation, transmission and distribution in the country. That year, the government restructured T&TEC removing from it responsibility for generation and creating a new separate joint venture company, the Power Generation Company of Trinidad and Tobago (PowerGen). PowerGen assumed responsibility for generation, while T&TEC continued to be responsible for the nationwide transmission and distribution of electricity.

PowerGen has private participation. T&TEC with 51 per cent is the majority shareholder and the remaining 49 per cent belongs to two United States companies, Southern Electric International Inc. (SEI) with 39 per cent and Amoco Business Development Corporation with 10 per cent. The two companies paid T&TEC US$ 71.6 million for their 49 per cent stake and agreed to make investments totalling US$ 35.9 million in the new plant, equipment and services.
16. Other Caribbean countries

Private sector participation in water-related public utilities is still incipient in most other Caribbean countries. The reasons for this vary.

For example, a recent IDB financed study in the Bahamas, concluded that concession or full privatization arrangements for drinking water supply and sanitation did not seem possible in the short run due to lack of an appropriate legislation and regulatory framework, prevailing public attitudes, and the history of weak financial performance which made it difficult to obtain commitment from experienced private operators. The study recommended a series of measures aimed at setting up an adequate regulatory framework, improving the financial performance of the agency concerned, and increasing private sector participation at levels commensurate with the regulatory capacity.

Situation is similar in Saint Lucia, where the Water and Sewerage Authority (WASA) has recently been subject of a study by consultants. One of the options the consultants had to consider was the possibility of privatization. In their interim report the consultants have not opted for privatization, but they identified the absence of any regulatory framework to facilitate the process.

(a) Drinking water supply and sanitation

Private sector participation in the provision of drinking water supply and sanitation services is largely limited to the construction, operation and maintenance, usually under a BOT or similar approach, of water desalination facilities. Examples are afforded by the Ocean Conversion Limited (BVI) on the British Virgin Islands, and the Ocean Conversion Cayman Limited and the Aqua Design Limited on the Cayman Islands. Similar projects have been proposed in the Bahamas.

There are many small water desalination, wastewater treatment and wastewater recycling facilities operated by the major hotels and tourist complexes.

(b) Electricity

Although private sector participation in the electricity industry is also incipient, some examples can be found. In Anguilla, the privately-owned Anguilla Electricity Company (ANGLEC) is responsible for generation, transmission and distribution. In the Bahamas, the local state-owned utility, the Bahamas Electricity Company (BEC), is expected to be totally or partially privatized, with privately-owned companies already operating on the Grand Bahama and several other islands.