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

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Abstract

This updated version of “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, but growing, 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.
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, in many countries the bulk of the electricity sector remains in government hands. In other countries extensive programmes for the privatization of the electricity sector have been recently begun, especially in Brazil and Colombia, but also in a number of countries in Central America, including Guatemala and Panama. Even in Mexico, there is a limited opening for private investment in electricity generation. There remain, however, 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, although the Province of Mendoza is considering the sale of shares. In Bolivia, the water supply system of La Paz has been transferred through a concession to a consortium of private companies 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 resorts and in new high income suburban developments.

**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. These factors have been especially important for water supply and sanitation.

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.

It is clear that the transfer of responsibility for the management of water based public utilities to the private sector cannot be successful without an adequate and well functioning regulatory 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 both by the attempt to privatize water supply and sanitation services in Caracas, which failed in large part due to the lack of a sufficiently well defined regulatory structure, and 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.

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 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 compiled by ECLAC from national, international, and professional literature, including publications of the Pan American Health Organization (PAHO), the Food and Agricultural Organization of the United Nations (FAO), 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.

(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 5 October 1992 (the transfer was effected on 7 January 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.

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% 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.

The Belize Electricity Company Limited (BECOL), 95% 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% 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).

Until very recently, the Servicio Nacional de Electricidad (SNE) was responsible for the regulation of the provision of public utility services. Under Law Nº 7593, the SNE has been transformed into an autonomous institution, and named the Autoridad Reguladora de los Servicios Públicos (ARESEP). ARESEP will set tariffs, ensure that the service norms are complied with, undertake technical inspections and regulate and inspect all public utilities. In order to become provider of these services, institutions or companies, excepting those, that already legally provide such services, must obtain the required concession or licence from the Ministerio del Ambiente y Energía (MINAE).

(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 many rural communities. Some 1 200 Comités Administradores de Acueductos Rurales (CAAR) operate water supply systems in rural communities. The Ministerio de Salud provides the rural population with septic tanks or latrines and the dispersed population with water supply.

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 first SAL began to function in 1995. The contracting of other activities is presently under
study. In 1997, AyA presented the Contraloría General de la República with a list of 67 of its activities, including the installation of new connections, the revision of residential installations, maintenance of equipment and installations, the inspection, design and construction of engineering works, the control of service quality, disconnecting and reconnecting pipelines and the design of transmission pipelines, so that it could decide which services could be privatized through the SAL system.

A consortium formed by Aguas Valencia and the Unión Fenosa ACEX of Spain was awarded the contracts for consulting services and the implementation of new management systems, including integrated commercial, financial and purchasing systems for AyA.

(b) Electricity

The Instituto Costarricense de Electricidad (ICE), an autonomous state owned vertically integrated power and telecommunications utility, carries out all activities related to the power sector, including research, generation, transmission and distribution. 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 (CNFL), a former privately owned utility, created by Law № 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 government opened the power sector to private participation in the late eighties, in 1989, the Comisión para la Generación Independiente de Electricidad (COGIP) was set up as an advisory body on opportunities for private participation in the generation of electricity. Private participation was permitted under Law № 7200 - “Ley que Autoriza la Generación Eléctrica Autónoma o Paralela” - of 28 September 1990 and Law № 7508 - “Reformas a la Ley que Autoriza la Generación Eléctrica Autónoma o Paralela” of 9 May 1995. These laws allow private investors and rural electrification cooperatives to build hydroelectric plants and plants using non-conventional energy sources - this is known as “autonomous or parallel generation” - of up to 20 MW of capacity under concessions granted for up to 20 years. The concession is granted subject to the determination by ICE that the project is eligible, and the approval of an environmental impact assessment study. ICE can declare that a project is eligible only if total private capacity does not exceed 15% of total installed capacity. The Law authorizes ICE to buy electricity from those projects in which domestic investors provide at least 35% of the capital. ICE can also buy electricity from private generators for additional 15% of total installed capacity.
in blocks of up to 50 MW. Acquisitions must be made through public bids, with sale prices subject to competition and to an evaluation of the technical, economic and financial capacity of the supply company, as well as, of the characteristics of the plant.

These reforms have given rise to considerable interest among private companies and various independent producers are already supplying electricity on the basis of agreements signed with ICE. The companies have formed the Asociación Costarricense de Productores Privados de Energía (ACOPE). As a result of the reforms, some 200 MW of generating capacity has been authorized. Other reforms are under consideration.

Under Law Nº 5961 of 1976, ICE has responsibility to develop and explore geothermal resources and to operate related facilities. Having completed the first two development phases of the Miravalles Geothermal, ICE is completing the bidding process for the third phase, which provides for the construction of two, 27.5 MW geothermal power plants 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 Acueducto y Alcantarillado. MINSAP is responsible for drinking water quality. INRH and the Ministerio de Finanzas y Precios propose water tariffs.

The Dirección Nacional de Acueducto y Alcantarillado operates through provincial water supply and sewerage systems bureaus - Dirección Provincial Acueducto y Alcantarillado - in each of the 14 provinces and municipal water supply and sewerage systems bureaus - Dirección Municipal 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.

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 (MINBAS), 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.

MINBAS is working on a plan to modernize and make more efficient the electricity sector, possibly with assistance from foreign companies. In October, 1997, the government awarded a maintenance and operation contract to the Canadian company, First Key Project Technologies Inc., for the modernization and expansion of the Santa Cruz del Norte thermal electricity plant. The project includes the establishment of a joint company to sell electricity. Earlier, the French company, Babcock Enterprises signed a contract to modernize another thermal plant. Other foreign companies are negotiating similar contracts.

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<td>- TOTAL ......................... 3 988</td>
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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

The secretary of state responsible for the energy sector is the Ministry of Communications, Works and Housing (MCWH). 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. DOMLEC was privatized in 1997.

Since the 1980s, with private sector participation, prefactibility studies have been made for generating electricity from geothermal resources. 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. Difficulties with negotiating the contract have, until now, prevented the development of the project.
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. 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.

Two draft laws, the “Ley General de Electricidad” and the “Ley de la Reforma de la Empresa Pública”, are under discussion in the Congress. In the former, private sector participation is proposed in the electricity sector. The second has amongst it main purposes the redefinition of state participation in productive activities, as well as, proposals to make public companies more efficient through associations with the private sector. Under this law, it is proposed that private sector participation could be through capitalization similar to the model adopted in Bolivia or, where this is not practical, through concessions or sales of assets and shares. A high level committee would oversee the reform process.

(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.

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 No 4115 of 21 April 1955, is responsible for electricity generation, transmission and distribution in the public grid. The private sector accounts for about a third of the total installed generating capacity. CDE can cover shortages by purchasing available power from private generating facilities and has power supply agreements with a number of companies.

The government has announced its intention to promote private sector participation in CDE. A new comprehensive electric bill, currently under discussion in the Congress, is designed to restructure the electricity sector so as to provide a regulatory framework and a basis for private participation. CDE would be divided into 8 companies: two thermoelectric generators, one hydroelectric generator, three distribution companies, a transmission company and a centre of support, which, among other things, would negotiate the contracts with independent producers. The Government intends to sell approximately 50% of the thermal generators and of the distributors to the private sector, up to 10% to the employees and the remainder would be held by the Banco de Reservas, the government owned commercial bank, as a capital fund. The CDE would be the owner of the hydroelectric generator, but management could be transferred to the private sector, of the transmission company and of centre of support. The reform would create two new regulatory agencies: the Superintendencia de Electricidad and the Organismo Coordinador de la Operación del Sistema.

(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 № 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 in the recently reformed power sector. Privatization is more advanced in the power sector than in water supply and sewerage.

(a) Drinking water supply and sanitation

The Administración Nacional de Acueductos y Alcantarillados (ANDA), an autonomous public company reporting to the Ministerio de Obras Públicas, is responsible for drinking water supply and sewerage services. It has authority for the regulation, planning and provision of water supply and sewerage. It serves about 40% 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. It also operates services in 316 rural communities; about 120 rural communities operate their services independently of ANDA.

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 (COSERHI), the agency charged with the legislative, regulatory and institutional reform of the water sector. The reforms aim at: (i) separating the institutional roles in the sector by creating a regulatory structure independent of the operation of water supply and sewerage services; (ii) establishing specialized agencies in charge of sector management, regulation, financing and technical assistance; (iii) promoting private and community participation in the provision of services; (iv) founding a group of operating companies; and (v) decentralizing services.

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

<table>
<thead>
<tr>
<th>Estimated coverage</th>
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<tbody>
<tr>
<td>In El Salvador, 88% of the urban population has drinking water supply, 80% inside the dwelling, but only 18% of the rural population, 16% inside the dwelling. 81% of the urban population has sanitation, 57% with sewerage, but only 49% of the rural population has sanitation. The level of service quality is irregular.</td>
</tr>
</tbody>
</table>
El Salvador

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 legislative decree 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. In May, 1994, the CEL signed its first contract with an independent producer. Until recently, the distribution and sale of electricity in the capital and other cities was in private hands under concessions granted to six distribution companies. In 1986, when 4 of the concessions expired, the Government bought the companies and now they are managed by the CEL. The electricity sector of El Salvador has been reformed under the “Ley General de Electricidad” (Decree No 843) of 10 October, 1996 and the “Ley de Creación de la Superintendencia General de Electricidad y de Telecomunicaciones” (Decree No 808) of 12 September, 1996. The reforms are directed towards separating institutional responsibilities in the sector, developing a competitive market for generation, transmission, distribution and sale of electricity, establishing free access to transmission and distribution for generating companies and ensuring the rational and efficient use of resources, protecting the rights of consumers and of all those who participate in the sector. The law, also, provides for the restructuring of the CEL within 3 years so as to make the maintenance and operation of the transmission system independent and that generation should be in the hands of the maximum number of operators.

The new Superintendencia General de Electricidad y de Telecomunicaciones (SIGET), a public, non-profit, company, with administrative and financial autonomy, is responsible for ensuring that the legal conditions governing the electricity and telecommunication sectors are met. The law provides SIGET with the authority to regulate and approve the charges for the use of the grid and of the distribution systems, to coordinate the operation of the grid, as well as the operation of the wholesale and retail distribution systems. The prices for other electricity services are to be fixed by common accord among the contracting parties. Consumers may negotiate with any seller the price and conditions of supply distinct from those approved by SIGET.

The Unidad de Transacciones (UT) operates the grid and the wholesale electricity market; it is prohibited from buying or selling electricity on its own behalf. The wholesale market consists of the Mercado de Contratos (long term) and the Mercado Regulador del Sistema (spot). The UT is organized as and operates as a private company and each grid must have a separate UT. The shareholders can be the operators and final users directly connected to the grid.
controlled by each UT. As an interim measure, the law provides that while the CEL is the owner of the grid and of more than 50% of the generating capacity, the UT is governed by an interim internal regulation to guarantee transparent and equitable means for decisions related with the operation of the grid and that the dispatch will be made by the systems operation centre of the CEL.

The generation of hydroelectricity or geothermal electricity requires a concession from the SIGET. The concessions are permanent and transferable. To obtain a concession a solicitude must be made to SIGET, accompanied by a factibility and an environmental impact study, previously approved by the competent authorities. All concessions are given on the basis of competitive bids. Other generating facilities, together with transmission, distribution and commercialization activities, must be registered with SIGET.

The same company can undertake generation, transmission, distribution and sale, but each activity must be accounted for separately and registered with the SIGET. No company involved in generation, distribution and sale of electricity can be a shareholder in the company emerging from the restructuring of the CEL, responsible for the operation of the grid, and this company, and it shareholders, cannot participate in generating and distribution companies.

At the present time, the four distribution companies run by the CEL are in process of privatization, a move approved by parliament in April, 1997. The first phase involved the sale in 1997 of 16% of the shares of the four companies to “priority investors”, the 3 000 employees and officials of the CEL and the distributors. In the second phase, 75% of the shares were sold on 20 January, 1998 at a public auction for US$ 586 million to three international consortiums. The Compañía de Alumbrado Eléctrico de San Salvador (CAESS) and the Empresa Eléctrica de Oriento (EEO) were bought by ENERSAL of Central America a subsidiary of the Venezuelan company Electricidad de Caracas, for US$ 297 million. The Distribuidora de Electricidad (Del Sur) was bought by Electricidad de Centroamérica, the Salvadoran subsidiary of the Chilean company EMEL S.A., for US$ 180 million. The Compañía de Luz Eléctrica de Santa Ana (CLESA) was bought by AES El Salvador Ltd. (Cayman Islands), a subsidiary of the AES Corporation of Virginia, USA, for US$ 109 million. In a third phase to be undertaken in March, 1998 the remaining shares with be sold publicly on the stock market. Of the total sale income, some US$ 160 million will be invested in energy projects, 106 million will be used to found an investment fund and 320 million for debt payments.

(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.

<table>
<thead>
<tr>
<th>Sector statistics</th>
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<tbody>
<tr>
<td>Agricultural area in 1995 (1 000 ha):</td>
</tr>
<tr>
<td>arable land</td>
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<tr>
<td>irrigated land</td>
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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.

The Comité Permanente de Coordinación de Agua y Saneamiento (COPECAS), created in October 1985 by Acuerdo Gubernativo N° 1036-85, coordinates activities of the different public agencies operating in the sector. The Instituto de Fomento Municipal (INFOM), created by Decree N° 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 (UNEPAR). 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% 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 Electrificaci\'on (INDE), a state owned national utility created through Decree Law N\'o 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 El\'\'ctrica 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 N\'o 20-86 “Ley de Promoci\'on de las Fuentes Nuevas y Renovables de Energ\'\'a” which encouraged private participation in generation based on new and renewable resources. Additional initiatives offered new opportunities to private generation which resulted in several contracts. Both INDE and EEGSA have negotiated purchase agreements for electricity with independent producers and more contracts are proposed.

Finally, in 1996 the principle regulatory framework for the sector was specified with the approval of the “Ley General de Electricidad”. The law separates institutional responsibilities, opens the sector to private participation, both local and foreign, removes the monopoly over electricity production, promotes competition in the provision of services, regulates the operation of the wholesale market formed by generators with capacity over 5 MW and connected to the national grid. The law requires that anyone who simultaneously generates (with installed capacity over 5 MW), transports or distributes electricity must create separate companies.

Regulation of the sector is the responsibility of the Comisi\'on Nacional de Energ\'\'a El\'\'ctrica, an autonomous technical body. The commission is responsible for ensuring that the “Ley General de Electricidad” is respected, supervising the activities of the generating, transmission and distribution companies, protecting consumer rights and ensuring that competition is not undermined and resolving controversies. It also will set the regulated tariffs for transmission and distribution, as well as determine the methods for their calculation. Its budget is met by a tax paid by generators, transporters and distributers of electricity. The Ministerio de Energ\'\'a y Minas (MEM) is responsible for formulating and coordinating policies, plans, indicative programmes, emitting regulations for the electricity sector and controlling that these are met.
In 1997, EEGSA put 90% of the shares in the Laguna plant in Amatitlán and the Stewart & Stevenson plant in Escuintla province, both thermoelectric plants with a combined capacity of 177 MW, up for bid. The winning company was the Guatemalan Generating Group (GGG), a subsidiary of Constellation Power Development. The GGG will sell electricity to EEGSA on the basis of a purchase agreement. The remaining 10% of the capital may be bought by the employees of the company.

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 1998. INDE will be privatized in the near future.
8. Haiti

The Government of Haiti has announced plans for the privatization of several state owned enterprises, including the Electricité d’Haiti (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.

In August, 1996, the Government created a unit within the ministry of public works to prepare for the reform of the drinking water sector. 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, the gradual decentralization of services to the municipalities and other local bodies, the application of an appropriate system for cost recovery and opening up possibilities for private sector participation in operation and management. Two new regulatory agencies are proposed, a national water council, responsible for water resources management, including assigning and regulating water rights, and the Conseil de Régulation de l’Eau Potable et de l’Assainissement (CREPA), responsible for formulating policy for drinking water supply and sanitation, coordinating sectoral investment policy, and regulating services.

CAMEP and SNEP would be absorbed by the Office National de l’Eau Potable et de l’Assainissement (ONEPA), which would assume responsibility for the services in larger cities. The management of the services would be transferred to the private sectors under lease contracts.

<table>
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<tr>
<th>Estimated coverage</th>
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<tr>
<td>There is a low level of drinking water supply provision, 53% of the population in Port-au-Prince, an average 59% in the other 72 towns, although varying considerably, and 34% in rural areas. In Port-au-Prince, about 15% of the population has house connections; water losses are put at approximately 60%. Only 43% of the urban and 16% of the rural population has access to sanitary excreta disposal services.</td>
</tr>
</tbody>
</table>
Under the proposed reforms, in other cities (from 5 000 to 20 000 inhabitants), currently under SNEP’s responsibility, ONEPA would initially take charge of the services through local offices with financial autonomy. In the medium term, the alternatives include transferring the local offices of ONEPA to the private sector. These would operate under contracts with ONEPA or with the respective municipalities. The systems could be transferred to municipal companies with a high degree of autonomy. In the smallest localities, local drinking water supply and sanitation committees will be responsible for constructing, maintaining and managing the systems. The systems would be operated and maintained by an engineer designated by the committees.

(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.

The IDB has recently approved a non-reimbursable technical cooperation programme to assist the reform of the energy sector. The money will be use to evaluate the alternatives for the reorganization of the sector with greater private participation. It will also be used to formulate the corresponding institutional and legal framework and assist in establishing an administrative unit charged with reforming the sector.

<table>
<thead>
<tr>
<th>Sector statistics</th>
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<tbody>
<tr>
<td>Net installed capacity in 1995 (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>
</tbody>
</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 matters related to privatization.

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 Patuca river.

The Comisión Nacional Supervisora de los Servicios Públicos (CNSSP), created by Decree N° 85-91 of 10 June 1991, 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 further responsibility is to oversee the privatization initiatives taken within the autonomous institutions which provide public services.

(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 (Juntas 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

Until the recent reorganization of the sector, the industry consisted of the Empresa Nacional de Energía Eléctrica (ENEE), an autonomous vertically integrated state agency created by Decree Law Nº 48 of 20 February 1957, responsible for electricity generation, transmission and distribution. There were also two private companies, one self-producer and a small company, vertically integrated, responsible for services on the island of Roatán.

Reform of the electricity industry began in 1991 with the creation of the CNSSP, responsible for the regulation of electricity services, and of the Comisión Nacional de Energía (CNE), charged with advising the government on the design of plans, policies and standards for

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### Estimated coverage

About 91% of the urban population has drinking water supply, 77% inside the dwelling, but only 66% of the rural population, 49% inside the dwelling. In many smaller systems the supply is discontinuous. Total water losses in Tegucigalpa and San Pedro Sula are estimated at up to 50%. About 95% of the urban population has sanitary excreta disposal services, 54% through sewerage connections, but only 71% of the rural population has sanitary excreta disposal services, 11% with sewerage. Only 3% of sewage receives treatment. The government plans to provide universal drinking water supply and sanitation coverage by 2005.

### Sector statistics

<table>
<thead>
<tr>
<th>Net installed capacity in 1995 (MW):</th>
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<tbody>
<tr>
<td>thermal</td>
<td>175</td>
</tr>
<tr>
<td>hydro</td>
<td>130</td>
</tr>
<tr>
<td>TOTAL</td>
<td>305</td>
</tr>
</tbody>
</table>

Percentage of population with residential connections in 1989        34
the sector and for undertaking technical studies of demand and supply and of energy prices. In November, 1994, the Congreso Nacional approved by decree Nº 158-94, the so-called “Ley Marco del Subsector Eléctrico”. The law has at its primary objective the regulation of the activities of the sector, applicable to all actors, independently of the property regime. Its main thrusts are to establish conditions to satisfy the electricity demand of the country at minimum cost; to promote an economic, safe and secure operation of the electricity system; to protect consumers rights; to facilitate the participation of private companies in generation and promote them in distribution; to prevent disloyal practices and abuse of a dominant market position; to regulate those activities which by their nature impede or restrict free competition; to promote competition in the production and consumption markets for electricity in order to ensure long run supply; and to encourage private investment in production and distribution.

The reforms included the creation of the Gabinete Energético, made up of six ministers and headed by the President, its functions are to define and formulate policies for the energy sector; the Comisión Nacional de Energía Eléctrica (CNEE), an autonomous unit of the Secretaría de Comunicaciones, Obras Públicas y Transportes (SECOPT), as technical advisor for the application of the law; and a fund for electricity development to finance studies and electricity works of social interest. The fund is administered by the ENEE and financed by the Government and the companies of the sector. The CNE and the CNSSP remain. The CNEE applies and monitors the fulfilment of the regulations for the sector; approves and enforces wholesale prices and proposes through SECOPT retail prices to the CNSSP; presents expansion programmes to the Gabinete Energético for its approval; presents the energy purchase contracts of the ENEE to SECOPT; passes its opinion on the sale contracts to the distributing companies for the approval of SECOPT; propose to the government concession of renewable resources for electricity generation; prevent monopolistic or discriminatory conduct; and determine the conditions for awarding distribution and generating concessions. It is also charged with proposing to the Gabinete Energético further market liberalization. Companies in the electricity sector require operating contracts with the SECOPT, which must also be approved by the CNEE.

The law established a new structure for the electricity industry. In generation, public, private or mixed companies may, through either building new plant or leasing existing plants, sell electrical energy either directly to a large consumer or a distribution company, or to the ENEE. In the second case, if the sale is at the initiative of the generator, ENEE will buy at short run marginal cost, but, if the operation is promoted by the ENEE then the tariff will be determined by bidding. The government reserves for itself the right to manage the grid and the dispatch centre, but public, private or mixed companies can operate their own transmission systems or systems leased from the government. Distribution will be mainly undertaken by private companies, but municipal companies or cooperatives can also participate. Transmission and distribution companies must allow any electricity company or large consumer to connect to their systems, and, with payment, the use of their networks.

Under the law, ENEE will be restructures vertically, through the separation of transmission and generation from distribution, and horizontally. The ENEE must sell, in part or as a whole, its distribution systems to private investors, municipalities or cooperatives. Before privatizing, at the request of the ENEE, the country will be divided into distribution zones in
such a way that each of these will be technically viable and economically profitable. Distribution companies may have generating plants where (i) the systems are not connected to the grid; or (ii) in interconnected systems this would be the only means of providing service, or the most economical way of doing so in the opinion of the CNEE.

There are already independent producers. The first private generator to provide energy to the grid was Electricidad de Cortés S.A. (ELCOLSA), a joint venture of local industry and foreign investors. The IDB has recently approved a loan - the first provided directly to a private company without government guarantee - so that ELCOLSA can increase capacity.

The IDB has also approved a non-reimbursable technical cooperation programme to assist in the restructuring of the sector and to promote private participation, as well as to attract risk capital from the local private sector. The funds will be used to create and implement a regulatory framework, organize, equip and put into operation the regulatory agencies and train staff.
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.

It is government policy that all public services should be regulated by one agency. As a reflection of this policy, regulatory authority is delegated to the Office of Public Utilities Regulation (OUR) established under the “Office of Utilities Regulation Act” 1995. The OUR began to operate in 1997. It regulates prices and the quality of service for electricity and water supply and sanitation.

(a) Drinking water supply and sanitation

The National Water Commission (NWC), a parastatal agency with corporate status established in 1980s 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. The Parish Councils operate and maintain drinking water supply and sanitation systems in rural areas. Some areas are served by independent entities. The publicly owned Carib Engineering Corporation Limited constructs major water supply projects.

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% 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 government has announced its intention to privatize JPSCo, and to deregulate and liberalize the sector. 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. In December, 1996, the government announced the suspension of the privatization plans. 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.

<table>
<thead>
<tr>
<th>Sector statistics</th>
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<tbody>
<tr>
<td>Net installed capacity in 1995 (MW):</td>
</tr>
<tr>
<td>· thermal ..................... 1 162</td>
</tr>
<tr>
<td>· hydro ......................... 20</td>
</tr>
<tr>
<td>· TOTAL ......................... 1 182</td>
</tr>
<tr>
<td>Percentage of population with residential connections in 1989 ........ 58</td>
</tr>
</tbody>
</table>
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 programme 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 Comisión Intersecretarial de Desincorporación founded in 1995 manages the privatization process. The members are the Secretaría de Hacienda y Crédito Público (SHCP), the Secretaría de Comercio y Fomento Industrial (SECOFI), the Secretaría de Contraloría y Desarrollo Administrativo (SECODAM), the Secretaría de Trabajo y Previsión Social (STPS) and, for each sector to be privatized, the cabinet member responsible for its coordination. The Banco Nacional de Obras y Servicios Públicos (BANOBRAUS) grants loans and has a guarantee programme for infrastructure development.

In 1995, the government established the Fondo de Inversión en Infraestructura (FINFRA), an infrastructure investment fund, aimed at encouraging new private sector projects. 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 BANOBRAUS it will also provide other services, such as project promotion, guarantees, technical and financial assistance, etc.

Under the “Ley de Aguas Nacionales” of 1 December, 1992, the utilization of water resources is carried out by (i) the private sector under a concession, or (ii) by the public sector under grants, both given by the Comisión Nacional del Agua (CNA). The length of the concession or grant cannot be less than five or more than 50 years. Under the “Ley Federal de Derechos de Materia de Agua”, anyone using water resources in the public domain of the Federal Government for water supply, the generation of hydroelectricity, aquaculture, etc. is obliged to pay a fee. No fee is required for agricultural use, including from the irrigation districts and units. The law also requires payment for the use of streambeds; for the discharge of wastewaters; and for the issuing or modification of grants, concessions and waste discharge permits. Waste discharges which meet all the standards set for discharges, or in their absence, the technical ecological standards, are not obliged to pay.
(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.

Under the “Ley de Aguas Nacionales” 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, paramunicipal and other entities which administer the systems. Where municipalities have given concessions for the provision of water supply and sanitation services, the water grants are still given to the municipality.

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 providing 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. In the “Ley de Aguas Nacionales” it is declared that it is in the public interest to promote and encourage private participation in the financing, construction and operation of federal water infrastructure, as well as in the provision of services. Different mechanisms are foreseen to obtain private participation, including traditional public works contracts, public work and service contracts with recoverable financing and concessions.

### Estimated coverage

Approximately 84% of the population has drinking water supply and about 67% 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% of the population has access to a drinking water supply and 21% 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% and 76%, 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.

<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>
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 nonpayment are provided by BANOBRAS.

Contracts have been awarded to many companies. Many foreign firms form joint ventures with local companies. The foreign firms provide much of the equipment and engineering services and the local companies construct the works. Many wastewater treatment projects have attracted foreign equity participation from specialized environmental venture capital funds and large institutional investors.
(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 countrywide 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 (LFC).

While the CFE has sole authority for thermal electricity generation, for hydroelectricity it shares administrative authority with the CNA. Any use of national waters for electricity generation, except small scale generation, requires a concession from 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. The CNA programmes water withdrawals from all water bodies so as to coordinate hydroelectric development with the other uses of the water. The CFE participates in the establishment of the CNA’s programmes. The Federal Executive decides whether it is the CNA or CNE which will build hydroelectric works.

The SE develops the national energy policy. The Comisión Reguladora de Energía (CRE) is a subsidiary agency of the SE with technical and operational autonomy in carrying out its duties. It is responsible for regulating the actions of both public and private operators in the electricity and natural gas sectors. The CRE has the following responsibilities: participate in tariff setting for the supply and sale of electrical energy; grant and revoke the licences needed to undertake regulated activities; approve the methods used for the calculation of the counterpart funds for buying power used for public service, as well as for transporting, transforming and delivering electrical energy; and provide advice, at the request of the SE, on the sectoral programme for energy, on the increases required in generating capacity, as to whether it is convenient that the CFE carries out projects or whether the private sector should be called upon to supply energy and finally, on the terms and conditions of the calls for bids. In May, 1996, the SE created the Unidad de Promoción de Inversiones to promote and coordinate private participation and investment in the energy sector.

Under the “Ley del Servicio Público de Energía Eléctrica” only the Federal Government can generate, transport, transform, distribute and supply electricity for public service. In order to promote private sector participation, however, the regulatory framework has been modified.

Under the reforms of 22 December, 1992 private participation in the generation of electricity has been authorized in activities which do not constitute public service. These include

<table>
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<tr>
<td>Net installed capacity in 1995 (MW):</td>
</tr>
<tr>
<td>thermal ................ 32 139</td>
</tr>
<tr>
<td>hydro ...................... 10 013</td>
</tr>
<tr>
<td>nuclear .................... 1 350</td>
</tr>
<tr>
<td>geothermal ................. 755</td>
</tr>
<tr>
<td>TOTAL ....................... 44 257</td>
</tr>
<tr>
<td>Percentage of population with residential connections in 1989 ........ 86</td>
</tr>
</tbody>
</table>
(i) generation for self-supply, co-generation or on a small scale; (ii) generation by independent producers for sale to CFC or LFC; (iii) generation for export derived from co-generation, independent or small scale production; (iv) the import of electricity exclusively for self-supply; and (v) generation during emergencies due to interruptions in the public system. Except in the last case, the other activities are subject to the granting of the corresponding licences by the CRE. Small-scale production is defined as generation for sale to the CFE or the LFC from plants with a capacity of less than 30 MW, or for self supply of small rural communities or isolated areas. Independent production is defined as generation from plants with a capacity of over 30 MW destined exclusively for sale to the CFE, the LFC or for export. Since 1992, 61 licences have been granted under the new legislation.

The regulatory framework for private sector participation is being gradually put in place. The CRE approved a model contract for interconnections to networks on 8 October, 1996. The model establishes the nature of the contractual relationship between the CFE and the holders of generating licences for capacity over 10 MW (co-generation or self-supply) when the licensees need to use CFE’s transmission or distribution networks. On 7 January, 1997, the CFE approved model contracts and agreements for the trading of excess energy, for the application and modification of charges for transmission and support services between licensees and the CFE, for self-supply, cogeneration, import and export. Finally, on 25 July, 1997, the “Reglamento de la Ley de Servicio Público de Energía” was modified to specify with greater precision the concepts of co-generation and self-supply, to give greater flexibility in the criteria for private participation in bids for new capacity of CFE and to establish the possibility for the private sector to build and maintain its own transmission lines.

It is not expected, in the short run, that the CFE will be privatized, although the new regulatory law has managed to attract private investment to the sector through “build, lease and transfer” (BLT) and “external energy supplier” (PEE) arrangements. A PEE is an independent private operator of a generating plant with a long term energy supply contract with the CFE. An important milestone was the granting in March, 1997 by the CRE of the first licence to generate electricity, as an independent producer, to the AES Mérida III consortium, formed by AES Yucatán, Nichimen Corporation and the Hermes Group. It is estimated that this thermal electric project of 532 MW capacity will require an investment of some US$ 200 million. The electricity generated by the plant will be sold exclusively to the CFE. In projects of the type, the CFE, by an order of the SE, must use a bidding process. Only then can the CFE grant the corresponding licence. In the case of Mérida III project the licence is for 28 years and six months and renewable.

It is expected that in 1998 bids will be called for 14 new generation projects with a total capacity of 3,392 MW, for 5 transmission projects of 2,910 kilometres, and for 4 transformation projects. Overall, it is estimated that of the 11,000 MW of new capacity required by Mexico, before 2005, some 9,750 MW will be built by private investors.
(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.

Irrigated areas in Mexico are classified into two broad groups, more than 30 thousand irrigation units (unidades de riego), covering 2.9 million hectares and 80 irrigation districts (distritos de riego), containing 3.3 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 began in 1989. 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 Responsabilidad Limitada de Interés Público y Capital Variable (S de R.L. de I.P. y C.V.), made up from all users’ associations of the district. These companies 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 would remain responsible for the control, operation and maintenance of head works, delivering water in blocks to the S de R.L. de I.P. y C.V., and carrying out the supervision to ensure compliance with the respective regulations. After the first districts had been transferred, the programme was adjusted and it was decided to postpone the creation of these companies until the users’s associations have been consolidated.

Since the programme began in 1989 and until August, 1996, the infrastructure corresponding to 2 821 million hectares has been transferred (87% of the total area of irrigation districts) to 404 000 users organized in 372 associations and 7 companies. 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 Boskallis of Holland to build, operate and maintain a 438 kilometre intracoastal 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.
The Corporaciones Nacionales del Sector Público (CORNAP), created through Decree Law Nº 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 Nicaragüense 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 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 would be able to 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**

Until 1994, the Instituto Nicaragüense de Energía (INE) was the sole agency responsible for all aspects of energy policy and electricity generation, transmission and distribution. It also had regulatory functions. There has always been some self-generation.

In 1993, the Government of Nicaragua began 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. Under legislative decree Nº 46-94 of 1 November, 1994, the government reformed the INE creating the Empresa Nicaragüense de Electricidad (ENEL), a vertically integrated company responsible for electricity generation, transmission and distribution. The INE remained responsible for planning, the development and application of energy policy, regulation and control of the energy sector and for the evaluation of energy resources. ENEL began operations in 1995.

The “Ley de la Industria Eléctrica” approved by parliament on 28 October, 1997 has as its purpose the establishment of a legal regime for the development of the electricity sector. The central points of the law are the following: (i) freedom for private companies to participate in generation and distribution, while transmission would be developed by a state company; (ii) vertical integration would be limited to isolated systems and to distribution companies with generating capacity of up to 10 MW; (iii) transmission and distribution networks would be subject to a free access regime, with regulation of the charges for their use; (iv) the Centro Nacional de Despacho de Carga (CNDC) would be independent of any generation or distribution company; (v) there would be both free and regulated prices, the last limited to the transactions between distributing companies and consumers, tolls and charges for electricity dispatch; and (vi) an electricity market in which generators, distributors, large consumers, etc. participate, in which business can be done either through long term contracts or for immediate delivery (“spot”), and freedom for large consumers to buy from any generator or distributor.

It is expected that ENEL will be divided into, at least, two generation, two distribution and one transmission company. Once the restructuring has finished, privatization or capitalization
of the new generation and distribution companies should quickly follow, beginning with the distribution companies. Transmission would remain in state hands.

Nicaragua has geothermal resources. The only field in active use is Momotombo, with a generating capacity of 70 MW. Private investors have expressed interest in its 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 be commissioned in 2001. In August, 1997, Unocal Corporation signed an exploration contract with the INE.
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. It is expected that the Instituto de Recursos Hidráulicos y Electrificación (IRHE), the state-owned electricity monopoly, and the Instituto de Acueductos y Alcantarillados Nacionales (IDAAN), the public water supply and sanitation utility, will be privatized in the near future and both sectors have been opened to private participation.

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, an autonomous state agency, with legal independence and its own budget separate from that of the central government. It is responsible for the regulation of drinking water supply, sewerage telecommunications and electricity utilities. A charge for control, monitoring and inspecting utilities was also created to finance the Ente Regulador. The amount of the charge applied to each utility is to be fixed annually by the Ente Regulador, it cannot, however, exceed 1% of the gross income of the utilities. The charge must be paid by the utility companies and cannot be passed on through the tariffs to customers.

(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 in urban areas. The Juntas Administradoras de Acueductos Rurales (JAAR) provide service to the rural population. The JAAR are regulated by the Ministry of Health (MINSA).

Law Nº 2 of 7 January, 1997, in which an institutional and regulatory structure were created for the provision of water supply and sanitation services, reformed the sector. The principle purposes of the law are: (i) to separate responsibilities for policy definition and planning, for regulation, inspection and control and for service provision; (ii) to give the sector a transparent, effective and efficient institutional structure; (iii) to strengthen the process for producing standards; (iv) to lay down the principles for the tariff and subsidy regimes; (v) to conciliate an efficient and effective provision of services with adequate public health protection;
(vi) to adequately protect the rights, obligations and prerogatives of customers, service providers and the State; (vii) to the appropriate operation and adequate maintenance of existing systems and to promote service expansion; and (viii) to promote private sector participation in service provision.

The government has decided to privatize IDAAN and created the Comisión de Incorporación de la Participación del Sector Privado to direct the privatization process in the drinking water supply and sanitation sector. IDAAN will be privatized as one unit under a 30 year concession. The concession process is programmed to be completed during 1998. Prequalification is scheduled for June/July, bidding for August/September and negotiations for October/December. A BOT contract has already been given to supply water in bulk to Panama City.

(b) **Electricity**

Until recently, the Instituto de Recursos Hidráulicos y Electrificación (IRHE) operated as a vertically integrated company for generation, transmission and distribution and undertook the planning and regulation of public electricity services. Two other institutions, the Comisión del Canal de Panamá, with a 142 MW plant, and the Chiriquí Land Company, with a 10 MW plant, make up the rest of the generating capacity of the country.

The government has decided to reform entirely the electricity sector. Reforms are directed towards increasing efficiency and improving the level of service through the introduction of competition and increasing private participation. As a first step, it is proposed to allow private investors to generate and sell electricity by building new plants. Under Law N° 6 of 9 February, 1995, the monopoly of IRHE was ended and private companies were permitted to generate electricity for their own consumption or for sale either to IRHE or third parties. The IRHE has contracted with a private generator for 50 MW over 5 years, 1997-2002.

In the second place, Law N° 6 of 3 February, 1997, defines the regulatory and institutional structure for the provision of public electricity services. The principle elements of the regulatory and institutional structure are the following: the formation of the Comisión de Política Energética under MIPPE, charged with designing overall policies and a strategy for the energy sector; the Ente Regulador will regulate the electricity sector; prices in the activities subject to monopoly in transmission and distribution will be regulated according to tariff formulas which provide incentives for efficiency and give an adequate return on the invested capital; generation prices will be determined through competition; and the integral operation of the public service will be provided by the Centro Nacional de Despacho, within the Empresa de Transmisión.
Domestic or foreign, private or joint companies can participate in the electricity sector through: buying shares in the state electricity companies, concessions for the construction and operation of hydroelectric or geothermal plants and in transmission and distribution for public service. The law provides for the separation of generation, transmission and distribution functions and establishes restrictions on the joint development of these activities. A free market will be established for large customers and distribution companies, who may buy directly from generating companies. The market will be based on the principle of open access to transmission and distribution networks.

The law provides for a five year transition period. In this time, the Empresa de Transmisión, a state company, will be the principal purchaser with responsibility to buy energy through competitive bids. It will also be responsible for planning expansion and for the integrated operation of the national grid. Beginning in the sixth year, the Empresa de Transmisión will stop being the principle buyer and the distribution companies will be able to buy freely in the market.

The government has announced plans for the privatization of the IRHE. The IRHE is being restructured into 8 separate companies: transmission, three distributors, a thermal electric generator, and three hydroelectric generators. The shares of all these companies, with the exception of the transmission company, which will remain 100% property of the state, can be sold to local or foreign investors. A block of 51% or more of the shares of the thermal generator and the distribution companies and up to 49% of the shares of the hydroelectric generators (in this case, the sale contact of the shares will be accompanied by a contract giving the buyer management control) resulting from the restructuring of IRHE can be sold to the private sector. The State will reserve 10% of the shares in order to sell them to the employees. The remaining shares will be sold in the stock market or by public auction, in lots limited to 5% of the shares per buyer. The sales of the shares in the companies should begin for the distribution companies in the third quarter of 1998 and for the generating companies in the fourth quarter. A second sale of shares is expected in 1999.

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 31 December 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.

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<th>Sector statistics</th>
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<tr>
<td>Inland waterways: 82 km Panama Canal; and 800 km navigable by shallow draft vessels.</td>
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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) (AAA). AAA operates 220 water supply systems and 71 wastewater collection and treatment systems on the island.

As a first step, AAA negotiated the operation and maintenance of four wastewater treatment plants: Barceloneta, Bayamón, Carolina and Humacao. As a second step, in September, 1995, it negotiated a contract with Professional Services Group, Inc., a United States subsidiary of the Compagnie Générale D’Eaux of France, to manage AAA’s drinking water supply and wastewater services. The government is now renegotiating the terms of the contract.

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 standby generators. 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. Over the last decade, most public companies have been privatized. The provision of drinking water supply and sewerage services has recently been opened to private sector participation and electricity generation partially privatized.

The Public Utilities Commission (PUC) is charged with the regulation of water supply, electricity and telecommunications. It is an independent body. It regulates prices and service quality.

(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 is to be carried out in two stages. At the first stage, already completed, an interim operator is to 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 first stage operator would be given a preference in the concession.

The government has negotiated a three year contract with a consortium comprising Severn Trent Water International and Tarmac Ltd. WASA and the consortium formed a new joint company, the Trinidad and Tobago Water Services (TTWS). The contract began to run in April, 1996.

The contract has many of the characteristics of a traditional management contract. Under the contract TTWS must meet very specific performance objectives. The total payment amounts to some US$ 10 million, but the government can retain up to 61% for failure to meet objectives. It is expected that the company will be financially viable in three years. In order to facilitate the transition, an US$ 83 million loan has been contracted with Citicorp Merchant Bank, a local
subsidy of Citibank. The contract, also, has made it possible to make operational a World Bank loan to finance an investment programme.

(b) **Electricity**

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.

<table>
<thead>
<tr>
<th>Sector statistics</th>
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<tr>
<td>Net installed capacity in 1995 (MW):</td>
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<tr>
<td>· thermal .................. 1 150</td>
</tr>
<tr>
<td>· TOTAL ..................... 1 150</td>
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<tr>
<td>Percentage of population with residential connections in 1989 ........... 97</td>
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PowerGen has private participation. T&TEC with 51% is the majority shareholder and the remaining 49% belongs to two United States companies, Southern Electric International Inc. (SEI) with 39% and Amoco Business Development Corporation with 10%. The two companies paid T&TEC US$ 71.6 million for their 49% stake and agreed to make investments totalling US$ 35.9 million in the new plant, equipment and services.

Until recently, the T&TEC had a virtual monopoly over the generation of electricity. It has been announced that generation will be opened to private sector participation. The Government is now formulating a policy on how much additional private participation will be allowed in the generation sector.
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. A similar situation exists 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. In 1996, in the Bahamas, Waterfields Co. Ltd., a joint company between Bacardi and DesalCo, won a 15 year concession to build a desalinization plant under a “build, own and operate” (BOO) arrangement. It will sell all its production to the Water and Sewerage Corporation, the state company responsible for providing water supply and sanitation on the island.

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 incipient, some examples can be found. In Anguilla, the privately owned Anguilla Electricity Company (ANGLEC) is responsible for generation, transmission and distribution. In Barbados, 78% of the ordinary shares of the Barbados Light and Power Company (BL&P) are in the hands of private investors, while the other 22% are held by the government through the National Insurance Board. In Santa Lucia, the St. Lucia Electricity Services Ltd., (LUCELEC) is a joint company with the shares held in a 43% by the U.K. Commonwealth Development Corporation (CDC), 18.7% by the Castries municipality, 12.4% by the government, 12% by the Social Security and the rest by other private holders. 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.