# Informe Energético de América Latina y el Caribe 2000





# Energy Report of Latin America and the Caribbean 2000

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#### PRESENTATION

After recording declines in major indicators in 1999, Latin America and the Caribbean was noteworthy in the year 2000 for the recovery of its energy sector development and for the general performance of its economy.

Recovery of the region's economy in 2000 was reflected principally in GDP growth, which amounted to 4.1% according to ECLAC, compared to 0.3% observed the previous year. Reactivation of world trade, recovery from the economic crisis in other regions of the world earlier than expected, and the region's rising exports, especially of oil and products, were the key factors for this recovery.

Development of the energy sector, especially the oil and gas subsector, was heavily influenced by the behavior of international oil prices, which continued to rise after their upturn in 1999, reaching their highest values since the Persian Gulf war by the fourth quarter of 2000, at 37 dollars per barrel, with an average increase of 60% compared to 1999. Major impetus was given to exploratory activities in the region's countries, with renewed interest by private investors, start-up of production that had been interrupted, and expansion of production and transport infrastructure.

As for natural gas, it continued to consolidate its status as the energy resource with the highest growth, not only in terms of reserves but also in terms of production, demand, and intra-regional trade, displacing mainly the consumption of oil products and coal in the industrial sector. Its share in generating electricity and residential energy demand, a sector where in addition the share of firewood continues to decline, has grown. It is important to underline that hydroenergy slightly increased its share in electric power generation, thus remaining the principal source of energy for this activity, at 62.8%.

The entry into force and application of the reforms of regulatory frameworks, as well as the consolidation of binational agreements and subregional integration, were apparent in the involvement of new privatesector players, mainly in power generation and distribution projects, with agreements having been drawn between the public and private companies of neighboring countries to develop or expand electric power and natural gas interconnections.

In general, energy supply and demand in the region grew compared to 1999, at 1.94% and 1.75%, respectively, although not at the same rate as GDP. As for total production and exports, which between 1998 and 1999 had recorded negative growth, they increased by 2.9% and 3.6%, respectively, in the year 2000.

The energy sector's contribution to the region's sustainable development and environmental preservation was also positive in 2000. Access of the population to commercial and less polluting energy sources increased, as well as per capita consumption of electricity, which rose from 400.5 to 409.9 kWh per inhabitant per year. Despite the rise in total energy consumption and electric power generation, it was possible to observe higher efficiency, as consumed energy for each US\$1000 of GDP declined by 2.2%. Likewise, CO2 emissions compared to GDP declined by 2.07% and, compared to each GWh generated, by 2.31%.

The Energy Report of Latin America and the Caribbean that is being presented by OLADE's Permanent Secretariat for the year 2000 intends to contribute to a better knowledge of the situation and results of the sector in the region and each one of its countries, by providing an analysis of the performance of the principal energy and energy-economic indicators and the relevant events that took place during the year.

All the information on the region is supplied by the Member States of OLADE through the Energy-Economic Information System (SIEE®).

DR. JULIO HERRERA Executive Secretary

# World energy outlook

The world's energy sector was characterized in the year 2000 by the steady rise of oil prices that had started in mid-1999. Furthermore, the international financial situation evolved positively, in contrast to the trend observed over the two preceding years, reversing the evolution observed between 1998 and 1999, when world energy production and consumption declined. Indeed, the U.S. economy continued to expand, the economies of Southeast Asia recovered more quickly than expected, and the former Soviet Union recorded high economic growth, which has been maintained over the last two years. In the European Union, economic activities increased due to the recovery of the

world economy and exports rose owing to the depreciation of the Euro. In Latin America, the Mexican economy continued its expansion, driven by the United States' economic boom and growing domestic demand, whereas in Brazil the economy recovered more rapidly than expected, due to positive impacts from neighboring countries.

Oil prices have been showing unstable behavior since 1998, the year in which prices fell to US\$10 per barrel, owing to major oil supply surpluses stemming lower demand triggered by Asia's recessions and the mild winters in Western Europe and North America. In

#### Figure 1. WORLD PRIMARY ENERGY PRODUCTION BY ENERGY SOURCE (MBoe)

Source	1991	1999	2000	Growth Rate (%)				
Course			1. N. 1. A. 1. N.	91-00	99-00			
OIL	22523.1	24643.2	25642.9	1.45	4.06			
COAL	22995.2	21937.0	21987.9	-0.50	0.23			
NATURAL GAS	12365.0	14235.7	14854.2	2.06	4.34			
ELECTRICITY	2256.4	2777.4	2851.3	2.63	2.66			
BIOMASS	4112.0	4160.2	4140.1	0.08	-0.48			
TOTAL	64251.6	67753.5	69476.4	0.87	2.54			



#### Figure 2. WORLD PRIMARY ENERGY CONSUMPTION (MBoe)

0	1991	1999	2000	Growth R	ate (%)
Sources				91-00	99-00
OIL	22725.7	25008.4	25233.6	1.17	0.90
COAL	23413.4	22196.7	22500.0	-0.44	1.37
NATURAL GAS	12154.3	13970.1	14641.5	2.09	4.81
ELECTRICITY	2255.7	2777.6	2852.4	2.64	2.69
BIOMASS	4047.9	4093.8	4073.7	0.07	-0.49
TOTAL	64597.1	68046.6	69301.1	0.78	1.84

SOURCE: OLADE/CE - SIEE



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2000, oil prices reached their highest level since the Persian Gulf war between 1990 and 1991 and went as high as US\$37 per barrel, as a result of the drop in production in the OPEC countries and other large exporters such as Mexico, Norway, Oman, and Russia. In addition to this, oil companies restricted their investments in new exploration projects because of the fear of new drops in crude oil prices, whereas the demand of Asian countries rose because of the unexpected recovery of their economies.

High oil prices and the rise in national industrial production helped Russia ensure steady economic growth for the second consecutive year since the collapse of the Soviet Union, whereas Western industrialized countries were affected by this rise. In the United States, because of fear of fuel shortages for district heating and in view of low fuel stock levels, the Government permitted industry to use close to US\$30 million barrels of oil from U.S. strategic reserves. In the European Union, Spain and France wanted to apply the same strategy but the International Energy Agency and other member States opposed their initiative.

In the United States, electricity prices rose steeply in various states, especially in California, where the problem that arose was blamed on the deregulation policy and inadequate power generation capacity. Despite high oil prices reached in 2000, a general recovery of the world economy, which on average grew at a rate of 3.5%, the highest since 1996, was observed. This in turn indicates lesser dependence of the economy on the behavior of crude oil prices, in contrast to earlier oil crises. Contrary to what was observed in 1999, in 2000 both energy production and consumption in the world recorded positive growth rates, 2.54% and 1.84%, respectively, as indicated in Figures 1 and 2.

The composition of world energy supply did not change substantially from what was observed in 1999 and the past decade, where oil was the most important resource, followed by coal and natural gas. In Figures 1 and 2, it can be noted that, during 2000, oil production rose by 4.06%, the highest growth rate since 1988, despite the cutbacks agreed upon by some oil exporting countries. Oil consumption, however, recorded a growth rate of only 0.9%, which was lower than the annual average growth rate recorded since 1991, which was 1.17%. In 2000, coal production and consumption recorded positive growth of 0.23% and 1.37%, respectively, results that had not been observed since 1997, the year when both production a nd consumption started declining gradually year by year.

Electric power kept growing steadily not only in terms of production but also

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Regions	1991	1999	2000	Growth Rate (%)			
	Ť			91-00	99-00		
NORTH AMERICA	6064.7	7013.0	7074.3	1.73	0.87		
LATIN AMERICA & CARIBBEAN	1831.2	2120.6	2136.6	1.73	0.75		
EUROPE	5127.3	5469.4	5431.1	0.64	-0.70		
FORMER SOVIET UNION	2867.8	1279.5	1249.2	-8.82	-2.37		
MIDDLE EAST	1222.5	1493.8	1508.2	2.36	0.97		
AFRICA	689.9	836.4	842.2	2.24	0.69		
ASIA & AUSTRALASIA	4922.3	6795.7	6992.0	3.98	2.89		
WORLD	22725.7	25008.4	25233.6	1.17	0.90		
SOURCE: OLADE/CE - SIEE®					a statistica da se		

Figure 3. OIL WORLD CONSUMPTION (MBoe)

in terms of consumption, with growth rates of 2.66% and 2.69%, respectively. **Natural gas** showed major growth in production and consumption over the last 10 years and by the end of 2000 it had a positive rate of 4.34% for production and 4.81% for consumption, the highest growth rate for all energy sources.

The expansion recorded by natural gas production and consumption in the world is due to its favorable price compared to other fuels, lower pollution, ease of handling and global economic growth. About 22% of world consumption of this energy source came from imports, compared to 50% for oil consumption.

Natural gas reserves are more widely distributed than oil reserves and the highest increases reported over the last year are in the Middle East, Latin America and the Caribbean (Tables 1.1.1 and 1.2.1). The production and consumption of **biomass** recorded negative growth rates by the end of 2000, with values of -0.48% for production and -0.49% for consumption.

#### Energy Consumption and Production by Region

The world consumption of **o**il in 2000 (Figure 3) rose by only 0.9% compared to 1999, with the nonindustrialized countries accounting for the highest rises, especially the countries of Asia and Australasia, whose rapid economic recovery contributed to high regional growth of oil consumption, amounting to 2.89%, despite high international crude oil prices. North America saw its consumption rise by 0.87% compared to an annual average of 1.73% since 1991, whereas Europe showed a decline of -0.7% in the last year. In 2000, the former Soviet Union countries, which in the last 10 years recorded a negative annual average

#### Figure 4. ENERGY WORLD PRODUCTION (MBoe)

Devices	1991	1999	2000	Growth Rate (%)		
regions				91-00	99-00	
NORTH AMERICA	13630.2	14422.9	14495.6	0,69	0.50	
LATIN AMERICA & CARIBBEAN	4689.5	6073.1	6260.3	3.26	3.08	
EUROPE	7262.0	7217.1	7206.5	-0.09	-0.15	
FORMER SOVIET UNION	13904.0	10844.8	11373.2	-2.21	4.87	
MIDDLE EAST	6671.2	8710.3	9295.7	3.75	6.72	
AFRICA	4466.0	5211.0	5372.1	2.07	3.09	
ASIA & AUSTRALASIA	13618.6	15265.9	15464.7	1.42	1.30	
WORLD	64241.5	67745.2	69468.1	0.87	2.54	



growth rate (-8.82%), reduced their consumption by 2.37%, compared to 1999.

In 2000, **natural gas** consumption showed major growth in the world and by region. Whereas between 1990 and 1999 its annual average growth amounted to 2.09%, in 2000 its growth reached 4.81%, compared to 2.74% recorded between 1998 and 1999; a similar behavior has been noted in all the regions, the most noteworthy being Africa (9.1% compared to 2.8%), Latin America (3.7% compared to 6.5%) and North America (1.9% compared to 5.1%).

The infrastructure and markets for the foreign trade of natural gas in the world increased considerably. In North America, natural gas import capacity to the United States from Canada rose by more than 40 million cubic meters per day, whereas the capacity between the United States and Mexico rose by close to 18 Mm<sup>3</sup>/day. In the European Union, August 10, 2000 was set as the deadline for gas systems to be accessible to many users, who will be entitled to freely choose their supplier. In Latin America and the Caribbean, natural gas trade has increased notoriously, especially between the Southern Cone countries and from Trinidad and Tobago to Puerto Rico and Spain, with future exports being planned to the Dominican Republic.

In 2000, the consumption of **electricity** rose in all regions of the world, similar to the evolution of natural gas. The year 2000 ended with a 2.69% rise and a final consumption of 4,603 TWh, with the highest consumers being North America and

Western Europe, followed by Latin America, Asia and Australasia.

As for biomass, it has kept up the trend that has characterized it over the last 10 years, that is, steady decline of world consumption, which in 2000 amounted to -0.48%.

In terms of total energy production (Figure 4), in 2000 all the regions recorded positive growth rates, except for Western Europe, which showed a rate of -0.15%. As for the other regions, it is worth noting the growth observed in the Middle East (6.72%), stemming from its rapid economic recovery from the recession in 1999, as well as the growth in the former USSR (4.87%) as a result of its economic expansion, stemming from the rise of its oil exports, favored by higher crude oil prices and growing industrial production for domestic consumption, in view of the devaluation of the ruble and the resulting difficulty in purchasing imported products.

In 2000, the share of Latin America and the Caribbean in world energy production and consumption rose, in keeping with the trend observed over the last few years. By 1991, energy production in the region accounted for 7.3% of world production and rose to 9% in 2000, whereas the region's share in world consumption rose from 5.9% in 1991 to 6.8% in 2000.

This situation held true for primary energy sources, except for biomass, for which a decline in the region's share was observed, from 16.2% to 13.8% between 1999 and 2000.

## Important aspects in 2000

#### OIL

Between Argentina and Brazil there was an oil swap. The oil companies Petrobras and Repsol YPF swapped assets in the amount of US\$1 billion: Petrobras kept Eg3, whereas Repsol YPF consolidated its position in Brazil. Each party transferred assets amounting to US\$500 million. Furthermore. the Argentine Government started up negotiations for oil and gas exploration in line with its policy for the Falklands (Islas Malvinas), South Georgia, and Sandwich islands and the surrounding maritime area, in a sustained effort to recover sovereignty over these territories with respect to the way of living of their inhabitants.

**Barbados** started up its oil production activities again in October 2000, after they came to halt in February 1999 because of low oil prices. The Barbados National Oil Company (BNOC) has planned to increased its production to 3,000 bbl/day for the second quarter of 2002, for which purpose it is using horizontal drilling techniques.

In **Bolivia**, the Vice-Ministry of Energy and Hydrocarbons proposed a draft bill of incentives to reactivate exploration and production activities in the country's nontraditional areas, while maintaining international competitiveness. In December 2000, the process of liberalizing the wholesale distribution system for supplying fuels to the entire country continued, in order to replace the current single wholesaler, YPFB, by eight efficient wholesalers and thus ensure better service and prices.

In 2000, **Brazil** continued opening up oil and natural exploration, development and production activities, which was previously the exclusive domain of Petrobras, to the private sector. To date, 33 blocks have been awarded to the private sector. The sector's liberalization has enabled about 35 companies to operate or participate in consortiums in the blocks that have been awarded.

Despite the uncertainty of the peace process in Colombia and the rising number of attacks on the oil pipelines, considerable recovery has been observed in this country. In 2000, 20 new exploratory wells were drilled, which is a higher number than the goal that had been set for that year, and 30 new partnership contracts were signed on the basis of the reforms promoted by the Ministry of Mines and Energy, which provide for tax incentives, ensure a more flexible scheme for royalty payments, and reduce the share of Ecopetrol for certain contracts, in order to give incentives to private-sector participation and ensure oil self-sufficiency in the future. In order to increase refining by 26% for clean products that are now being imported for domestic consumption, the Colombian Government is working to modernize the refineries of Barrancabermeja and Cartagena. The

Trans-Andean Oil Pipeline between Ecuador and Colombia, which carries Ecuadorian crude oil, is finally operating, although with periodical breaks due to guerrilla sabotage.

Work to expand the refinery of RECOPE in **Costa Rica**, from its current capacity of 15 KBD to 25 KBD in 2001, continued.

Current oil and gas resources from **Cuba** in 20 fields are operated on the basis of incremental production contracts and risk contracts in 35 onshore blocks and 10 offshore blocks. At present, 20 blocks have been awarded to companies from six countries for risk oil prospecting. Between 1991 and 1999, investments in the oil sector rose to about US\$600 million in prospecting and production.

Ecuador took major steps to give impetus to its oil and gas industry, which is the economy's mainstay. Outstanding debts amounting to US\$61.2 million were paid and, at the same time, US\$24.9 million of receivable assets for oil transport were recovered. National crude production, which had been declining over the previous five years, stabilized. Ten development wells were drilled and 198 wells were upgraded. Expansion of the Trans-Ecuadorian Oil Pipeline (Oleoducto Transecuatoriano-SOTE) from 330 to 390 KBD was concluded. Petroperú, Petroecuador and Alberta Energy Company of Canada (AEC) are examining the possibility of signing

an agreement to develop oil areas on the border between **Ecuador** and **Peru**. AEC will complete the feasibility study for building an oil pipeline between southern Ecuador and the Norperuano Oil Pipeline located in Loreto and Piura in northern Peru.

At present, in **Guatemala**, 11 oil operation, 3 production, 5 production-sharing, and 3 seismic option contracts were signed. With about 100 exploratory wells and more than 40 wells showing traces that will have to be evaluated, it is expected that there will be greater private-sector participation in coming years.

**Guyana** continues its efforts to find profitable offshore discoveries, for which purpose it is conducting preliminary work along with foreign companies for oil exploration.

In **Haiti**, as a result of geological studies, 11 blocks with a high oil and gas potential were delimited. Through a brochure, attractive conditions are being promoted for oil exploration and the Office of Mines and Energy, with the sponsorship of the Ministry of Public Works, Transportation, and Communications, is looking for private-sector companies to become involved in a wide-ranging oil production program.

In Mexico, projects have started up to inject massive amounts of nitrogen in the Cantarell field complex in Sonda de Campeche, at an estimated cost of US\$10 billion, the highest in the world for this type of undertaking. In the second quarter of 2000, PEMEX announced the discovery of another giant field, Sihil of Sonda de Campeche, whose minimum reserves are estimated to be 1,400 Mbls. Mexico and the United States signed a Gulf of Mexico border waters treaty, granting to Mexico jurisdiction over 62% of this deep-water sea area and establishing a 5-km buffer zone where both countries have pledged to refrain from drilling over the next 10 years.

The Department of Hydrocarbons of the Directorate for Mineral Resources of **Paraguay** signed technical and scientific agreements with Reservoir Definition Inc. (RDI) for the reinterpretation and reprocessing of existing seismic lines in the country, as well as magnetometric and gravimetric studies, and with the IHS Energy Group to promote the country's oil and gas resources.

The government of Peru continues to promote private-sector investment in oil exploration and production activities, in order to increase reserves and achieve self-supply over the medium term. Likewise, efforts have continued to promote the creation of competitive markets that promote private-sector investment in oil and gas refining and marketing activities. Regarding new oil exploration projects, there are now 14 oil operations contracts in force involving the search for new oil and gas reserves, and there are also 15 production contracts.

In **El Salvador**, in the face of the shortage problems that arose, the Department of Mines and Hydrocarbons of the Ministry of the Economy signed an agreement with Tropigas requiring that it store a minimum stock of propane equivalent to at least three days of national consumption.

In February 2000, the state oil company of **Suriname**, Staatsolie, signed an agreement with Western Geco to acquire 2D seismic information for the exploration of nearshore fields. Western Geco will acquire, process, and market this information for future contracts in the region. In March 2000, Staatsolie signed an onshore exploration contract with Koch Exploration Canada Ltd., a subsidiary of Koch Industries from the United States.

ANCAP of **Uruguay** is in the process of expanding the capacity of the Teja refinery by about 30%, after signature of a contract with Techint and ABB. The investment amounts to US\$120 million.

In October 2000, the Government of Venezuela signed the Caracas Energy Cooperation Agreement with the governments of Belize. Rica, Costa ΕI Salvador, Guatemala, Haiti, Honduras, Jamaica, Nicaragua, Panama, and the Dominican Republic. In conformity with the provisions of the Agreement, Venezuela shall supply crude oil and oil products through quotas allocated to the signatory countries. Under the Agreement,



Venezuela finances a portion of the purchases of crude and oil products on the basis of prices, as long as the crude and oil products that are purchased are for domestic consumption. The financing scheme provides for a term of up to 15 years to amortize the capital, with a grace period of up to one year and an annual interest rate of 2%.

The exploratory activity in Venezuela was aimed at increasing light and medium crudes by looking for fields with reserves holding more than 500 million barrels of these types of crude. In general, the exploratory efforts of Petróleos de Venezuela S.A. added proven reserves amounting to 209 million barrels of oil, whereas activities undertaken with partners contributed unofficial proven reserves amounting to 111 million barrels of crude oil. Thus, the proven reserves of crude and condensates, in the vear 2000, amounted to 77,685,000,000 barrels.

Furthermore, the oil production capacity of PDVSA amounted to 3,582,000 barrels per day, 84% of which was from direct management by the national company and 16% as a result of agreements that PDVSA has with other companies. When the strategic partnerships of the Orinoco Oil Belt are taken into account, Venezuela's production capacity amounts to 3,854,000 barrels per day.

#### NATURAL GAS

In Argentina, Repsol YPF started up the Mega project, with an investment of 470 million pesos, to process and market natural gas extracted from Loma de la Lata. The first export of Argentinean natural gas to Brazil has taken place; the natural gas comes from Argentina's largest deposit, Neuquen of Loma de la Lata, and is carried by the trans-border gas pipeline from Paraná to Uruguaiana, Brazil. Argentina will be supplying 2.8 million m3/day to the station of Uruguaiana, which is equivalent to 70 million pesos of sales abroad per year. The scale of the gas pipeline in Paso de los Libres will also promote the development of distribution network for this fuel in the province of Corrientes. The Cuenca Marina Austral Consortium, set up with French, German, and U.S. capital, inaugurated a liquefied petroleum gas plant with a production capacity of 8 million cubic meters per day, for the first phase, in Cañadón Alfa, Tierra del Fuego, built in 18 months, with an investment of US\$62 million.

**Brazil** took several steps aimed at gradually increasing the share of natural gas in the energy matrix, intended to reach the goal of a 12% share by the year 2010. For the first time, it was possible to check the effective application of the principle of free access to gas lines made possible by ANP to the Bolivia-Brazil gas line. In June 2000, the first segment of the southem Brazil gas line (Transportadora Sur Brasilera de Gas—TSB) between the Argentina–Brazil border and Uruguaiana started up; this enabled consumption amounting to 0.5 million m3/day

of the thermoelectric station of Uruguaiana; by the middle of the year the third segment had started up (Canoas/REPAF-Triunfo/COPESUL) with a carrying capacity of 0.7 million m3/day of Bolivian gas.

The Vice-Ministry of Energy and Hydrocarbons of Bolivia, as part of the new energy policy "to monetize available gas reserves by aggressively searching for new uses and markets" held meetings in June 2000 in Rio de Janeiro with representatives of Petrobras and Petroquisa S.A. in order ensure the viability of building a petrochemical plant for producing ethanol with a capacity of 600,000 tons/year, with investments amounting to US\$1 billion and natural gas consumption on the order of 25 million m3/day. The signature of a Memorandum of Understanding between Bolivia's Minister of Economic Development and Brazil's Minister of Mines and Energy in May 2000 launched the project to build a thermoelectric complex comprised of two plants, one in Puerto Suárez and the other in Corumbá, enabling Bolivia to export electricity for the first time. In December, the Presidents of Bolivia and Brazil laid the first stone to build the first plant, San Marcos in Puerto Suárez, which will involve a capacity of 110 MW, an investment of US\$70 million, natural gas consumption of 1.2 million m3, and generation of 870 GWh/year.

In **Colombia** geographic coverage of gas service rose from 18 to 38 municipalities and 70,000 new residential users were connected, increasing effective service coverage from 6% to 13%. The country continued the Motor Vehicle Natural Gas Program, liberalizing the price of compressed natural gas and authorizing shops to convert gasoline-driven motor vehicles to natural gas, in addition to the authorization of eight supply facilities in service stations. Some producers are interested in carrying gas to Central America through a gas pipeline that starts in Cartagena and reaches Colón in Panama, to be sold to an electric power generation plant. Initial demand is calculated at 40 MPCD. According to the project's schedule, it will conclude in 2004. By this date it will eventually have been extended to the borders of Honduras and El Salvador, facilitating its extension to Costa Rica and Nicaragua.

There are projects being implemented to take about 3.5 MPCD of associated gas from the oil fields of the eastern region of **Ecuador**, obtaining as a result 48 MT of LPG per day. Furthermore, natural gas exploration in the Gulf of Guayaquil is being continued with the company EDC.

Mexico is reviewing the possibility of importing natural gas in amounts of 270 MPCD. In the next three years, it is possible that these imports will reach more than 900 MPCD. The natural gas company of Mexico (Gas Natural de México) obtained from the Energy Regulation Commission (Comisión Reguladora de Energía-CRE) a permit to build and operate a natural gas distribution system in the geographical area Bajío del Norte. It will have extend for 719 km, for which US\$34 million will be invested in this period of time. The system will carry an average of 1.2 million cubic meters per day. The CRE issued a resolution approving substitution of the Spanish company Gas Natural SDG for the U.S. company Lone Star in operating Metrogas, the natural gas distributor in Mexico City. Investments amounting to more than US\$100 million for installations and more than 2,600 km of gas lines are expected.

The Hydrocarbons Department of **Guatemala** has planned a gas pipeline that will be jointly installed with Mexico, as part of an agreement in natural gas trade and transport, to be used in electric power generation. Its implementation will be in the hands of the private sector.

In February 2000, the Government of **Peru** signed a contract for production in Camisea with the consortium comprised of Pluspetrol–Tecgas (Argentina), Hunt Oil (United States), and SK (Korea), which approves the extraction of about 13 trillion cubic feet of gas and 660 million barrels of liquid from the reservoir over a 40-year period. Afterwards, in December 2000, it signed contracts for gas transport and distribution for Peru's largest cities, with Techint (Argentina), Sonatrach (Algenia), Graña Montero (Peru), Pluspetrol (Argentina), Hunt Oil (United States), and SK (Korea).

In Paysandú, Uruguay, gas that will be supplying the residential, commercial, and industrial sectors in the city will be made available to the gas distribution network. The network is expected to enter into 5,000 supply contracts by the end of 2000. On the other hand, the building of the Cruz del Sur Gas Pipelines will begin in January and end in early 2002. This a joint undertaking of ANCAP (20%), British Gas (40%), Pan American Energy (30%), and Wintershall (10%) that will be supplying natural gas to Montevideo and to the cities of the Departments of Colonia, San José, and Canelones, covering almost 55 % of the country's population; the main gas line will extend over 210 km from Punta Lara (Argentina) to Montevideo and additional 200 km of branches. ANCAP has decided to jointly become part (45%), along with Sempra Energy (15%) and Unión Fenosa (40%), of the gas network distribution systems inside the country through Conecta S.A., which is already distributing in Paysandú. The majority of the localities of the departments of the interior will be supplied with natural gas of LPG via network. The network that will be connected first will be Ciudad de la Costa (start of 2001), to provide LPG until natural gas is supplied by the Cruz del Sur gas pipeline.

In **Trinidad & Tobago** the company BPAmoco Trinidad Exploration announced the discovery of two new fields during 2000, Red Mango and Manakin, with reserves estimated at 5 billion cubic feet, which guarantees gas development projects that are being implemented since mid-1999, when the first liquefied natural gas (LNG) plant in the Western Hemisphere, with a capacity of 3 Mtons/year, started operating. Atlantic LNG announced plans to triple the capacity of the plant with investments amounting to US\$7 billion, which will start up in 2003.

During 2000, the natural gas reserves of **Venezuela** amounted to 148 trillion cubic feet, as a result of exploratory activities, which contributed 291 billion cubic feet of gas as a result of PDVSA's direct management and 458 billion cubic feet with third-party participation. This year, the first actions were taken to develop natural gas business, especially non-associated gas, with the participation of the international and national private sector. Thus, actions were started to register and classify the companies for the bidding process of the blocks for non-associated gas exploration.

#### ELECTRICITY

In July 2000, the Government of Argentina invited the private sector to accompany the State in the Federal Electric Power Transport Plan. This project will require an investment on the order of 700 million pesos and its objective is to promote the development of the transportation network in order to improve service quality and security, to finance only projects that were identified as beneficiaries of the system, and especially to consider connecting the grids. The Congress ratified the third law to permit the expropriation of land to raise the level of the Yacyretá dam, because the associated hydropower station is operating at a level that is lower than that envisaged in the original project. The National Energy Regulatory Agency (ENRE) issued a resolution ordering Endesa to sell its share in one of the two electric power distribution utilities where the local market participates. Thus, the Spanish firm will have to opt to remain in Edenor or Edesur.

In 2000, Brazil increased its electric power generation installed capacity by 4.2 GW and built 2,600 km of transmission lines over 230 kV. In global terms, the bidding processes and authorizations for new hydro, thermoelectric and renewable energy stations amounted to 12.59 GW of new energy. Regarding the Priority Thermoelectricity Program, the National Energy Agency (Agencia Nacional de Energía Eléctrica-ANEEL) authorized 16 projects corresponding to 7.45 GW. There was also a bidding process for building 5,236 km of lines for the basic network. To these projects must be added 696 km of lines that do not require bidding processes. ANEEL reviewed and approved 43 energy efficiency projects, with an investment of 300 million reales. The economic and financial aspects, service, quality, technical models for power generation, compliance with network procedures and construction of power transmission system expansion works of all the electric power concession holders, distributors, generators and transmitters were audited. In 2000, a profile of the Brazilian energy market showed 65.23% private-sector participation (or privatized), 34.77% private enterprise as such, and 2.49 % state-owned utilities.

The process of capitalizing power utilities in Colombia is aimed at linking strategic investors to power distribution utilities in which the State is a majority shareholder, looking for capital injection and the necessary management for its consolidation and efficient service delivery, ensuring technical and financial viability over the medium and long term. It started in 1999 and, to date, the legal, appraisal, accounting and technical procedures for each one of the utilities are at an advanced stage, and the appraisal model and proposal for structuring the capitalization have concluded. The National Government's program entitled "ISA: Shares for Everybody" was successfully carried out. The democratic spirit that inspired this program permitted the placement of 115 million shares on the market in the hands of 62.106 new shareholders who become the owners of 13.33% of the utility. This contribution constitutes a fundamental support for the investment plan to provide electricity to zones that are not interconnected over the next few years. According to the results of the Solidarity Fund for the year 2000, the missing subsidies for this year were covered for all the companies of the electric power and natural gas sectors, permitting in many cases handling deficits validated by previous periods.

In **Cuba**, two electric power stations using associated gas were built; they generate 160 MW. Four turbines were installed in Varadero, three with European technology and one 20-MW Hitachi to control power spikes.

At the end of 2000, in **Ecuador** there were 11 power generation utilities, one transmission utility and 20 distributors, of which 14 had generation because as yet they have not been split as ordered by the Law Governing the Electric Power Sector, and two of the power distributors only operated stand-alone systems and therefore they do not have to break away from their generation portion.

The Francisco Morazán hydropower station in Honduras started operating at full capacity (420 MW) at the end of February, almost one year after the fire that severely damaged one of its four turbines. A contract between the European Union (EU) and the Technical Secretariat of Cooperation (Setco) was signed for the Autonomous Generation and Rational Use of Electrical Energy Project, in the amount of 92 million lempiras. The project focuses on the implementation of concrete actions to promote the rational use of electricity. In addition, contracts were entered into with three private enterprises for the generation of 53.63 MW of hydropower. The projects are: the Yojoa station in the village of los Cipreses; the Babilonia plant in Gualaco, and the Cangrejal Project in La Ceiba, which will be generating 50 MW at a cost of 125 million lempiras. Furthermore, the electric power interconnection between the island of Amapala and the rest of the country was inaugurated, via an underwater cable; the project was valued at 16 million lempiras, 10 million of which were provided by the Japanese Government and the rest by Honduras. The project has a capacity of 10 MW of power, twice as much as that need by the population of 9,000.

In El Salvador, as part of the efforts of operators to modernize constantly, two 6.7-MW units MW were commissioned, along with a further 96 MW of installed capacity from the Acajutla Generator. Likewise, generation was expanded by the Executive Lempa River Hydropower Commission by upgrading the units of the 5 de Noviembre and Guajoyo hydropower stations, whose capacities were augmented by 2 MW and 4.7 MW, respectively. At December, the retrofitting and expansion program for the transmission system that CEL is developing advanced by 65%, and it is expected that it will have concluded in 2002. The goal is to rehabilitate 382 km of old lines and build 151.4 km of new lines. The approximate cost of this program is US\$89.8 million.

In **Mexico**, with a potential investment of about US\$365 million, the Energy Regulatory Commission approved Mexico's largest private power self-supply project. The organization granted permits for the power utilities of Veracruz and Veracruz II, with which the companies Ispat and their partners will be able to generate up to 930 MW of capacity. The Energy Regulatory Commission granted a 27-year permit to Electricidad Aguila de Altamira (EAA), owned by the Japanese company Mitsubishi and the French utility Electricité de France (EDF), to generate electrical energy as an independent producer. For the development of this project, a direct investment of about US\$254 million is estimated and a thermoelectric station of 565 MW will be built in Tamaulipas. The Canadian company Westcoast Energy will participate in international bidding processes in Mexico's electric power sector as an external power producer (IPP) in the building of combined cycle thermoelectric stations. According to law, the electrical energy it generates can only be sold exclusively to the semi-State utility.

The Government of Nicaragua received an IDB Ioan to obtain a SCADA/EMS station. A collaboration agreement between the Nicaraguan Institute for Support to Small and Medium-Sized Enterprises (Instituto Nicaragüense de Apoyo a la Pequeña y Mediana Empresa-INPYME) and the National Energy Commission (Comisión Nacional de Energia—CNE) was signed to promote the efficient use of electricity and build up the capacity of electricity distribution cooperatives so that they can supply efficient service to medium and small rural companies. Unión Fenosa of Spain bought 95% of the power distribution utilities (DISNORTE and DIS-SUR) for US\$115 million. The other 5% is owned by the employees. As part of the process of breaking up the Nicaragua power utility Empresa Nicaragüense de Electricidad (ENEL), the resulting power generation utilities were put up for sale to private investors through a bidding process, and permits for power generation, transmission, and distribution concessions were granted.

In March 2000, a collaboration agreement was signed to conduct a study on the electric power interconnection between **Peru** and **Ecuador**, between the midwestern power utility Empresa de Transmisión Eléctrica Centro Norte S.A. (ETECEN) of Peru, Hydro Quebec International of Canada, and the power transmission utility Transelectric S.A. of Ecuador. Hydro Quebec will be conducting the prefeasibility studies for the interconnection between the power systems of the two countries.

In **Paraguay** the bid documents and conditions for the invitation to bid to build the hydropower project of Brazo Aña Cuá of the hydropower complex of Yacvreta started being elaborated. Forecasting studies for this project indicate a rated capacity of 250 MW, which could be generating an average of 900 GWh per year, and a lead time of about 2.5 years. As for energy transfers in the year 2000, in compliance with the treaty with Argentina and Brazil (Treaties of Yacyretá and Itaipú, respectively), the country transferred about 46,758 GWh, 12.6% to Argentina and 87.4 % to Brazil. The trunk network developed by ANDE, from the eastern zone to the Metropolitan zone (Asunción), has reached its peak transmission capacity, and therefore ANDE is building a dual 220-kV line, interconnecting the hydropower station of Yacyretá with the Metropolitan System, with a capacity of about 500 MVA (450 MW). During 2000, many high-level meetings were held between the government of Paraguay and the government of Argentina concerning the completion of complementary projects in Yacyretá.

In the **Dominican Republic**, the Coordinating Agency for the Interconnected Electric Power System started up operation of the system in March, under its coordination, on the basis of economic programming of the operation and started, in June, economic transactions between spot market agents.

In **Uruguay** more than US\$110 million were invested to meet customer demand growth and improve service quality. An agreement was signed with world-class utilities to evaluate a project for building

a thermoelectric station and interconnection installations with Brazil for 1,000 MW. The project will permit drawing up contracts with Brazilian agents, as well as the marketing of secondary energy between the markets of Argentina, Brazil, and Uruguay. In the framework of the contract for the manufacturing and assembly of equipment for the Rivera-Livramento electric power interconnection, to be developed by UTE and ELETROSUL, progress was made in implementing the 70-MW Conversora project, which is expected to end in the first guarter of 2001. Efforts continue to be made to improve service quality by achieving the efficiency and effectiveness objectives in the distribution networks. Among the projects being implemented the following are noteworthy: renovation of the Montevideo and Interior network with the switch of voltage to 22 kV and 0.4 kV (IBRD and IDB funding); SCADA with the incorporation of state-of-the-art technology to supervise, monitor and acquire at a distance from the network. UTE has launched the Plan called "Uruguay: A Well-Lit Country" aimed at improving the safety of citizens. Both UTE and market agents can enter into supply contracts and participate in spot transactions. During 2000, two contracts with Argentinean generators were functioning. In November 2000, three new supply contracts were signed for a total amount of 365 MW valid for 36 months.

#### COAL

In **Colombia**, on November 15, 2000, the process of involving private-sector capital in the megaproject of El Cerrejón Zona Norte culminated with the signing of

the mining exploration contract and the transfer between Carbocol and the company Cerrejón Zona Norte S.A. (consortium of three foreign investors: Billinton, Angloamerican and Glencore).



#### RENEWABLE SOURCES OF ENERGY -RURAL ELECTRIFICATION

The Sociedad Cooperativa Popular Limitada (SCPL) and the Spanish company Gamesa Eólica S.A. signed an agreement to install 16 new windmills in Comodoro, **Argentina**, a decision that will duplicate installed capacity on the wind farm and will require an investment close to US\$7 million. These aerogenerators will be added to the 10 that already exist.

The Energy Development Program of States and Municipalities (Programa de Desarrollo Energético de Estados y Municipios-PRODEEM) in Brazil continued actions aimed at supporting and meeting the basic social demands of needy and dispersed communities. In the year 2000, close to 104,000 persons were cared for in 291 municipalities. The IBRD proposed funding the rural residence energy supply project, and therefore the MME and IDB jointly prepared a Plan of Action for PRODEEM, which for its implementation will benefit from a nonreimbursable fund of US\$9 million. In the rural sector, the National Rural Electrification Program referred to as "Lighting in the Countryside," in its first stage up to 2002, has the goal of taking electricity to a million rural households, for the benefit of 5 million inhabitants, with a demand for resources of 2.7 billion reales. During 2000, contracts were signed with more than 40 concession holders.

During 2000, in **Chile**, 13,901 rural homes were electrified, thus increasing rural electrification coverage from 76% in 1999 to 78% in 2000. Moreover, the CNE along with UNDP implemented four pilot renewable sources of energy projects, involving one wind-diesel project on Tac Island and three micro hydropower plants in indigenous areas.

In **Colombia**, the financial support fund was set up to supply energy to non-interconnected zones (NIZ) and a mandatory contribution amounting to one peso per kWh dispatched on the wholesale energy market was levied to finance the fund, which will provide the resources for a financial package to establish and develop a new institutional and administrative scheme for providing energy to the NIZs.

In various cities of Ecuador, the Energy Saving Program was promoted and agreements were signed with the Ministry of Education and Culture, universities, and other institutions to disseminate them. The prefeasibility study for renewable energy electrification in the Galápagos was concluded and the definitive results of the project's feasibility are available. As part of the Decentralized Rural Electrification Program, 18 solar systems were installed in the schools of the province of Pastaza and in a health center. In addition, a cooperation agreement for electrification in border zones was signed. The Ministry of Energy and Mines is developing a renewable energy program in the seven provinces of the Amazon region, using photovoltaic systems, for 482 schools and 94 health centers, as well as a program for small hydropower stations, involving 42 projects.

The Ministry of Energy and Mines (MEM) of **Guatemala** launched an awareness-raising campaign on the efficient and rational use of fuels and electrical energy. The MEM is

preparing the Public Lighting in the Rural Area Project, which will be providing luminaires for street lighting in rural communities, and worked on the Renewable Energy Promotion project by conducting actions aimed at increasing the use of renewable sources of energy in power generation, facilitating investment, as well as the compiling and supplying basic information to investors.

The Five-Year Economic and Social Development Plan of the Government of **Haiti** has planned building a health center and elementary school in each one of the 565 rural communities in the country. Therefore, rural electrification using renewable sources of energy is considered a priority, and the program will cost about US\$6 million. Furthermore, with the participation of the Franco-Caribbean Institute, a study on the wind energy potential in the northern part of the country is being carried out in order to elaborate a master wind energy plan for this region.

The Government of **Honduras**, along with the Japanese Government, installed a rural electrification system in the village of Achiote, in Comayagua; Japan donated 270,000 lempiras and the community contributed the posts, which amounted to about 256,000 lempiras. Norway will be providing funds in the amount of more than US\$2.6 million for rural electrification, for which purpose a letter of understanding

between the Central American Bank of Economic Integration (BCIE), the Government of Honduras, and the Kingdom of Norway was signed. With this investment in rural electrification, it is expected that 160 rural communities will be served, with a coverage of about 3,400 families. The Clean Development Mechanism and Joint Implementation Office of Honduras (OICH) identified various projects in the energy sector, and a good reference is the wind generation with the Honduras-2000 project, which will be located on the Hula summit and mounts of Azacualpa and Izopo, with 80 aerogenerators of 750 Kv, which will be mounted on steel towers, with a capacity of 60 MW.

In **Mexico**, development of three electric power generation projects using renewable sources of energy is under way: 20-MW Atexcaco Hydropower Project in State of Puebla; 12-MW Geothermal Plant of Los Azufres in the State of Michoacán; and the 30-MW El Gallo Hydropower Station in the State of Guerrero.

The CNE of **Nicaragua** regulates the Fond for the Development of the Electric Power Industry (FODIEN) as a strategic element to decide the amount for financing renewable energy projects.

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### Development of the energy sector in Latin America and the Caribbean

Economic recovery of Latin America and the Caribbean in the year 2000 meant regional GDP growth of 4%, compared to the 0.3% observed in 1999, whereas energy supply and demand recorded positive growth in 2000, although not at the same level as GDP.

Primary energy supply grew from 4,587 MBoe in 1999 to 4,675 MBoe in 2000, which meant a 1.93% rise, a rate similar to the one obtained in the period 1998-1999, which amounted to 1.92%, although lower than the annual average rate of the last decade, which amounted to 2.26% (Figure 5).

As for total energy supply, it rose from 4,435 MBoe in 1999 to 4,521 MBoe in 2000, in other words, a 1.94% rise, compared to the annual average observed between 1991 and 2000, which was 2.79%.

In countries like **Costa Rica**, primary energy supply rose by 17.4%, stemming from the higher use of hydroenergy and geothermal energy in electric power generation, which in turn rose by more than 10%. As for **Ecuador**, it recorded a 17.3% rise due to higher oil production, which rose by more than 7%. By contrast, in **Argentina** it was possible to observe a decline of -3.98% owing to the reduction in oil supply and

0	1001	000		Growth Rate (%)			
Countries	1991	1999	2000	91-00	99-00		
ARGENTINA	364.8	485.2	465.9	2.75	-3.98		
BARBADOS	2.0	0.4	0.4	-16.01	-0.96		
BOLIVIA	22.8	34.8	36.2	5.29	4.14		
BRAZIL	1007.6	1248.2	1268.5	2.59	1.63		
COLOMBIA	205.3	230.5	236.4	1.58	2.56		
COSTA RICA	10.7	8.5	10.0	-0.76	17.41		
CUBA	74.5	46.0	57.7	-2.80	25.50		
CHILE	105.3	174.6	185.0	6.46	5.92		
ECUADOR	59.3	62.8	73.6	2.44	17.28		
EL SALVADOR	17.6	20.9	21.4	2.19	273		
GRENADA	0.0	0.0	0.0	3.28	3.81		
GUATEMALA	29.1	38.6	39.0	3.32	0.97		
GUYANA	2.8	3.0	31	1.00	1.47		
HAITI	9.5	12.0	11.4	2.05	-5.57		
HONDURAS	15.6	111	12.5	-2.45	12.26		
JAMAICA	10.3	7.1	11.6	1.40	64 43		
MEXICO	907.2	1015.0	1025.6	1.37	1.04		
NICARAGUA	13.7	16.3	16.8	2.30	2.67		
PANAMA	12.8	23.7	22.2	6.35	-6.49		
PARAGUAY	39.2	53.4	52.6	3.32	-1.47		
PERU	87.2	88.8	90.7	0.45	2.23		
DOMINICAN REP.	22.0	26.0	25.1	1.48	-3.62		
SUBINAME	2.6	2.8	2.9	0.95	0.37		
TRINIDAD & TOBAGO	79.0	116.9	120.4	4.79	2.96		
URUGUAY	17.9	19.1	23.9	3.22	25.15		
VENEZUELA	706.2	840.8	862.3	2.24	2.56		
LA&C	3824.9	4586.7	4675.2	2.26	1.93		

#### Figure 5. PRIMARY ENERGY SUPPLY IN LATIN AMERICA AND THE CARIBBEAN (MBoe)



nuclear energy. **Cuba, Jamaica, and Uruguay** show the highest rates of primary energy supply growth rate, with rates of 25.5%, 64.43%, and 25.15%, respectively, for the high increase in oil imports in the three countries, oil production in Cuba, and hydroenergy in Uruguay.

In the region, in 2000, final energy consumption amounted to 3,200 MBoe, compared to approximately 3,145 MBoe in 1999, which entailed a 1.75% rise, higher than what was recorded in 1999, when growth amounted to 1.14%. Although various countries increased their consumption at rates that were similar to those obtained for the region, the most noteworthy rises occurred in Argentina (5.24%), Ecuador (8.7%), Dominican Republic (8.9%), Cuba (11.3%), and Venezuela (5.28%). Positive, albeit lower, growth rates, were observed in Brazil, Chile, Honduras, Jamaica, Nicaragua, and Paraguay. There was a noteworthy decline in Bolivia (-8.87%) and in Uruguay (-7.92%) because of the reduction of consumption in the transportation and industrial sectors.

With 2,188 Mbbl, domestic oil supply recorded only a 0.86% rise during 2000, compared to an annual average of 1.67% since 1991, with noteworthy reductions in Argentina (-15.85%), Panama (-10%), and Paraguay (-11.31%), the latter because of the drop in processed crude oil for operational reasons, although imports rose thus increasing inventories. Furthermore, there were major increases in countries like Ecuador, Trinidad and Tobago, and Uruguay.

Countries	1991	1999	2000	Growth Rate (%)			
Countries	1551	1000	2000	91-00	99-00		
ARGENTINA	335.5	452.2	435.0	2.93	-3.80		
BARBADOS	2.8	2.8	2.7	-0.34	-1.72		
BOLIVIA	22.7	36.8	38.3	6.01	4.04		
BRASIL	1026.8	1326.9	1341.3	3.01	1.09		
COLOMBIA	182.1	206.5	210.0	1.60	1.69		
COSTA RICA	15.2	21.7	21.8	4.10	0.90		
CUBA	102.6	83.7	87.7	-1.73	4.77		
CHILE	105.7	180.9	184.1	6.36	1.76		
ECUADOR	47.1	52.1	59.6	2.64	14.36		
EL SALVADOR	19.0	26.8	27.8	4,34	3.79		
GRENADA	0.3	0.5	0.5	5.37	1.77		
GUATEMALA	34.8	51.9	53.6	4.93	3.21		
GUYANA	5.5	7.1	7.0	2.68	-1.68		
HAITI	11.6	15.6	15.0	2.87	-3.80		
HONDURAS	17.9	21,5	22.6	2.61	4.84		
JAMAICA	21.6	26.9	28.4	3.07	5.34		
MEXICO	920.7	1079.5	1107.1	2.07	2.56		
NICARAGUA	13.8	18.9	19.3	3.83	2.30		
PANAMA	11.5	17.7	18.1	5.17	2.47		
PARAGUAY	25.0	33.8	33.0	3.13	-2.30		
PERU	73.9	80.5	91.3	2.38	13.40		
REP.DOMINICANA	29.5	53.0	55.7	7.31	5.04		
SURINAME	6.0	6.4	6.4	0.87	0.37		
TRINIDAD Y TOBAGO	51.7	65.6	68.6	3.20	4.55		
URUGUAY	18.0	23.7	22.8	2.62	-3.99		
VENEZUELA	426.5	541.7	562.9	3.13	3.91		
AL&C	3527.7	4434.7	4520.7	2,79	1.94		

#### OIL

At the end of 2000, the countries of Latin America and the Caribbean had oil reserves amounting to 145.8 Gbbl of oil (Figure 7), which meant a rise of 2.5%, compared to reserves in 1999. The region's reserves accounted for 13.6% of the world's total. They were mainly concentrated in **Venezuela** (53.3%), **Mexico** (32.7%), and **Brazil** (5.8%) (Table 2.1).

In 2000, the region increased its oil production by 2.5%, from 3,403 Mbbl to 3,488 Mbbl. This rise comes from the increase among the region's largest producers, **Mexico** (4.22%) and **Venezuela** (2.67%), as well as medium and small producers such as **Brazil** (15%) and **Ecuador** (7.4%). In addition, a major decline in oil production in **Colombia**, amounting to 15.85%, as a result of public order problems and the start of the decline of large oil projects, was observed (Table 2.2).

In the region's countries, during 2000, oil imports declined by 1.9%, compared to 1999, reaching a total of 369 Mbbl. The largest oil importer in the region, Brazil, whose imports accounted for close to 40% of the entire region's imports, showed an important variation rate of -17.56%, whereas Argentina

increased its imports by 39.76%, Cuba by 106%, and Trinidad and Tobago by 22.65%. Countries like Chile, Paraguay, and Peru increased their imports by more than 4%, whereas Panama reduced them by 10.05% (Table 2.3).

As for oil exports, they grew by 1.72% compared to 1999, which accounts for 29 million additional barrels for a total of 1,717 millions barrels. Mexico and Venezuela, the region's largest exporters, increased their exports by 6.94% (39 million barrels) and 1.33% (9 million barrels), respectively, whereas Colombia reduced its export by 25.32% (47 million barrels). Ecuador, however, increased its exports by 2.26%, that is, close to 2 million barrels, whereas Peru reduced its exports by 53.14%, that is, more than 5 million barrels (Table 2.4).

The added refining capacity of the region's countries reached 6.9 Mbbl/day in 2000, similar to the capacity observed the preceding year, with Colombia recording a decline of 11.82% (from 330 to 291 kbbl/day) and Chile an increase of 24.85% (from 165 to 206 kbbl/day) (Table 2.5).

Year	PRODUCTION	RESERVES	Growth Rate Production (%)	4000
1991	2638.5	124905.9		3500
1992	2676.4	129295.0	1.44	3000
1993	2749.4	130554.8	2.73	2600
1994	2834.8	130545.2	3.11	2000
1995	2972.9	131730.4	4.87	1500 -
1996	3277.8	137597.6	10.26	1000 -
1997	3445.5	141022.3	5.12	570
1998	3516.0	142375.9	2.05	300 -
1999	3403.0	144342.2	-3.22	0 1991 1992 1993 1994 1995 1996 1997 1998 1999 20
2000	3488.1	145810.1	2.50	PRODUCTION

#### NATURAL GAS

The natural gas sector continued to record major development in the region. In 2000, reserves amounted to 7,796.6 Gm\_, which meant a rise of 2.96%, compared to 1999. Natural gas reserves in the region account for 5.2% of the world's reserves. The major increase in the region's reserves during 2000 is justified by recent discoveries in Bolivia of close to 157 Gm\_, which means a 30% growth compared to 1999 (Table 3.1).

Of total reserves in the region, the countries with the highest contributions are Venezuela (53.8%), Mexico (10.5%), Argentina (8.8%), and Bolivia (8.7%).

Natural gas production in Latin America and the Caribbean accounted for 7.8% of world production and, in 2000, amounted to 193,514 million m\_ (530 million m\_ per day), which for the region means a rise of 5.31%, compared to 1999, a growth rate that is higher than the trend observed over the last decade (4.6%), which corresponds to increases recorded in Argentina (7.22%), Bolivia (13.7%), Brazil (4.3%), Colombia (11.09%), Peru (4.86%), Trinidad and Tobago (17.26%), and Venezuela (1.6%) (Table 3.2).

In 2000, the region's countries that contributed the most as natural gas producers were Mexico (31.1%), Argentina (23.2%), and Venezuela (20.4%).

Figure 8. NATURAL GAS PRODUCTION AND RESERVES IN LATIN AMERICA AND THE CARIBBE	EAN
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Year	PRODUCTION Gm3	RESERVES Gm3	Growth Rate Production (%)		Gm3 250					8000 Gm	3
1991	129.2				]				۶	7800	
1992	130.0		(1)	0.65	200	t :	1997 - B	- 1	́п	7600	1
1993	131.2			0.91	150		Сп.	Π   /		7400	
1994	138.3	1		5.42	2	ппП				7200	
1995	143.1			3.52	100						
1996	156.9			9.60				•			
1997	170.2	6933.0		8.51	50 -					6800	1
1998	176.9	7138.9		3.90						6600	
1999	183.7	7572.2	1	3.89	0	1991 1992 1993 1994	1995 1996	1997 1998 1999	2000	6400	
2000	193.5	7796.6		5.31	[m	PRODUCTION		RESERVES			
SOURCE: OLA	DE/CE - SIEE®				-					•	

#### COAL

Coal reserves in the region did not record any major variations during 2000 and amounted to slightly more than 16.1 billion tons, distributed mainly in Colombia (41%), Brazil (33%), Mexico (11%), and Venezuela (8%) (Table 4.1). Coal reserves in the region's countries account for 1.7% of the world's total reserves.

World coal production in 2000 amounted to 4,359 Mton (0.23% more than in 1999), of which Latin America and the Caribbean accounted for 1.5%, that is, 63.7 million tons, which meant a rise of 15.39%, compared to 1999, with major increases in Brazil (15.3%), Colombia (16.45%), and Venezuela (20.85%), whereas Argentina and Chile recorded declines of 11.5% and 24.6%, respectively (Table 4.2).

Coal imports in the region amounted to 30.9 million tons, indicating a 8.7% growth compared to the preceding year, which is above the annual average rate of the last decade, which was 5.2%. This growth was due principally to the significant rise in Argentina's imports (54.65%) and Brazil's imports (11.3%), whereas Chile reduced its imports by 12.71%, although it is the region's second largest importer, with imports of 4.4 million tons, after Brazil, which imported more than 21 million tons in 2000 (Table 4.3).

Moreover, exports amounted to 43.6 million tons, which represent an 18.45% increase compared to 1999, in contrast to the annual average growth of 9.95% between 1991 and 2000. This increase corresponds to rising exports from Colombia (18.98%) and Venezuela (17.53%), which represent increases of 5.7 and 1.2 million tons, respectively (Table 4.4).

#### ELECTRICITY

For the year 2000, the electric power generation capacity in Latin America and the Caribbean rose by 6539 MW, amounting to a total installed capacity of 223,808 MW, which means a growth of 3.00%, compared to the preceding year. This rate is lower than the annual average rate from 1991 to 2000, which was 3.56%. The rise in power generation capacity is noteworthy in Costa Rica (13.68%), Chile (4.3%), El Salvador (11.36%), Panama (11.85%), and Trinidad and Tobago (13.09%) (Table 6.3).

Of the region's total capacity, 55.1% is from hydropower generation, 42.2% thermoelectric generation, 1.94% nuclear (Mexico, Argentina, and Brazil), and only 0.6% from other nonconventional sources, mainly geothermal plants. The ratio between hydropower capacity and thermoelectric capacity is 1.31 and has remained virtually unchanged since 1998. As for electric power generation in 2000, 958,368 GWh were produced, which means a growth of 4.99%, compared to 1999. This rate is slightly higher than the annual average of the last decade, which is 4.84% and, in contrast to 1999, the year in which electric power generation declined in seven of the region's countries, in 2000 all countries except Barbados, Colombia, Guyana, and Haiti recorded positive growth rates. Electric power generation came essentially from hydropower stations (62.3%) and thermoelectric stations using diesel, fuel oil and coal (34.5%) (Table 6.1).

Per capita electric power consumption in the region during 2000 amounted to 1,510.4 kWh/inhabitant, 3.89% higher than in 1999, with substantial growth observed in Brazil (4.01%), Costa Rica (5.29%), Chile (4.2%), Honduras (11.25%), and Mexico (5.5%). The largest decline was observed in Haiti (-9.09%) (Table 6.6).

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Figure 9. ELECTRICITY GENERATION AND INSTALLED CAPACITY IN LATIN AMERICA AND THE CARIBBEAN (GWh)

Year	ELECTI	RICITY GENER GWh	ATION	INS	STALLED CAP	ACITY	GWh 1200000	T				
	HYDRO	THERMO.	TOTAL	HYDRO	THERMO.	TOTAL						
1991	385469.7	241028.6	626498.3	96001.8	67361.6	163363.4	1000000	+				n +
1992	395457.0	249158.5	644615.4	98307.7	67478.2	165785.9	800008			пſ	ח ך	
1993	426816.6	253263.2	680079.8	100931.2	69998.7	170929.9			л П 🗄			+
1994	443215.7	274967.0	718182.7	104404.6	76405.9	180810.5	600000	†∏ ∏ ∏		╶╠╌┤	╞┼┢╴	
1995	463400.4	291452.2	754852.6	107159.7	79648.9	186808.6	400000				ALC: NO.	
1996	486715.2	312952.5	799667.7	113046.8	82751.9	195798.7				0.040	201710	
1997	505589.9	341690.6	847280.4	117284.6	85822.4	203107.0	200000			100		1
1998	516987.9	367223.1	884211.0	118336.7	90853.7	209190.4	0					
1999	524196.0	388602.0	912798.0	121703.6	95565.2	217268.8		1991 1992 1993 1	994 1995 1996	1997 1	998 1999	2000
2000	601801.3	356567.0	958368.3	123319.6	100488.2	223807.8		- TOTAL GENER	LCAPACITY	_X_	а нүрно - нүрно	GENERA INST.CA
SOURCE: OL	ADE/CE - SIEE®											

#### NEW AND RENEWABLE SOURCES OF ENERGY

In 2000, firewood, bagasse, and geothermal energy accounted for 14% of primary energy supply, compared to 15% in 1999. This trend, which has been apparent in the region for many years now, can be explained essentially by the progressive decline in the use of firewood.

#### Firewood

Firewood production rose in the region by only 0.56%, and for 2000 it amounted to an equivalent of

364 MBoe. Although various countries marginally increased their production, major reductions were recorded in Bolivia, Cuba, Haiti, Peru, and Uruguay (Table 5.1).

Likewise, firewood consumption rose by only 1% although its share continued to fall in the region, accounting in 2000 for less than 9% of final energy demand and about 36% of total energy consumption in the residential sector. Nevertheless, there are countries where firewood still plays an important role, such as Guatemala, Haiti, Honduras, and Nicaragua, where it accounts for more than 40% of final energy consumption. The per capita consumption of



firewood in the region reached 0.56 Boe/inhabitant, slightly under that of 1999 (Tables 5.5 and 5.6).

#### Sugarcane products

The production of sugarcane products as a source of energy fell from 252 MBoe in 1999 to 221 MBoe in 2000, recording a negative growth of -12.35%, mainly owing to the fall of production in Brazil, whose production accounts for 63% of the region's total and where, since 1996, the production and use of alcohol as a motor vehicle fuel have declined continuously. The other large sugarcane producers, Colombia and Cuba, recorded a positive growth of 4.5% and 3,8%, respectively, whereas in Mexico this rate declined by 4.29% (Table 5.2).

#### **Geothermal energy**

Geothermal energy, which accounts for a limited share of primary energy supply (0.4%), rose by 14.27% in 2000, with increases of over 11% in all the countries using this resource and 6.3% in Mexico, whose supply accounts for 58% of the region's total.

#### CONSUMPTION SECTORS

Total energy consumption of Latin America and the Caribbean for the year 2000 amounted to 3,199 MBoe, which meant that it rose by 1.75%, compared to the previous year, lower than the annual average observed since 1991, which was 2.8%.

The sectors with the highest consumption during 2000 were the industrial sector (32.7%), transportation (33.1%), and the residential sector

(18.2%), a performance that has remained unchanged for several years now.

As for energy consumption by type of source (Figure 11), oil products accounted for somewhat more than 50%, biomass 15.3%, electricity 15% and gas 12.5%. If these percentages are compared to those of 1999, it can be observed that there is a rise in the share of natural gas, principally in the countries of the Southern Cone, which contrasts with the reduction in the share of oil products and biomass. As for the share of electricity, it rose from 14.5% to 15%.









#### INDUSTRIAL SECTOR

Energy consumption in industry in the region during 2000 amounted to 1,047 MBoe, that is, 26 MBoe more than in 1999, which represented an increase of 2.6% whereas the average rate observed since 1991 has been 2.32%. There were major declines in consumption in Haiti (-1.5%), Trinidad and Tobago (-1.2%), and Uruguay (-8.6%), whereas the principal growth occurred in Costa Rica (8.5%), Cuba (12.6%), Chile (7.8%), Honduras (10.4%), Peru (6.7%), and Venezuela (5.7%) (Table 7.1).

Natural gas is the main source of energy in the region's industry, with a share of 26.3%, similar to that of 1999, which amounted to 26%, and it has remained constant over the last 10 years. Although this source of energy is not available in the majority of the countries of Latin America and the Caribbean, its importance in the region is due to the high share of its consumption in the industrial sector of countries such as Venezuela (63.9%), Argentina (50.2%), Mexico (35.5%), Trinidad and Tobago (87.2%), and Brazil (9.6%). The increases of this energy source are also noteworthy in Chile, Colombia, and Uruguay, compared to 1999, which means a trend to introduce gas to replace other energy sources traditionally used in the industrial sector of these countries.

During 2000, the biomass consumed by industry in the region accounted for 16.5% of total energy consumed in the sector, whereas oil products accounted for 15.8%, natural gas for 26.3%, and electricity for 21.4%. Although the share of biomass declined, compared to 1999, there are major shares of this energy source in Barbados, Bolivia, Cuba, Guatemala, Guyana, Haiti, Honduras, and Paraguay, with values over 35%.

As a rule, energy consumption in the region's industrial sector over the last 10 years has been characterized by a growth in the share of electricity, a decline in the share of liquid fuels and biomass, and an unchanged share of natural gas.

The share of electricity in the industrial sector has kept its upward trend over the last few years, accounting for 21.4% of total consumption by this sector in 2000. Although the majority of countries increased their use of electricity in industry, the increases in Barbados, Brazil, Colombia, Costa Rica, El Salvador, and Uruguay are the most noteworthy. Countries like Chile, Cuba, and Mexico, however, reduced the share of electricity in the sector this year (Table 7.5).

COURCE	1991	1999	2000	Growth Rate (	%)		2000		
SOURCE			vije politi	91-00	99-00				
GAS	215.7	255.3	265.7	2.34	4.06	6.3% 5.6%		95 ARL	g GAS
BIOMASS	202.9	246.0	235.8	1.68	-4.13			à	BIOMASS
ELECTRICITY	157.5	210.8	224.1	3.99	6.27	18.9%			
OIL PRODUCTS	167,1	193.6	197.6	1.88	2.09				DIL PRODUCTS
COAL AND COKE	80.5	56.1	58.2	-3.55	3.60	T		7	COAL AND CO
OTHERS	27.9	58.6	65.7	9.99	12.09	21.4%		22.5%	OTHERS
TOTAL	851.7	1020.5	1047.1	2.32	2.61				

#### **TRANSPORTATION SECTOR**

Energy consumption in the transportation sector, which depends almost completely on oil products, recorded an increase of 1.74%, compared to 1999, whereas the average increase observed over the last decade amounted to 3.34%. Total consumption during 2000 amounted to 1059.5 MBoe, with a decline in the consumption of gasoline (1.6%), whereas consumption of diesel oil rose by 4.32% and consumption of other fuels by 15.18%, owing to higher consumption in this sector of natural gas in Brazil and fuel oil in Chile (Figure 13).

**Gasoline** continued to be the fuel with the highest consumption, accounting for 48.8%. The share of this fuel declined compared to that registered for 1999, which amounted to 50.4%, due to the reduction of the share of consumption in Brazil, Chile,

Colombia, Ecuador, Peru, and Uruguay. The remaining countries recorded a rate similar to that of 1999, except for Costa Rica, Cuba, Honduras, and Trinidad and Tobago, where the share of gasoline in the transportation sector rose substantially (Table 7.8).

In 2000, the share of **diesel** increased, compared to 1999 from 39.1% to 40.1%, with noteworthy increases of its use in Brazil, Colombia, Costa Rica, Peru, Trinidad and Tobago, and Uruguay and greater declines of its share in Cuba, Honduras, and the Dominican Republic.

Jet fuel, whose contribution to the sector is relatively low (7.3%), shows high shares in Bolivia, Cuba, Grenada, Haiti, Jamaica, Peru, and Suriname of more than 10%, where its share has remained constant, as in the majority of the countries of Latin America and the Caribbean.





#### **RESIDENTIAL SECTOR**

Energy consumption in the residential sector for the year 2000 amounted to 583.5 MBoe, 3.11% more than in 1999, a rate higher than the annual average observed since 1991, which was 1.76% (Figure 14). The growth of energy demand in this sector is noteworthy in Argentina, Costa Rica, Cuba, and the Dominican Republic, higher than 8%, and in Honduras, where it grew by 16.2%, amply compensating for the decline of the previous year triggered by the adverse impacts of Hurricane Mitch. The remaining countries kept up positive consumption growth rates, except for Bolivia, Ecuador, and Haiti (Table 7.2).

As for energy consumption by source (Figure 14), **biomass** continues to be the principal source, accounting for a share of 38.4% of total demand, followed by **oil products** (27.7%), **electricity** (22.3%), and **natural gas** (11.3%).

The trend in the use of biomass, mainly **firewood**, continued its downward course because it was being replaced by other sources (**LPG**, **electricity**, **and natural gas**) in the sector. Firewood accounted for a share of 36.3% of final demand in 2000, compared to 37.1% in 1999 and 45.3% in 1991. Although there are various countries where firewood accounts for a very large share (higher than 70%) such as El Salvador, Guatemala, Guyana, Haiti, Honduras, Nicaragua, and Paraguay, only in Costa Rica did the share of this source increase, compared to 1999 (Table 7.6).

The principal oil product that is consumed inside the residential sector is liquefied petroleum gas (LPG), which accounts for more than 90% of oil products as whole, which also includes kerosene and naphtha. The share of these products has remained almost constant compared to the previous year in the region, with slight rises in Chile, Colombia, Ecuador, Mexico, and Venezuela.

SOURCE	1991	1999	2000	Growth	Rate (%)	2000	
SUDRCE				91-00	99-00		
GAS	38.6	59.8	65.9	6.12	10.20	0.2%0.1%	
BIOMASS	238.5	222.6	224.1	-0.69	0.70	27.7% B BIO3/	A55
ELECTRICITY	85.2	125.5	130.4	4.84	3.93		TRICITY
OIL PRODUCTS	133.5	156.5	161.6	2.15	3.24		RODUCTS
COAL AND COKE	1.0	0.4	0.4	-8.68	1.05	38.4% <b>2</b> COAL	AND COKE
OTHERS	2.1	1.1	1.0	-7.68	-7.16	22.3%	RS
TOTAL	498.9	565.9	583.5	1.76	3.11		

Figure 14. ENERGY CONSUMPTION IN THE RESIDENTIAL SECTOR BY TYPE OF SOURCES (MBoe)

SOURCE: OLADE/CE - SIEE®





The share of electricity in 2000 rose slightly compared to what was observed in 1999, from 22.2% to 22.3%, with major increases in Bolivia (from 15.2% to 19.1%), Paraguay (from 17.5% to 18.4%), and the Dominican Republic (from 16.1% to 18.5%). Although in the majority of the region's countries, the share of the use of electricity rose, slight reductions were recorded in this sector in Argentina, Colombia, Costa Rica, and Venezuela, compared to the preceding year.

**Natural gas**, whose share in the residential sector is 11.3%, continues to be the energy source with the highest rate of growth compared to previous years. The majority of the countries where this source is used, such as Argentina,

Barbados, Brazil, Chile, Colombia, and Venezuela, increased their consumption. Bolivia kept its share unchanged, whereas Argentina, Barbados, Brazil, Chile, and Colombia increased it. Of the previously mentioned countries, natural gas accounts for a large share in the residential sector of Argentina (65.0%) and Venezuela (31.8%).

If energy consumption is analyzed in terms of useful energy, the perspective changes mainly due to the levels of efficiency of each source of energy used in the sector. Thus, the share of oil products, according to these terms, amounted to 40.4%, the share of electricity 34.3%, the share of natural gas 18.7%, and the share of biomass 6.3% (Figure 15).

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#### **COMMERCIAL SECTOR**

In 2000, energy consumption in the commercial, public, and services sector amounted to 152.4 MBoe, which indicates a rise of 5.8%, compared to 1999, an amount that is higher than the annual average growth rate since 1991, which amounted to 4.91% (Figure 16).

The highest growth rates were recorded in Argentina (9.9%), Bolivia (11.8%), Brazil (8.7%), Chile (7.5%), Colombia (8%), Ecuador (10.6%), Nicaragua

(14.4%), and Uruguay (6.2%). Growth of consumption recorded negative rates in Barbados, El Salvador, Haiti, Honduras, Panama, and Peru (Table 7.3).

Electricity continues to be the principal source of energy in the sector, with a share of 65%, followed by oil products with 21.3% and natural gas with 12.1%. It is important to note that, compared to the previous year, the share of electricity remained constant, whereas the rate of natural gas consumption rose from 11.3% to 12.1% and that for oil products declined from 22.5% to 21.3%

<u> 1. Bar</u> ley's state the second	1991	1999	2000	Growth R	ate (%)	2000	aliyan ya kekarini ha
OUNCE			i de la composición d	91-00	99-00	Ø 507	
AS	11.7	16.3	18.5	5.25	13.53	12,1%	I GAS
IOMASS	1.7	1.6	1.6	-0.54	-3.13		BIOMASS
LECTRICITY	56.8	93.2	99.0	6.38	6.24		
IL PRODUCTS	28.3	32.4	32.5	1.56	0.29		
OAL AND COKE	0.0	0.0	0.0		-49.23		2 COAL AND COKE
THERS	0.6	0.4	0.8	1.87	71.80		D OTHERS
OTAL	99.0	144.1	152.4	4.91	5.80	55,0%	

#### **ENVIRONMENTAL IMPACT**

The annual average growth rate of total  $CO_2$  emissions from the energy sector has declined notably during the period from 1970 to 2000, from 3.85% between 1970 and 1991 to 3.154% between 1991 and 2000 (Figure 17). In 2000,  $CO_2$  emissions in the region rose by 2.1%, mainly due to growing emissions in the manufacturing industry, which over the last decade grew at a rate of 1.31% and, between 1999 and 2000, grew by 3.8%.

The transportation sector remains the major source of emission, accounting for 39.32% of total CO<sub>2</sub> emissions, followed by electric power generation (20.45%) and industry (18.44%).

The growth rates of emission among the different sectors have recorded changes compared to the averages observed since 1991. Thus, whereas between 1991 and 2000, the highest growth rate was recorded in electric power generation (5.28%), between 1999 and 2000 the growth rate in this sector declined to 2.6% owing to the greater use of natural gas and hydroenergy.

The emissions from fuel consumption in the manufacturing industry recorded a growth rate of 3.8% between 1999 and 2000, compared to -0.4% between 1998 and 1999, because of the economy recovery that took place in the majority of the countries, especially in Brazil and Mexico. The decline in CO<sub>2</sub> emissions growth rates in **distilleries**, which since 1998 have recorded negative growth rates, is also noteworthy, as the rate for 2000 is the lowest (-17.6%), because of



Activities	1970	1991	1999	2000	Growth Rate (%)			Share (%)
					70-91	91-00	99-00	2000
PRODUCTION	15469	24866	33143	34431	2.29	3.68	3.89	2.97
ELECTRICITY GENERATION	58491	149396	231513	237458	4.57	5.28	2.57	20.45
DISTILLERY	426	6831	7480	6163	14.13	-1.14	-17.60	0.53
OWN CONSUMPTION	43269	84308	103062	104764	3.23	2.44	1.65	9.02
TRANSPORTATION	142345	339558	448606	456513	4.23	3.34	1.76	39.32
INDUSTRY	97282	190462	206225	214042	3.25	1.31	3.79	18.44
RESIDENTIAL	33690	60033	73622	77218	2.79	2.84	4.88	6.65
OTHERS	6398	23170	33666	30438	6.32	3.08	-9.59	2.62
TOTAL	397371	878624	1137317	1161027	3.85	3.15	2.08	100.00

Figure 17 TOTAL EMISSIONS OF CO2 IN LATIN AMERICA AND CARIBBEAN - (Gg)

the major decline in the use of sugarcane bagasse in the production of alcohol in Brazil (Figure 17).

The share of  $CO_2$  emissions in the transportation sector, compared to total  $CO_2$  emissions stemming from the energy sector, is higher than the region's average in countries like Paraguay (88.7%), Costa Rica (67%), Haiti (55.8%), and Brazil (47.5%). For the year 2000, the emissions of other pollutants such as NOx, hydrocarbons, particulates, and SOx grew whereas the emissions of  $CO_2$  declined compared to 1999.

The interest in protecting the environment in Latin America and the Caribbean has been noteworthy as this matter has been included in national legislation. Between 1990 and 1998, new or upgraded environmental laws were enacted in **Bolivia**, **Chile**, **Colombia**, **Costa Rica**, **Cuba**, **El Salvador**, **Guatemala**, **Guyana**, **Honduras**, **Jamaica**, **Mexico**, **Nicaragua**, **Panama**, **Peru**, and **Uruguay**. Likewise, ministries, secretariats or agencies were established to focus attention on environmental issues. This process is being consolidated in the region. In 1999, **Ecuador** enacted the Environmental Management Law, **Venezuela** dedicated an entire chapter of its new Constitution to environmental rights, and **Paraguay** has envisaged the creation of a Secretariat for the Environment with the rank of ministry.

In the energy sector in particular, sector and subsector regulations and standards for the environmental impacts of energy activities, their assessment, and corresponding mitigation and remediation plans have been elaborated. Likewise, regulation is differentiated from citizen participation in development. **Bolivia** concluded a long consulting process among the players involved to define regulations for oil and gas operations in indigenous territories, whereas in other countries such as Ecuador and Peru draft regulations for this sector were also discussed.

On the basis of the Energy and Environmental Legislation Project developed by OLADE with the University of Calgary under the auspices of the Canadian International Development Agency (CIDA), the Energy and Environment Legal Information System (SIEAL) is being updated and kept up to offer the member countries and the international community a reliable information system on environmental legislation applicable to the energy sector in the region.

Pollutant	1970	1990	1999	2000	G	6)	
					70-90	90-100	99-100
Carbon dioxide (CO2)	417280	907535	1202667	1225909	3.96	1.04	1.93
Carbon monoxide (CO)	10230	21187	26524	26096	3.71	0.72	-1.61
Hydrocarbons (HC)	702	731	1147	1435	0.20	2.35	25.13
Nitrogen oxides (NO)	2652	5806	7928	8082	4.00	1.15	1.94
Sulfur oxides (SO2)	1878	3411	4044	4113	3.03	0.65	1,70
Particulates	188	201	201	202	0.34	0.02	0.66

Figure 18. TOTAL EMISSIONS OF OTHER POLLUTANTS IN LATIN AMERICA AND THE CARIBBEAN

SOURCE: OLADE/CE - SIEE®



#### PRICES

Considering the average weighted prices for the different energy sources in the region, in terms of current U.S. dollars, the trend during 1991-2001 has been upward, especially for jet fuel, industrial natural gas, and fuel oil. Whereas between 1998 and 1999 it was observed that, barring few countries, prices had declined, in 2000 there were high increases for all commercial energy sources except for industrial electricity. Average prices of residential electricity in the region rose by 6.79%, not as the result of a widespread policy for this purpose in the countries, but rather because of a combination of increases and reductions observed in the countries, in response to different policies in this area. In the case of fuels, on the contrary, where major increases were observed, it can be asserted that they are the result of the rise in international oil prices. Except for a few countries.

all the countries recorded increases in the prices of oil products and natural gas. In the **residential sector**, the average price of electricity in the region rose by 6.79%, the price for natural gas by 1.47%, and liquefied gas by 14.73%. In the **commercial sector**, the price of electricity rose by 8.3% whereas in the industrial sector it declined by 1.74%. In 2000, in the **transportation sector** prices for gasoline rose at a rate of 17.09%, for diesel at 21.95%, and for jet fuel at 50.0%. As for fuel oil used in industry, it rose by 37.81% (Figure 19).

Prices for **industrial electricity** in 2000 recorded high rates of decline in the majority of the region's countries. Bolivia, Brazil, Colombia, Costa Rica, Haiti, and Uruguay reduced prices by more than 8%, compared to 1999, whereas Barbados, Cuba, Grenada, Jamaica, and Mexico increased prices by more than 17%. The highest prices for electricity were recorded in Barbados, Grenada, Suriname, and

Figure 19.	AVERAGE	ENERGY	PRICES II	LATIN	AMERICA	AND THE	CARIBBEAN

Energy Products - Sector	Unit	1991	1999	2000	Growth Rate (%)		
					91-00	99-00	
Electricity - Residential	US¢/kWh	5.5	8.4	9.0	5.59	6.79	
Natural Gas - Residential	US\$/10(3)m3	110.0	195.4	198.3	6.76	1.47	
Liquid Gas - Residential	US\$/bbl	19.5	43.4	49.8	11.01	14.73	
Electricity - Industrial	US¢/kWh	4.1	5.0	4.9	2.19	-1.74	
Natural Gas - Industrial	US\$/10(3)m3	66.6	75.5	89.3	3.31	18.21	
Fuel Oil - Industrial	US\$/bbl	18.9	21.0	28.9	4.85	37.81	
Gasoline - Transportation	US\$/bbl	58.6	74.9	87.7	4.58	17.09	
Diesel - Transportation	US\$/bbl	36.3	48.5	59.1	5.57	21.95	
Jet Fuel - Transportation	US\$/bbi	32.1	29.0	43.5	3.44	50.00	
Electricity - Commercial	US¢/kWh	7.9	9.6	10.4	3.13	8.30	

SOURCE: OLADE/CE - SIEE®

Jamaica, with rates over US\$12 per MWh, whereas the lowest prices were recorded in Trinidad and Tobago (2.31), Venezuela (2.97) Paraguay (3.22), Ecuador (3.56), and Brazil (3.60). The average price for the region is equivalent to US\$4.9 per MWh.

In the region, **residential electricity** in 2000 had an average price of US\$9.0 per MWh, with a wide range of values in the different countries. The highest prices were recorded in Grenada (21.93), Barbados (18.20), Suriname (17.08), Uruguay (13.08), and Jamaica (15.59), whereas the lowest prices were

recorded in Trinidad and Tobago (2.74) and Ecuador (3.64). The highest rises were reported in Costa Rica (65.08%) and Mexico (14.62%), whereas the greatest declines were observed in Colombia (-17.76%) and Ecuador (-27.35%) (Table 9.1.1).

The prices of **commercial electricity**, in terms of U.S. dollars per MWh, rose proportionally more than in the residential and industrial sectors (10.4%), with noteworthy increases in Barbados (18.4%), Brazil (18.54%), and Cuba (18.19%), whereas the greatest

reductions took place in Colombia (22.61%) and Haiti (-11.86%).

The price of **gasoline** for transportation rose in 23 of the 26 countries, with the highest rates recorded in Costa Rica (51.95%), El Salvador (35.28%), Honduras (28.73%), Nicaragua (39.65%), and the Dominican Republic (49.31%). The highest prices for gasoline in terms of US\$/bbl were observed in Uruguay (175.32), Argentina (148.35), Brazil (129.66), and Barbados (125.37). The lowest prices corresponded to Venezuela (14.18), Ecuador (36.02), Colombia (54.53), and Guyana (58.44) (Table 9.3.1).

Similar to gasoline, **diesel for transportation** saw its prices rise in the majority of the countries. The highest increase was recorded in Costa Rica (51.8%), whereas the greatest decline compared to the rate for 1999 was observed in Ecuador (-26.74%). The highest values in US\$/bbl appeared in Barbados (96.76), Argentina (80.39), Bolivia (79.39), Uruguay (78.86), and Jamaica (80.91) (Table 9.3.2).

Jet fuel recorded the highest rate of decline in the region between 1999 and 2000, from US\$29.0 to US\$43.5 per barrel. The highest increases were

recorded in Honduras (114%) and Venezuela (111.63%), whereas prices declined in Ecuador (6.15%), Haiti (-14.22%), and Paraguay (-10.43%).

Considering prices of energy sources in terms of US\$/Boe and using residential electricity as the base price (= 100), it can be observed that residential electricity is the most costly after commercial electricity and that the relative prices of all energy sources (except residential natural gas and industrial electricity) rose in comparison to those of residential electricity. In 2000, the price of residential liquefied gas was equivalent to 51% of the price of residential electricity, compared to 48% in 1999. The price of residential natural gas dropped from 24% to 23% of the price for residential electricity, the price of gasoline rose from 62% to 68% of the residential electricity price, and the price of **diesel** from 36% to 46% of that price. Between 1991 and 1999, the majority of energy sources recorded a trend involving the decline of their value compared to that for residential electricity, except for residential natural gas and LPG; this trend was reversed between 1999 and 2000, except for industrial electricity.

#### Figure 20. RELATIVE ENERGY PRICES IN LATIN AMERICA AND THE CARIBBEAN

Energy Products - Sector	Prices in US\$/Boe			Prices compared to Residential Electricity (100)				
	1991	1999	2000	1991	1999	2000		
Electricity - Residential	88.6	135.3	144.5	100	100	100		
Natural Gas - Residential	18.4	32.7	33.2	21	24	23		
Liquid Gas - Residential	29.0	64.8	74.3	33	48	51		
Electricity - Industrial	65.6	81.2	79.7	74	60	55		
Natural Gas - Industrial	11.1	12.6	14.9	13	9	10		
Fuel Oil - Industrial	18.3	20.4	28.1	21	15	19		
Gasoline - Transportation	65.6	83.9	98.2	74	62	68		
Diesel - Transportation	36.2	48.4	59.0	41	36	41		
Jet Fuel - Transportation	33.5	30.3	45.4	38	22	31		
Electricity - Commercial	127.7	155.6	168.5	144	115	117		

SOURCE: OLADE/CE - SIEE®

# Energy and sustainable development

In 2000, Latin America and the Caribbean presented an outlook of recovery and expansion in both its economy and the performance of its energy sector. The region's gross domestic product rose by 4%, compared to 1999, final energy consumption by 1.75%, primary energy production by 2.9%, and gross domestic product by 1.9%. These factors, along with other economic factors such as the rise in foreign trade and external investment, as well as a reduction, albeit slight, of the external debt, enabled the region to show positive results, as reflected in the evolution of the majority of the indicators of sustainable development.

#### Energy/Economics

Bearing in mind the growth of the region's product and energy demand, the **demand-GDP elasticity** for 2000 was 0.43, an amount that has been heavily influenced by the region's largest economies, which showed positive growth in their gross domestic product and energy demand. Countries like Colombia and Costa Rica presented a decline in energy demand and growth in their domestic production, indicating a low functional ratio between the evolution of the two variables. On the other hand, there is Uruguay, where the growth of domestic product and demand declined, showing a positive elasticity of 6.34.

energy intensity (final In 2000. energy consumption/GDP) in the region amounted to 2.23 Boe/103 US\$, 2.25% lower than the one recorded in 1999 and 5% less than the one observed in 1991, indicating higher efficiency in the use of energy for each GDP unit. As a whole, between 1999 and 2000, it was observed that the countries did not record any large variations in the evolution of this indicator of energy efficiency. In Argentina it rose from 1.56 to 1.64, in Brazil it declined from 2.16 to 2.10, whereas in Mexico it declined from 2.0 to 1.87 Bep/10\_US\$. In Trinidad and Tobago, one of the countries with the highest energy intensity, it declined from 7.65 to 7.13, whereas in Venezuela it rose from 4.53 to 4.61 (Table 10.2).

Energy intensity of the transportation sector fell by 2.25%, compared to 1999, amounting to 0.74 Boe/10<sup>3</sup> US\$ of 1995. For 2000, the high rates of energy intensity growth in the transportation sector in Cuba (8.16%), Ecuador (14.63%) and Paraguay (8.1%) are noteworthy, whereas major drops were observed in Bolivia (-10.95%), Costa Rica (-11.66%), Peru (-6.44%), Trinidad and Tobago (-9.17%), and Uruguay (8.6%) (Table 10.4).

#### Energy/Social Welfare

Diversification, understood as the higher share of commercial energy sources, rose during 2000 not only in the residential sector (1.84%) but also in the industrial sector (1.26%), owing to the higher share of LPG and natural gas in the residential sector and natural gas in the industrial sector. In the residential sector, the share amounted to 58.4%, compared to 57.3% in 1999, Colombia, Costa Rica, Cuba, and Uruguay being noteworthy, since in 1991 they recorded shares below 35% and in 2000 considerably increased their diversification, especially Costa Rica, which reached 81.62%, whereas the three other countries recorded values of about 50%. In the industrial sector, diversification amounted to 65.47%. with major rises in Brazil (4.86%), Colombia (12.98%), El Salvador (15.59%), and Honduras (8.93%). Furthermore, major declines were observed in Bolivia (-7.94%), Guyana (-10.59%), and Haiti (-13.0%).

**Final per capita energy consumption** of the region rose in 2000 by 0.2%, reaching 6.23 Boe/inhabitant, compared to 6.22 Boe/inhabitant observed in 1999. It recorded a considerable increase in Cuba with a rate of 10.88% and 6.04 Boe/inhabitant per year, in Ecuador with a rate of 6.68% and 3.64 Boe/inhabitant per year, and the Dominican Republic with a rate of



7.22% and 4.73 Boe/inhabitant per year. The main declines were observed in Bolivia (-10.91%), Costa Rica (-4.06%), and Uruguay (-7.01%). The highest per capita consumption in the region is in Trinidad and Tobago, with 37.55 Boe/inhabitant, followed by Venezuela with 11.04, Suriname with 10.39, Argentina with 9.16, Mexico with 7.01, and Chile with 9.44 (Table 10.7).

In 2000, per capita residential electricity consumption continued to rise in the region's countries, reaching an average of 409.9 kWh/inhabitants, that is, 2.35% more, compared to 1999, lower than the annual average growth since 1991 (2.93%). The growth rates of 5.47% in Cuba, 10.96% in Honduras, and 28.13% in the Dominican Republic are noteworthy, while they continue to decline in Colombia, Ecuador, Haiti, and Nicaragua (Table 10.9).

The external energy balance, that is, the ratio of exports-imports to total supply measured in terms of KBoe, rose by 1.14% in 2000, meaning a relative rise in the region's self-supply capacity. This indicator for 2000 amounted to 0.37. Countries with a positive balance that saw this indicator increase were Argentina, Bolivia, Paraguay, and Trinidad and Tobago. Colombia, however, saw it decline by 7.47% owing largely to the decline of its oil exports and the rise in imports of oil products, attaining nevertheless a value of 1.58, that is, its external balance is equivalent to 158% of its gross demand. Venezuela is the country that showed the highest balance, with a value of 2.04, followed by Colombia and Ecuador, with 1.68. The country that recorded the lowest balances are Grenada (-0.93), Jamaica (-0.92), the Dominican Republic (-0.81), Panama (-0.71), and Chile (-0.68). As for Brazil, it showed a balance of -0.23, whereas Argentina and Mexico recorded values of 0.39 and 0.47, respectively.

**Efficiency of residential consumption** in the region was calculated at 42.17% in 2000, higher by 1.44% than the one observed in 1999, which amounted to 41.57%. Likewise, useful per capita consumption of

the residential sector amounted to 0.48 Boe/inhabitant, which means a growth rate of 3.0%, compared to 1999.

Electric power service coverage is highly variable in the region, ranging from countries that are able to meet the needs of 95% of their population such as Uruguay, Barbados, Suriname, Trinidad y Tobago, Costa Rica, and Chile, to other such as Haiti, Honduras, or Nicaragua, where coverage is below 60%. Nevertheless, during 2000, various countries of the region consolidated their electrification programs, especially for the rural sector, in order to expand coverage, as is the case for Guatemala and Jamaica.

#### Energy/Environment

**Total per capita CO<sub>2</sub> emissions** in the region rose in 2000 by 0.38%, amounting to 2.39 Gg/10<sup>3</sup> nhab. (ton/inhabitant), as a result of rising energy demand in the region. The highest rises, because of their representativeness in the region, took place in Mexico (2.07%) and Venezuela (3.1%). The growth of this indicator between 1999 and 2000, however, is lower than the annual average since 1991, which is 1.26%, which means a general trend toward using less polluting energy sources.

As for CO<sub>2</sub> emissions compared to GDP (**intensity of emissions**), they declined by 2.07%, compared to 1999, reaching a value of 0.85 Gg CO<sub>2</sub>/10<sup>6</sup> US\$ of 1990, with values by country ranging from 0.51 for Barbados to 2.84 for Trinidad and Tobago (Table 10.15).

Regarding demand or final consumption of energy, total CO<sub>2</sub> emissions rose by only 0.18%, reaching a value of 0.38 Gg of CO<sub>2</sub> for each KBoe consumed, with major declines recorded in Chile (-9.54%), Costa Rica (-4.99%), and Uruguay (-14.63%) and large increases in Bolivia (4.36%), Guatemala (11%), and Mexico (3.79%).

As for  $CO_2$  emissions by sector, a reduction of 2.31% in pollution from electric power generation was

observed during 2000, amounting to 0.25 Gg/GWh, which means that over the last year the contribution of thermoelectric stations to pollution was lower than in 1999, with the noteworthy reduction of more than 20% in countries like Chile, the Dominican Republic, and Uruguay. The transportation sector remained unchanged, with the same level of emission observed since 1991, that is, 0.43 Gg/10<sup>3</sup> Boe.

In the region, the **durability (scope) of oil reserves** (reserve-production ratio) for 2000 declined by 1.45%, compared to 1999 when it fell from 42.4 to 41.8 years, with rises for this indicator observed in Colombia and Peru, owing to the reduction in production and in Trinidad and Tobago due to the rise in reserves. In Brazil, although reserves increased, this indicator fell because production increased more rapidly than reserves. Durability of reserves also fell in Mexico from 44.5 to 42.5 and in Venezuela from 71.4 to 70.3 years (Table 10.19).

The durability (scope) of natural gas reserves declined in 2000 from 41.3 to 40.4 years, with drops observed in Brazil from 21.1 to 19.3, in Colombia from 25.7 to 25.2, in Trinidad and Tobago from 45.7 to 42.8, in Mexico from 14.1 to 13.9, and in Venezuela from 106.7 to 106 years. As for Bolivia, it increased the indicator for durability of its natural gas reserves from 103.6 to 188.7 years (Table 10.20).

#### Figure 21. SUSTAINABILITY INDICATORS

Indicators	Unit	1991	1999	2000	Growth Rate (%)		
					91-00	99-00	
Demand -GDP elasticity		0.61	2.53	0.43	-3.79	-83.09	
Energy intensity	KBoe/US\$	2.28	2.28	2.23	-0.26	-2.25	
Industrial energy intensity	KBoe/US\$	2.27	2.21	0.00	-100.00	~-100.00	
Transportation energy intensity	KBoe/US\$	0.72	0.75	0.74	0.29	-2.25	
Residential sector diversification	%	46.86	57.31	58.36	2.47	1.84	
Industrial sector diversification	%	69.88	64.66	65.47	-0.72	1.26	
Total per capita consumption	Boe/inhabitant	5.76	6.22	6.23	0.88	0.20	
Residential per capita consumption	Boe/inhabitant	1.15	1.12	1.14	-0.12	1.54	
Residential per capita electricity consumption	KWh/inhabitant	316.21	400.47	409.90	2.93	2.35	
Foreign balance	Exp-imp/total supply	0.32	0.37	0.37	1.91	1.14	
Residential efficiency	%	36.03	41.57	42.17	1.76	1.44	
Per capita useful consumption	Boe/inhabitant	0.41	0.47	0.48	1.65	3.00	
Electricity service coverge %	%	0.00	0.00	0.00			
Per capita CO2 emissions	Gg CO2/1000inhabitant	2.13	2.38	2.39	1.26	0.38	
Intensity CO2 emissions - GDP	Gg CO2/10(6) US\$	0.84	0.87	0.85	0.11	-2.07	
CO2 emissions vs. final demand	Gg CO2/KBoe	0.37	0.38	0.38	0.38	0.18	
CO2 emissions power sector vs. generation	Gg CO2/Gwh	0.24	0.25	0.25	0.43	-2.31	
CO2 emissions transport/consumption transport	Gg CO2/KBoe	0.43	0.43	0.43	0.00	0.02	
Durability of oil reserves	Years	47.34	42.42	41.80	-1.37	-1.45	
Durability of gas reserves	Years	55.47	41.31	40.41	-3.46	-2.19	
Self-generation / total generation	%	7.09	6.97	6.85	-0.37	-1.60	

SOURCE: OLADE/CE - SIEE®

### Economic, regulatory, and energy policy aspects

#### ECONOMIC ASPECTS

In 2000, the economy of Latin America and the Caribbean was characterized by a major recovery, compared to 1999, which is reflected principally in GDP growth in the region, amounting to 4%, compared to 0.3% observed the preceding year.

This recovery was based mainly on the rise in exports, especially oil, which were favored by international crude oil price hikes, which helped to buttress the economic expansion of Mexico and counteract the economic recession in Colombia, Ecuador, and Venezuela. The non-exporting countries generally showed positive growth, although their export-import ratio declined.

The region's foreign trade was driven by international growth amounting to 4%, with a 20% rise in exports and 17% rise in imports, with the highest increases recorded in (60%) and Mexico (20%). The other countries, except for Costa Rica, Haiti, and Paraguay increased their exports as a result of the rise in marketed volumes and the increase in unit prices for a large part of the products exported by the region, especially oil, whose average price in 2000 grew by 60% compared to that in 1999. This growth in the region's exports depended to a large extent on the world's economic expansion, especially that of the United States, which favored imports from Mexico and the Central and Caribbean countries.

Similar to exports, the highest increases in imports in the region took place in the countries with the highest economic expansion such as Mexico (21%), the Dominican Republic (14%), and Venezuela (30%), whereas imports declined in Argentina, Costa Rica, Nicaragua, Paraguay, and Uruguay.

International investments in the region also rose compared to 1999, amounting to US\$52 billion, compared to US\$40 billion that came into the region the preceding year, despite the fact that the region's risk indicator rose and less liquidity was available on international markets.

#### Production of Goods and Services

The highest economic growth that was observed in the region took place in the Dominican Republic (8.5%), followed by Mexico (7%). The size of the Mexican economy and the 4% growth in Brazil explain why total regional growth is so high. Of equal importance is the growth in Chile, Cuba, and Nicaragua (5.5% each country), as well as that of Honduras (4%), which had been severely by Hurricane Mitch and had recorded a negative growth of -1.9% the preceding year. Venezuela, the region's largest oil exporter, which in 1999 had recorded a negative growth of -6.5%, recovered from this recession as a result of higher income from the sale of oil and gas, whose prices rose notably on the international market, permitting a rise of its gross domestic product of 3.5%. Likewise, in Chile, which in 1999 had recorded a negative growth rate of -1.1%, experienced a 5.5% rise in its gross domestic product in 2000, as a result of higher unit prices reached by its export products, although its growth target was adversely affected by the higher oil prices. The other countries recorded positive growth rates, albeit not as high, except for Uruguay, which saw its growth decline by 1% mainly due to the fact it was unable to materialize the exports to Brazil and Argentina it had planned, the drop in export prices, and the rise in oil prices.

#### Per Capita Income

Per capita income in the region, in U.S. dollars of 1990, rose from US2,732 in 1999 to US2,800 in 2000, which corresponds to a growth of 2.54%, compared to a negative growth of -1.1% recorded in 1999. The **Andean Zone**, which in 1999 had recorded a decline in its per capita GDP of -5.17%,



Regions	GDP PER CAPITA US\$1990	Growth Rate (%) 99-00		
CARIBBEAN	1372.85	4.11		
CENTRAL AMERICA	1197.67	0.49		
SOUTHERN CONE	4556.61	-0.27		
ANDEAN ZONE	1652.48	1.44		
MEXICO	3747.65	5.36		
BRAZIL	3004.46	2.66		
LATIN AMERICA & CARIBEAN	2800.62	2.50		

Figure 22. PERCENTAGE VARIATION OF THE PER CAPITA INCOME OF	
LATIN AMERICA AND THE CARIBBEAN 2000	

SOURCE: OLADE/CE - SIEE®

witnessed a rise from US\$1,629.1 to US\$1,652.5 per inhabitant, that is, 1.56%, with positive growth observed in the subregion's countries, except for Bolivia, which recorded a decline of -0.28%. In the countries of the Southern Cone, except for Chile with a rise of 4.16%, the other countries showed negative growth over -1%, so that the subregion as a whole recorded a decline of -0.27%, which in any case means a recovery when this rate is compared to the rate of -4.19% recorded in 1999. Despite the above, it continues to be the subregion with the highest per capita income, which in 2000 amounted to US\$4,556.6 per inhabitant. Brazil, the subregion's largest economy, recorded a per capita income of US\$3,004.5, indicating a growth rate of 2.66% compared to 1999. In the Caribbean subregion, the per capita income for 2000 amounted to US\$1,373, with a growth rate of 4.12%, compared to the previous year, with noteworthy increases over 5% in Cuba and the Dominican Republic, as well as in Barbados, with the highest per capita income in the region growing at 2.62%, amounting to US\$7,384 per inhabitant. In Central America an individual income of US\$1,197.71 was recorded, with an annual growth rate of 0.49%. As for Mexico, it recorded an increase

of 5.36%, with a per capita income of US\$3,748 per inhabitant.

#### Employment, Unemployment and Inflation

The economic growth that was observed in the region, however, did not exert a major impact on **employment**, which rose from 52.7% in 1999 to 53% in 2000, whereas **unemployment** only declined from 8.7% in 1999 to 8.6% in 2000, as the economic recovery was not enough to handle growing labor supply.

The region's inflation rate declined slightly in 2000 compared to 1999, from 9.7% to 9%. In the majority of the countries, except for Ecuador, Haiti, and Venezuela, the inflation rate never went over 10%, with the notable exception of Argentina, which was the only country where consumer prices declined. Countries like Bolivia, Chile, Costa Rica, El Salvador, Nicaragua, Paraguay, and Uruguay, recorded a slight increase in their pace of inflation, as a result of rising oil prices, whereas countries such as Trinidad and Tobago, Guatemala, Brazil, Colombia, Mexico, Honduras, and Venezuela showed a decline in their



inflation rates. Mexico and Colombia returned to an inflation of less than 10% after 5 and 30 years, respectively, whereas in Uruguay, despite the slight rise, inflation remained below 5%.

#### Foreign Trade

Both imports and exports in the region grew considerably in 2000, with exports recording the highest increase, thus reducing the foreign trade deficit.

#### **Investment and Debt**

Foreign direct investment (FDI) to the region declined between 1999 and 2000, from US\$77,047 million to US\$57,410 million, which means a decline of 25.5%. The countries taking the highest amounts of FDI were **Argentina, Brazil, Mexico,** and **Venezuela**, which received 90.5% of the total amount invested, of which Brazil received US\$30 billion. As for the external indebtedness of the countries, **Brazil** accounts for 31.3% of the region's total debt, followed by **Mexico** (21.7%), **Argentina** (19.6%), **Colombia** and **Chile (**4.8% each), **Venezuela** (4.1%) and **Peru** (3.7%). As a whole, the external debt disbursed to the region declined slightly between 1999 and 2000, from US\$759,085 million to US\$750,855 million, that is, by 1.1%.

#### LEGISLATION AND REGULATION

At the end of 2000, the Congress of **Colombia** approved legislative initiatives for extending the period to gradually dismantle extra-legal subsidies to electric power service and to charge a contribution of one peso per kWh dispatched on the wholesale market to finance electric power investment projects in areas that are not interconnected up to the year 2007. Likewise, regulations were provided for the establishment of the National Natural Gas Operation Council (Consejo Nacional de Operación de Gas Natural—CON), which is at present discharging its duties with respect to the integrated operation of the Gas Transport System.

In **Ecuador**, new transport rates for secondary pipelines were set, which generated an additional income of US\$4.3 million.

In **Honduras**, the new Framework Law for the Electric Power Sector was presented. It is in the process of being ratified by the National Congress and will be providing a new legal framework for electric power matters in order to adjust the structure and functioning of electric power sector of Honduras in line with the provisions contained in the Central American electric power market treaty, to which Honduras is a party.

In compliance with its function of formulating the policies and strategies for the country's energy sector, the National Energy Commission of **Nicaragua** requested the IDB to provide funding for a project entitled Indicative Policymaking for the Energy Sector and, with support from PREEICA, it started preparing the Indicative Plan for the Electric Power Sector.

In **Paraguay**, progress was made in drawing up the Natural Gas Regulatory Framework bill, which among other definitions creates the National Natural Gas and Hydrocarbons Regulatory Agency (ENREGAS), which will be in charge of administrative and technical regulations, monitoring, supervision and verification of natural gas and hydrocarbons transport and distribution via pipelines and associated activities.

In the new regulatory framework of **Uruguay**'s Budget Law, a new Public Utility Regulatory Unit (URSIP) was created, whereby services such as electricity and fuels are supposed to be regulated.

In **Venezuela**, the National Gas Agency (ENAGAS) was created and attached to the Ministry of Energy and Mines, in compliance with the provisions of the new Hydrocarbons Law. It will be responsible for promoting the sector's development and competition in all phases of the oil and gas industry involving transport and distribution activities and for helping to coordinate and safeguard these activities.



### Environmental Legislation and Community Participation

Citizen participation in environmental management is provided for in the Constitutions and environmental legislation of some of the region's countries, as in El Salvador, Honduras, Mexico, Panama, Chile, Ecuador, Colombia, Bolivia, and Peru. This subject is of the utmost interest for the energy sector because, owing to its nature and characteristics, energy projects are subject to specific environmental control mechanisms, including environmental impact assessments, although they are not limited to just this. There is a trend, therefore, toward developing not only a broader environmental framework but also the strictly sectoral aspect of energy, regulations promoting the individual or joint participation of citizens to favor fairness and better decision making in sector development and activities, as well as greater control over them.

In 2001, Ecuador reformed its Environmental Regulations for Oil and Gas Operations, including technical norms for environmental control and monitoring for all phases of these activities and requiring companies to conduct environmental monitoring and reporting to the Environmental Protection Under-Secretariat. Although these new regulations incorporate provisions for citizen participation, the mechanism and rules for this participation are lacking. The Ecuadorian Government is promoting a discussion among the players about necessary regulation. As for the institutional framework, the National Directorate for Environmental Protection of the Ministry of Energy and Mines was restructured in December 2000 and its institutional capacity built up as a result.

En **Bolivia**, enactment of the Regulation for Oil and Gas Activities in Original Community Territories (Reglamento de Operaciones Hidrocarburíferas en Territorios Comunitarios de Origen-TCOs) is expected. It provides a technical and legal instrument to govern the relations between the indigenous people and companies and to generate consulting opportunities for the indigenous people and their participation in oil development. The draft regulations envisage the incorporation of socioenvironmental impact assessment studies (Estudio de Evaluación de Impacto Socio Ambiental-EISA). So that they can be correctly implemented, guides and manuals are expected to be developed. In addition, Bolivia has amended the Environmental Regulations for the Oil and Gas Sector and issued environmental regulations for the electric power sector.

**Paraguay** is working on the regulation for the Environmental Impact Assessment (EIA) Law, with the participation of NGOs and various environmental agencies of the government to update environmental standards and parameters.

In January 2001, the Ministry of Energy and Mines of **Peru** published the Guide for Community Relations, which provides a series of guidelines so that electricity, hydrocarbons, and mining projects are implemented appropriately with respect to the communities, by developing two specific tools, the Social Impact Study and the Community Relations Plan.

In **Venezuela**, the Indigenous Habitat and Land Delimitation and Guarantee Law, which provides for the implementation of natural resource development projects on indigenous lands, was promoted. The information and consulting process with the indigenous people and organizations will continue. The National Assembly of Venezuela also ratified Convention 169 on Indigenous Peoples and Tribes of the International Labor Organization.


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1.1.1 WORLD OIL RESERVES (Gb	obl)			Growth R	late (%)	WORLD	DIL RESERVES 2000			
Region	1991	1999	2000	91-00	99-00					
NORTH AMERICA	41.7	35.5	36.1	-1.59	1.69	EUROPE				
LATIN AMERICA & CARIBBEAN	124.9	144.3	145.8	1.73	1.02				1	
EUROPE	14.5	20.7	19.1	3.11	-7.73	FORMER SOVIET UNION				
FORMER SOVIET UNION	58.8	65.4	65.3	1.17	-0.15	AFRICA				
MIDDLE EAST	661.6	675.7	683.6	0.36	1.17	LATIN AMERICA & CARIBBEAN				
AFRICA	60.4	74.8	74.8	2.40	0.00	MIDDLE EAST	······································		)	
ASIA & AUSTRALASIA	44.1	44.0	44.0	-0.03	0.00	1	10	10	0	1000
WORLD	1006.0	1060.4	1068.7	0.67	0.78			Gbbl		

1.1.2 WORLD OIL PRODUCTION (	kbbl/day)			Growth	Rate (%)	WORLD	OIL PRODUCTION 2	000			
Region	1991	1999	2000	TC 90-98%	TC 97-98%						
NORTH AMERICA	10188.6	9349.6	9472.0	-0.81	1.31	EUROPE					
LATIN AMERICA & CARIBBEAN	7228.7	9323.2	9556.6	3.15	2.50	AFRICA					
EUROPE	4491.2	6489.0	6495.0	4.18	0.09	ASIA & AUSTRALASIA FORMER SOVIET UNION		1			
FORMER SOVIET UNION	10182.7	7302.4	7786.0	-2.94	6.62	NORTH AMERICA	-				
MIDDLE EAST	16501.9	20653.6	21960.4	3.23	6.33	LATIN AMERICA & CARIBBEAN		9884-8882			
AFRICA	6459.4	7136.6	7367.5	1.47	3.24	MIDDLE EAST					í
ASIA & AUSTRALASIA	6562.1	7160.2	7511.6	1.51	4.91		0 5000	10000	15000	20000	25000
WORLD	61614.6	67414.6	70149.2	1.45	4.06			kbb	ol/Day		

SOURCES: BP Statistical Review of World Energy, LA&C: SIEE





1.1.3 INTERNATIONAL CR	UDE OIL PRI	CES (US\$/bbl)		Growth	Rate (%)
	1991	1999	2000	91-00	99-00
OPEC Basket	17.39	24.77	24.13	3.71	-2.58
Arabian Light	16.25	25.04	22.65	3.76	-9.54
Dubai	15.31	23.65	22.27	4.25	-5.84
Bonny Light	18.98	25.86	25.47	3.32	-1.51
Saharan Blend	19.59	26.13	26.11	3.24	-0.08
Minas	19.44	24.27	24.87	2.77	2.47
T.Juana Light	15.56	23.61	23.11	4.49	-2.12
Isthmus	16.59	24.79	24.40	4.38	-1.57
Oman	15.86	24.34	0.00	-100.00	-100.00
Brent	18.39	25.63	25.07	3.50	-2.18
West Texas Intermediate	19.68	26.21	28.39	4.16	8.32
Alaska North Slope	16.58	24.66	0.00	-100.00	-100.00
SOURCE: OPEC, SIEE	NOTE: DE	CEMBER PRIC	ES		



1.2.1 WORLD NATURAL GAS RES	ERVES (Tm3)			Growth	Rate (%)	WORLD NATURAL GAS RESERVES 2000					
Region	1991	1999	2000	91-00	99-00	EUROPE					
NORTH AMERICA	7.3	6.5	6.5	-1.33	0.15	NORTH AMERICA					
LATIN AMERICA & CARIBBEAN	7.2	7.6	7.8	0.95	2.96	LATIN AMERICA & CARIBBEAN					
EUROPE	5.1	5.2	5.2	0.26	1.36	ASIA & AUSTRALASIA					
FORMER SOVIET UNION	50.0	56.7	56.7	1.41	0.00	AFRICA					
MIDDLE EAST	37.4	49.5	52.5	3.84	6.06	MIDDLE EAST					
AFRICA	8.8	11.2	11.2	2.67	0.00	FORMER SOVIET UNION					
ASIA & AUSTRALASIA	8.4	10.3	10.3	2.32	0.49	1	10	100	,		
WORLD	124.2	146.8	150.2	2.14	2.28		Tm3				

<b>1.2.2 WORLD NATURAL GAS PRO</b>	DUCTION (Gm	3)		Growth F	Rate (%)	WORLD NATURAL GAS PRODUCTION 2000					
Region	1991	1999	2000	91-00	99-00	AFRICA		J	<u></u>		
NORTH AMERICA	615.7	697.7	723.3	1.80	3.66	LATIN AMERICA & CARIBBEAN			Kosindizzaina		
LATIN AMERICA & CARIBBEAN	129.2	183.7	193.5	4.60	5.31	MIDDLE EAST			<u></u>		
EUROPE	226.1	280.7	287.9	2.72	2.53	ASIA & AUSTRALASIA					
FORMER SOVIET UNION	756.1	656.3	674.4	-1.26	2.76	EUROPE					
MIDDLE EAST	104.7	191.6	209.6	8.03	9.39	FORMER SOVIET UNION		r		<b>_</b>	
AFRICA	71.9	116.9	129.5	6.76	10.84	NORTH AMERICA		I			
ASIA & AUSTRALASIA	163.9	253.3	265.5	5.51	4.82		1 .	10	100	1000	
WORLD	2067.5	2380.3	2483.7	2.06	4.34			Gm3			

SOURCES: BP Statistical Review of World Energy, LA&C: SIEE

1.3.1 WORLD COAL RESERVES (G	t)			Growth I	Rate(%)	WORLD	COAL RESERVES 2000	
Region	1991	1999	2000	91-00	99-00	MIDDLE EAST	1	
NORTH AMERICA	250.0	255.3	255.3	0.23	0.00	LATIN AMERICA & CARIBBEAN		
LATIN AMERICA & CARIBBEAN	14.3	16.2	16.1	1.37	-0.27	AFRICA		
EUROPE	99.0	122.0	122.0	2.35	0.00	EUROPE		-
FORMER SOVIET UNION	315.0	230.2	230.2	-3.43	0,00	FORMER SOVIET UNION		
MIDDLE EAST	0.2	0.2	0.2	-0.40	0.00	NORTH AMERICA	·	
AFRICA	62.0	61.4	61.4	-0.11	0.00	ASIA & AUSTRALASIA		
ASIA & AUSTRALASIA	304.0	292.3	292.3	-0.43	0.00		1 10 10	1000
WORLD	1044.5	977.6	977.6	-0.73	0.00	1	Gt	

SOURCES: BP Statistical Review of World Energy, LA&C: SIEE

1.3.2 WORLD COAL PRODUCTION	(Mt)			Growth R	ate(%)	WORLD	COAL PRODUC	TION 2000			
Region	1991	1999	2000	91-00	99-00	MIDDLE EAST					
NORTH AMERICA	974.9	1071.8	1045.2	0.78	-2.48	LATIN AMERICA & CARIBBEAN		$C = \phi_1 = 0$			
LATIN AMERICA & CARIBBEAN	35.7	55.2	63.7	6.65	15.39	AFRICA					
EUROPE	669.5	430.5	416.5	-5.14	-3.25	EUROPE		ι	······		
FORMER SOVIET UNION	1024.2	745.5	791.6	-2.82	6.19	FORMER SOVIET UNION			1	נ	
MIDDLE EAST	1.0	0.9	0.9	-0.74	0.00	NORTH AMERICA			1		
AFRICA	186.2	229.5	229.3	2.34	-0.08	ASIA & AUSTRALASIA			I		
ASIA & AUSTRALASIA	1667.5	1815.8	1812.0	0.93	-0.21		1 1	0 1	00	1000	1000
WORLD	4559.0	4349.2	4359.3	-0.50	0.23				Mt		

SOURCES: International Energy Agency , LA&C: SIEE

1.4 ENERGY BALANCE OF	LATIN AMERIC	A AND THE C	ARIBBEAN (k	Boe) - 2000																			)
- ACTIVITY	Dil	Natural Gas	Coal	Hydroenergy	Geothermal	Nuclear	Firewood	Cane Products	Other Primary	Total Primara	Electricity	Liquid Gas	Gasoline / Alcobol	Kerosone &	Diesel Oil	Fuel Oil	Coke	Charcoal	Gases	Other Secondary	Non Energy	Total Secondary	TOTAL
, PRODUCTION	3628020.93	1201100.64	282400.98	546820.34	21944.73	23914.32	364235.55	221423.61	74671.21	6364532.30	593808.90	168492.58	670598.10	127486.24	61578D.07	545896.65	18196.27	38346.96	82143.75	46050.28	120812.51	3027412.32	6364532.30
. IMPORTS	37,4270,25	62363.45	122109.38	-	-	4373.44				563116.51	34392.25	71936.72	84341.01	20750.63	128324.74	100967.56	11701.69	92,41		13333.40	4165.29	470005.70	1033122.21
. EXPORTS	1806884.44	72146.72	209033.03						24706.00	2112770.20	33311.83	32146.98	128835.46	48239.81	123363,43	208287.21	2515.40	36.32	-	14689.02	17925.82	609351.26	2722121.48
STOCK VARIATION	-7050.27	-6196.92	1220.92	-1326.00	-	9033.66		-4.30	1552.00	-2770,92		-2345.51	-5150.44	-3279,23	-4629.13	-5359.52	4173.50		-390.55	550.66	1329.37	-15100.85	-17871.76
. UNUSED	1,02	117657.71	362.97	14399.72	3578.98			438.00	471.45	136909.84					-				75.00			75.00	136984.84
. TOTAL SUPPLY	2188355.44	1067462.73	196335.28	531094.62	18365,75	37321.41	364235.55	220981.31	51045.76	4675197.85	594889.32	205936.81	620953.22	96717,84	616112.24	433217.49	31556.06	38403.06	81678.21	45245.32	108181.35	2872890.90	4520676.43
. REFINERIES	-2150257.65	-11755.50							;	-2162013.14		66217,98	562020.19	127167.22	610335.07	545768.96	539.75	-	60920.89	20220.83	100759.36	2093950.24	-68062.90
POWER PLANTS	-499.15	-198231.55	-74085.64	-523817.66	-18165.80	-37321.41	-195.27	-	-14.00	-852330.49	562418.54		-55.64	_	-29858.46	-232786.68	-1039.78	-	-10509.65			562418.54	-564162.15
. SELF-PRODUCERS	-161.85	19988.21	-1121.00	-6498,76	·		-3746.98	-16474.88	-9629.55	-57621.22	32090.24		-469.39	-110.78	-11874.45	-18469.91	-	-	-5817.26	-1337.00		32090.24	-63608.78
GAS TREATMENT		-184103,95				-	_			-184103.95		100730.37	45307.10	319.02	11.84	126.59	-29.40	_	6488.85	-0.72	17837.16	169820.93	-14313.13
CHARCOAL PLANTS							-72464.84			-72464.84					_	-		38346.95				38346.95	-34117.89
COKING PLANTS AND BLAST FURNACES			-73799.04					-	-36.75	-73835.79	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	-7.93					11669,73		14969.37	-2069,37	2016.00	28655,10	-47277.99
DISTILLERIES								-40332.40		-40332.40	-		39389.97		-					-		39389.97	-942.43
. OTHER CENTERS	-39442.37	-18539.41						-		-57981.79		1515.39	9783.34	_	5433.17	-21.64	-32967.64	-	2643.30	23758.82		43134.02	-47837.25
TOTAL TRANSFORMATION	-2190361.01	-432618.61	-149005.69	-530318.42	-18165.60	-37321.41	-76407.09	-56807.28	-9680.29	-3500683.61		-7.93	-525.03	-110.78	-41732.91	-251277.23	-34037.01		-16326.91	-3427.09		-347444.89	-840322.51
. OWN CONSUMPTION	1052.56	231825.78	25.51					38919.00		271822.84	19898.63	2139.76	6652.23	226.94	7736.35	30899.69	2184,90	_	57228.67	1425.70	13407.62	141800.49	413623.33
. LOSSES	6083.47	6970.48	1160.94	1	171.36		139.82	139.60	736.00	15401.67	93443.27	301.94	841. <b>1</b> 6	729.53	1091.26	489.80	59.49	975.99	241.44	906.00	139.69	99219.57	114621.24
. ADJUSTMENT	-26683.38	-4351.02	4375.45	5 778.20	28.59		169.96	-480.19	181.52	-25980.87	1026.82	-911.95	15470.20	-149.06	1349.17	1026.70	-25361.67	127.89	-4703.99	664.66	9592.22	-1869.00	-27849.87
. TRANSPORTATION		13665.89	6.65	5			51.47			13724.01	2112.45	9390,69	516750.05	77806.68	424921.30	14547.31		0.50	3.20	3.00	145.30	1045680.48	1059404.49
INDUSTRY	17068.39	265708.95	37700.56	5			58088.51	114691.81	36964.05	530122.27	224058.84	28561.46	1358.86	2294.80	51236.11	114071.52	20457.38	26182.57	10022.79	36577.54	2057.26	516969.13	1047091.40
RESIDENTIAL		65882.94	449.64	4			211886.65		2240.15	280459.38	130404.91	144276.45	1100.94	14627.53	1038.66	576.46		10009.58	1025.93		1.00	303061 47	583520.86
. COMM. SERV. PUBLIC	52.34	18500.08	23,78	a .			753.70			19330.80	99048.34	16600.17	1436.62	642.70	9085.20	4734.73		835.57	419.85	169.32	111.69	133084.19	152414.99
AGRI, FISH, MINING	38.33	1371.71	3585.55	5			16367,65	5158.92	1137.38	27659.53	22945.87	1614.61	489.55	221.43	74173.60	15189.99	178.94	150.14	2.30	1074.00		116040.47	143700.00
. CONSTRUCTION, OTH.	382.72		1.5	r .			370.68		127.63	862.5	1950.16	37.90	679.45	6.72	3746,99	397.45		120.81	2.10		1771.61	8713.25	9595.86
. ENERGY CONSUMPTION	17541.78	365130.47	41767.65	9			287518.67	119850.72	40369.2	5 872178.5	480520.5	200581.27	521815.56	95589.87	564201 R6	149517.47	20636 32	37299.17	11476 19	37823 RF	4086 85	2123549 01	2995727 50
NON ENERGY CONSUMPTION		35268.42		_				5744.90	78.70	41092.02		3817.80	75649.03	209.79	0.60	6.50	10000101	Graddin	1109.00	999.00	80954 97	162745 04	203837.08
. FINAL CONSUMPTION	17541.76	400398.89	41767.65	0			287518.67	125595.62	40447.9	5 913270.60	480520.55	204399.13	597464.55	95799.65	564202.55	149524.06	20638.32	37299.17	12585.18	38821.8F	85041.83	2286294.95	3199565 55



2.1 OIL RESERVES (Mb	bl)			Growth R	late (%)		R	ESERVE	S 2000			
Countries	1991	1999	2000	91-00	99-00	HAITI			1	1		·j
ARGENTINA	1683.3	2753.0	3066.0	6.89	11.37	LIRUGUAY	-					
BARBADOS	3.3	2.4	2.4	-3,48	0.00	GUYANA	•					
BOLIVIA	111.1	396.5	440.5	16.54	11.10	COSTA RICA	-					
BRAZIL	4818.5	8153.6	8464.7	6.46	3.82	DOMINICAN REPUBLIC						-
COLOMBIA	1884.6	2289.0	1972.0	0.50	-13.85	GRENADA	1					
COSTA RICA						PARAGUAY						
CUBA	75.0	61.0	61.0	-2.27	0.00	PANAMA						
CHILE	273.4	29.9	30.0	-21.77	0.33	NICARAGUA						
ECUADOR	1524.4	4428.0	4566.0	12.96	3.12	EL SALVADOR						
EL SALVADOR						JAMAICA						
GRENADA						HONDURAS						
GUATEMALA	54.5	525.0	840.0	35.51	60,00	BARBADOS						l l
GUYANA						SURINAME		<u></u>				
HAITI						CHILE						
HONDURAS						CUBA						
JAMAICA						PERU						
MEXICO	50925.0	47822.0	47620.0	-0.74	-0.42	BOLIVIA						
NICARAGUA						TRINIDAD AND TOBAGO					i i	
PANAMA						GUATEMALA	· · · · · · · · · · · ·	· ·				
PARAGUAY						COLOMBIA	******	r				
PERU	380.9	309.8	323.4	-1.80	4.40	ARGENTINA			1			
DOMINICAN REP.						ECONDOR BRAZI						
SURINAME	28.9	24.2	24.1	-2.00	-0.41	MEXICO	<u> </u>			T. T		_
TRINIDAD & TOBAGO	494.0	685.9	715.0	4.19	4.24	VENEZUELA			· ['			
URUGUAY			1			VENELOEDA	<u>.</u>			····		
VENEZUELA	62649.0	76862.0	77685.0	2.42	1.07		1 1	Ð	100	1000	10000	100000
LA&C	124905.9	144342.2	145810.1	1.73	1.02				мьы			

2.2 OIL PRODUCTION (	kbbi)			Growth R	ate (%)			PR	ODUC	TION	2000	·				
Countries	1991	1999	2000	91-00	99-00											
ARGENTINA	180014	291701	280953	5.07	-3.68	HAITI										
BARBADOS	455	707	560	2.33	-20.84	URUGUAY										
BOLIVIA	8737	11848	11467	3.07	-3.22	GUYANA .										
BRAZIL	227327	402195	462567	8.21	15.01	COSTA RICA										
COLOMBIA	155035	297773	250576	5.48	-15.85	DOMINICAN REPUBLIC								.		
COSTA RICA						GRENADA								) I		
CUBA	3884	15751	19872	19.89	26.16	PANAMA										
CHILE	5755	1824	2058	-10.80	12.80	NICARAGUA										
ECUADOR	109385	136293	146385	3.29	7.40	EL SALVADOR										
EL SALVADOR						JAMAICA										
GRENADA						HONDURAS						i				
GUATEMALA	1353	8507	7571	21.09	-11.00	BARBADOS						1				
GUYANA						SURINAME				<u></u>		1				
HAITI						CHILE					-	1				
HONDURAS						GUATEMALA			-							ĺ.
JAMAICA						BOLIVIA			_			J				
MEXICO	976741	1075063	1120479	1.54	4.22	CUBA				L						
NICARAGUA			1			PERU				······································						
PANAMA			1			TRINIDAD AND TOBAGO				r						
PARAGUAY						ECUADOR				1						
PERU	41898	37421	34891	-2.01	-6.76	COLOMBIA				[				3		
DOMINICAN REP.						ARGENTINA										
SURINAME	1740	1815	1820	0.50	0.28	UTENISTIC .										
TRINIDAD & TOBAGO	53861	45618	43727	-2.29	-4.15	MEXICO										
URUGUAY								-		F						
VENEZUELA	872297	1076467	1105220	2.66	2.67		1	0	100	1000	) 100	00	100000	1000	000 100	000000
LA&C	2638482	3402984	3488146	3.15	2.50						kbbl					

2.3 OIL IMPORTS (kbbl)				Growth	Rate (%)			IMPO	ORTS 20	000			
Countries	1991	1999	2000	91-00	99-00	1 antis (error) (alt) - A		<u> </u>					
ARGENTINA	1553	6837	9555	22.37	39.76	FCUADOR							
BARBADOS	1119	0	0			HONDURAS							
BOLIVIA						SURINAME							
BRAZIL	191887	176396	145427	-3.03	-17.56	HAITI							
COLOMBIA	0	1326	1380		4.07	GUYANA							
COSTA RICA	2545	0	337	-20,12		BARBADOS							
CUBA	32592	5905	12154	-10.38	105.82	GRENADA	1						
CHILE	39784	67819	71167	6.68	4.94	BOLIVIA	]	1					
ECUADOR						MEXICO							
EL SALVADOR	5661	6967	. 7017	2.41	0.71	COSTA RICA		1					
GRENADA						PARAGUAY		1	-				
GUATEMALA	4849	5966	6041	2.47	1.25	COLOMBIA		1					
GUYANA								Τ		.1	<u> </u>		
HAITI		-				EL SALVADOR		1					
HONDURAS	2978	0	0			JAMAICA							
JAMAICA	6612	3218	7732	1.75	140.29	ARGENTINA		1					
MEXICO						CUBA		.1					
NICARAGUA	4557	5943	5992	3.09	0.81	URUĞUAY		4	1.	·			
PANAMA	8151	18002	16193	7.93	-10.05	DOMINICAN REPUBLIC		1					
PARAGUAY	2099	736	809	-10.06	9.86	. PANAMA		1					
PERU	12391	21177	22323	6.76	5.41	PÉRŲ		1					
DOMINICAN REP.	13680	14418	14424	0.59	0.04	TRINIDAD AND TOBAGO						ן נ	
SURINAME						CHILE		T		1			
TRINIDAD & TOBAGO	15229	29157	35761	9.95	22.65	BRAZIL		1					
URUGUAY	9983	12260	12657	2.67	3.24		1	10	100	1000	10000	100000	1000000
VENEZUELA													
LA&C	355671	376128	368968	0.41	-1.90				kbbl				

2.4 OIL EXPORTS (kbbl	)			Growth F	Rate (%)			EXPO	RTS 200	0			
Countries	1991	1999	2000	91-00	99-00	OPPNADA		r	7		····		
ARGENTINA	9044	98196	124618	33.84	26.91	GRENADA							
BARBADOS	0	723	561		-22.43	EL CALMADOR			1				
BOLIVIA	368	0	0			EC ORCHDOR							
BRAZIL	0	214	7145		3238.79	DOMINICAN REPUBLIC							
COLOMBIA	61970	188137	140498	9.52	-25.32	CHILE			1				
COSTA RICA						FARAGUAY							
CUBA						PANAMA							
CHILE						NICARAGUA				1			
ECUADOR	65259	84650	86566	3.19	2.26	CUBA							
EL SALVADOR						JAMAIGA			ļ				
GRENADA						HONDURAS				1			
GUATEMALA	1063	7016	6905	23.11	-1.58	HAITI							
GUYANA						GUYANA			1		1		
HAITI						COSTA RICA							
HONDURAS						SURINAME			<u></u>	1			
JAMAICA						BARBADOS		I	<u> </u>	i i			
MEXICO	499605	574701	614609	2.33	6.94	PERU		1					1
NICARAGUA						GUATEMALA		1					
PANAMA						BRAZIL		(	1				
PARAGUAY						TRUNIDAD AND TOBAGO		1	1				
PERU	377	10590	4963	33.17	-53.14	ECUADOR			1				
DOMINICAN REP.						ARGENTINA			1				
SURINAME	329	350	353	0.79	0.86	COLOMBIA		1	1				
TRINIDAD & TOBAGO	26466	21179	19188	-3.51	-9.40	MEXICO		1	T				
URUGUAY						VENEZUELA							
VENEZUELA	455507	701864	711213	5.08	1.33		1 1	0 1	100	1000	10000	100000	1000000
LA&C	1119988	1687621	1716618	4.86	1.72					KODI			

2.5 INSTALLED CAPACI	TY OF REFINE	RIES (kbbl/day)	)	Growth	Rate (%)	INS	TALLED CAP	ACITY OF RI	EFINERIES 20	00	
Countries	1991	1999	2000	91-00	99-00	OPENADA		1			
ARGENTINA	686	667	667	-0.31	0.00	HONDINAS					
BARBADOS	4	0	0			HAITI					
BOLIVIA	45	47		0.41	0.00	GUYANA					
BRAZIL	1518	1943	1992	3.07	2.54	BARBADOS	1				
COLOMBIA	259	330	291	1,29	-11.82	SURINAME					
COSTA RICA	15	15	15	0.00	0.00	PARAGUAY					
CUBA	176	176	176	0.00	0.00	COSTA RICA					
CHILE	147	165	206	3.82	24.85	NICARAGUA					
ECUADOR	151	177	177	1.78	0.00	EL SALVADOR		<u> </u>			
EL SALVADOR	17	20	20	1.82	0.00	GUATEMALA					
GRENADA						JAMAIGA	<u> </u>			1	
GUATEMALA	17	18	23	3.16	28.57	LIRUGUAY					
GUYANA						BOLIVIA					
HAITI						DOMINICAN REPUBLIC					
HONDURAS	14	0	0			PANAMA		<u> </u>			
JAMAICA	35	35	35	0.00	0.00	TRINIDAD AND TOBAGO					
MEXICO	1524	1525	1559	0.25	2.23	CUBA					
NICARAGUA	15	20	20	2.96	0.00	ECUADOR					
PANAMA	80	60	60	-3.15	0.00	PERU		Τ	<u> </u>		1
PARAGUAY	8	8		0.00	0.00	CHILE					
PERU	189	190	190	0.04	0.00	ADGENTINA					
DOMINICAN REP.	47	49	49	0.55	0.00	VENEZUELA		1			
SURINAME	0	7			0.00	MEXICO					
TRINIDAD & TOBAGO	305	175	175	-5.99	0.00	BRAZIL					
URUGUAY	36	37	37	0.30	0.00			+			
VENEZUELA	1320	1285	1183	-1.21	-7.94		1	10 .	100	1000	10000
LA&C	6607	6947	6935	0.54	-0.17			R,	, concernance and a second sec		

2.6 DOMESTIC OIL SUP	PLY (kBoe)			Growth F	Rate (%)		DON	ESTIC	OIL SU	IPPLY 20	000		
Countries	1991	1999	2000	91-00	99-00								
ARGENTINA	175616	204540	172115	-0.22	-15.85	BARBADOS							
BARBADOS	1493	0	0	-101.69	-18.43	GUYANA							
BOLIVIA	8382	12555	14891	6.59	18.60	GRENADA							
BRAZIL	415424	578833	584030	3.86	0.90	HONDURAS			1				
COLOMBIA	93982	108767	109797	1.74	0.95	COSTA RICA		כ	1				
COSTA RICA	2833	4	16	-43.59	290.19	PARAGUAY			+				
CUBA	36531	21689	32074	-1.44	47.88	SURINAME			-	÷		·	
CHILE	48144	75502	75867	5.18	0.48	NICARAGUA							
ECUADOR	47356	49984	61076	2.87	22.19	GUATEMALA			-T				
EL SALVADOR	5705	7003	7053	2.38	0.72	IAMANCA			J				
GRENADA						DOMINICAN REPUBLIC	·						
GUATEMALA	4697	7404	6659	3.95	-10.06	BOLIVIA				L			
GUYANA						URUGUAY							
HAITI						PÁNAMA	-				<u> </u>		
HONDURAS	3007	0	0			CUBA							
JAMAICA	6676	3223	7743	1.66	140.29	PERU			1				
MEXICO	490930	513378	514478	0.52	0.21	TRINIDAD AND TOBAGO			1				
NICARAGUA	4546	5965	6087	3.30	2.04	ECUADOR	L.		.1			l	
PANAMA	7954	17910	16118	8.16	-10.01	COLONBIA				· · · ['			
PARAGUAY	2033	835	741	-10.61	-11.31	ARGENTINA			_L				
PERU	53437	52569	52369	-0.22	-0.38	VENEZUELA							
DOMINICAN REP.	13823	14440	14446	0.49	0.04	MEXICO							
SURINAME	1454	1510	1512	0.43	0.14	BRAZIL							
TRINIDAD & TOBAGO	41498	55091	59531	4.09	8.06		1 10		100	1000	10000	100000	1000000
URUGUAY	9597	11878	15627	5.57	31.56					kBoe			
VENEZUELA	409379	426590	436127	0.71	2.24								
LA&C	1884496	2169668	2188355	1.67	0.86						-		

3.1 NATURAL GAS RESE	RVES (Gm3)			Growth R	ate (%)		R	ESERVES	2000		
Countries	1991	1999	2000	91-00	99-00			1			
ARGENTINA	592.8	697.0	687.0	1.65	-1.44	COSTA RICA				{	
BARBADOS	0.2	0.2	0.2	0.00	0.00	GRENADA					
BOLIVIA	113.4	518.5	675.1	21,92	30.20	SKENADK					
BRAZIL	181.5	231.2	221.0	2.21	-4.43	DOMINICAN DEDURE IC					
COLOMBIA	98.0	186.9	203.7	8.47	8.97	EL SALVADOR			1		
COSTA RICA				, and the second s		PARAGUAY		1	1		
CUBA						FANAMA					
CHILE	119.0	45.0	45.0	-10.24	0.00	NICARAGUA					
ECUADOR	19.5	28.6	28.6	4.35	0.00	CUBA				1	
EL SALVADOR						JAMAKA					
GRENADA						HONDURAS					
GUATEMALA	0.6	0.6	0.6	0.00	0.00	HAITI					
GUYANA						GUYANA	1				
HAITI	1					BARBADOS	1		1		
HONDURAS						GUATEMALA		1			
JAMAICA						ECUADOR					
MEXICO	2009.2	860.6	835.5	-9.29	-2.92	CHILE			3		
NICARAGUA						COLOMBIA		1			
PANAMA						BRAZIL		1		1	
PARAGUAY						PERU					
PERU	199.8	246.0	245.0	2.29	-0.41	TRINIDAD AND TOBAGO					
DOMINICAN REP.						BOLIVIA					
SURINAME						ARGENTINA				arrand .	
TRINIDAD & TOBAGO	246.9	604.6	664.1	11.62	9.84	VENEZIELA					
URUGUAY						VENCEDEDA			·		
VENEZUELA	3581.8	4153.0	4190.9	1.76	0.91		1	10	100	1000	1
LA&C	7162.7	7572.2	7796.6	0.95	2.96				Gm3		

\* Mexico reassessed its reserves in 1996

3.2 NATURAL GAS PRO	DUCTION (Mr	n3)		Growth R	ate (%)		P	RODUCTIO	ON 2000		
Countries	1991	1999	2000	91-00	99-00	-	· · · · · · · · · · · · · · · · · · ·				
ARGENTINA	24596	41850	44870	6.91	7.22	GUYANA					
BARBADOS	33	47	38	1.55	-19.19	URUGUAY					
BOLIVIA	6335	5003	5687	-1.19	13.65	COSTA RICA					
BRAZIL	6053	10962	11435	7.32	4.31	SURINAME				1 1	
COLOMBIA	4985	7273	8080	5.51	11.09	DOMINICAN REPUBLIC				1 1	
COSTA RICA			1			BARACIUM				L L	1
CUBA	30	460	574	39.02	24.80	PANAMA				1 1	
CHILE	1772	2246	4783	11.66	112.96	NICARAGUA				Ę	
ECUADOR	835	964	1030	2.37	6.85	EL SALVADOR					
EL SALVADOR						JAMAICA	1			1	
GRENADA						HONDURAS				1	
GUATEMALA		102	29	15.56	-71.18	HAITE					
GUYANA						GUATEMALA	1				
HAITI						BARBADOS					i i
HONDURAS						CUBA		1			
JAMAICA						ECUADOR	l	l			
MEXICO*	47106	61094	60256	2.77	-1.37	PERU				5	l l
NICARAGUA						CHILE		. 1		<u></u>	
PANAMA						BOLIVIA					
PARAGUAY						COLOMBIA					
PERU	1013	1584	1661	5.65	4.86	BRAZIL					· •
DOMINICAN REP.			N			TRINIDAD AND TOBAGO					-
SURINAME						VENEZUELA					
TRINIDAD & TOBAGO	7404	13240	15525	8.57	17.26	ARGENTINA .					
URUGUAY						MEXICO				tt_	
VENEZUELA	28982	38924	39546	3.51	1.60		I 10	10	10 11	JOO 1000	00000 100000
LA&C	129151	183750	193514	4.60	5.31				Mm3		





4.1 COAL PROVEN RES	SERVES (Mt)			Growth R	ate (%)		RES	ERVES 2000	)		
Countries	1991	1999	2000	91-00	99-00	GUYANA					
ARGENTINA	151	424	424	12.16	0.00	URUGUAY					
BARBADOS						TRINIDAD AND TOBAGO					İ
BOLIVIA						SURINAME					
BRAZIL	5309	5269	5269	-0.08	0.00	DOMINICAN REPUBLIC					
COLOMBIA	5897	6692	6655	1.35	-0.55	GUATEMALA					
COSTA RICA	32	33	33	0.27	0.00	PARAGUAY					
CUBA						GRENADA					
CHILE	194	166	166	-1.72	0.00	NICARAGUA					
ECUADOR	28	22	22	~2.64	0.00	EL SALVADOR					
EL SALVADOR						BARBADOS					
GRENADA						BOLIVIA					
GUATEMALA						CUBA					
GUYANA						PANAMA					
HAITI	6	9	9	3.84	0.00	HAITI	]				
HONDURAS	21	21	21	0.00	0.00	HONDURAS					
JAMAICA	0	333	333	146.25	0.00	ECUADOR		L.			
MEXICO	1877	1848	1848	-0.17	-0.02	COSTA RICA		<u></u>			
NICARAGUA						PERU	~				
PANAMA	1	1		0.00	0.00	CHILE			÷		
PARAGUAY	1					JAMAICA		1			i i
PERU	66	58	58	-1.43	0.00	ARGENTINA		1			
DOMINICAN REP.						VENEZUELA		1			
SURINAME						MEXICO					
TRINIDAD & TOBAGO						BRAZIL		1		<u></u>	
URUGUAY						COLOMBIA					
VENEZUELA	697	1309	1303	7.19	-0.46		1	10	100	1000	10000
LA&C	14279	16185	16142	1.37	-0.27				Mt		

4.2 COAL PRODUCTION	N (kt)	*****		Growth F	Rate (%)			PRODU	CTION 200			
Countries	1991	1999	2000	91-00	99-00					· · · · · · · · · · · · · · · · · · ·		
ARGENTINA	292	336	297	0.19	-11.50	CUBA						
BARBADOS						URUGUAY						
BOLIVIA						TRINIDAD AND TOBAGO						
BRAZIL	4291	4287	4944	1.59	15.33	SURINAME						
COLOMBIA	19992	32754	38142	7,44	16.45	DOMINICAN REPUBLIC						
COSTA RICA						COSTA RICA						
CUBA		1				PARAGUAY				1		
CHILE	2208	485	366	-18.11	-24.60	PANAMA						
ECUADOR						NICARAGUA						
EL SALVADOR						BOLIVIA						
GRENADA						HONDLIDAS						
GUATEMALA						HAIT						
GUYANA						CUNANIA						
HAITI	[					GUNTEMALA						
HONDURAS						GRENADA		1				
JAMAICA						EL SALVADOR						
MEXICO	6747	10379	11543	6.15	11.21	ECUADOR						l l
NICARAGUA						BARBADOS		1				
PANAMA						PERU						
PARAGUAY						ARGENTINA		I				
PERU	11	22	17	5.17	-22.73	CHILE		1				
DOMINICAN REP.						BRAZIL						
SURINAME						VENEZUELA						
TRINIDAD & TOBAGO						MEXICO						
URUGUAY						COLOMBIA				<u></u>		
VENEZUELA	2175	6979	8434	16.25	20.85		1	10	100	1000	10000	100000
LA&C	35716	55242	63743	6.65	15.39		•		kt	1000	10000	100000

4.3 COAL IMPORTS (kt)				Growth	Rate (%)			IMPORT	TS 2000				
Countries	1991	1999	2000	91-00	99-00	VITAIT 1 ITA A				,			_
ARGENTINA	1077	929	1437	3.26	54.65	VENEZUELA		-					
BARBADOS								{					
BOLIVIA						SUDINAME							
BRAZIL	16395	19464	21664	3.14	11.30	ROLIVIA		1					
COLOMBIA						OPENADA							
COSTA RICA	0	0	0		0.00	PARAGUAY							
CUBA	106	23	22	-16.13	-5.24	EL SALVADOR		1					
CHILE	1490	5043	4402	12.79	-12.71	NICARAGUA		·	l				
ECUADOR						ECUADOR		1					
EL SALVADOR						COLOMBIA		1					
GRENADA						BARBADOS	· ·	1					
GUATEMALA	0	15	215		1335.33	HAITI	· ·	1					
GUYANA						COSTA RICA		1					
HAITI	31	0	0			URUGUAY		1					
HONDURAS	0	96	135		40.27	CUBA							
JAMAICA	54	72	72	3.25	0.00	PANAMA			<u> </u>				
MEXICO	25	2085	2195	64.42	5.28	JAMAICA							
NICARAGUA						DOMINICAN REPUBLIC	2		L_,	1			
PANAMA	46	60	60	3.00	0.00	HONDURAS		**************************************	1	2			
PARAGUAY						GUATEMALA							
PERU		425	625	14.69	47.06	PERU			· · · · · ·				
DOMINICAN REP.	194	234	93	-7.89	-60.34	ARGENTINA			[	1	1		
SURINAME						MEXICO					1		
TRINIDAD & TOBAGO						CHILE					1		
URUGUAY	0	1	1	4.61	-33.33	<b>BRAZIL</b>							
VENEZUELA						1	)	1 1	10 1	00 1	000 1	0000	100000
LA&C	19600	28447	30920	5.20	8.70					kt			

4.4 COAL EXPORTS (kt	t)			Growth	Rate (%)			EXPOR	TS 200	0			
Countries	1991	1999	2000	91-00	99-00		·····				,	·····	
ARGENTINA	15	0	0			BOLIVIA	Į.						
BARBADOS						URUGUAY				1			
BOLIVIA						TRINIDAD AND TOBAGO							
BRAZIL						SURINAME				1			
COLOMBIA	16379	29932	35614	9.01	18.98	DOMINICAN REPOBLIC	1		1				
COSTA RICA						PARAGUAY	1						
CUBA						PANAMA	1						1
CHILE						NICARAGUA	1						
ECUADOR						BARBADOS	1						
EL SALVADOR						JAMAICA	1						
GRENADA						HONBURAS	1					1	
GUATEMALA				1		HAITI	1	-				1	
GUYANA						GUYANA	1						
HAITI						GUATEMALA	]						
HONDURAS						GRENADA	}						
JAMAICA						EL SALVADOR	]	1					
MEXICO	1	86	5	19.58	-94.19	ECUADOR	]						
NICARAGUA						CHILE	]						
PANAMA						CUBA							
PARAGUAY						COSTA RICA							
PERU						ARGENTINA		1					
DOMINICAN REP.						BRAZIL	{	i		ł			
SURINAME						MEXICO							
TRINIDAD & TOBAGO						VENEZUELA		1		1			
URUGUAY						COLOMBIA						<b></b> .	
VENEZUELA	2196	6828	8025	15.49	17.53		1	10	100	100	10 10	000	100000
LA&C	18592	36846	43644	9.95	18.45								



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$\smile$		OTION (I-D)			<b>•</b> • • •						- +		
	5.1 FIREWOOD PRODU	CTION (KBOE)	1000		Growth	Rate (%)		FIREWOOD	D PRODUC	TION 20	00		
	Countries	1991	1999	2000	91-00	99-00				• • • • • • • • • •	· · · · · ·		
	ARGENTINA	3759	4640	4773	2.69	2.86	TRINUAD AND TOBAGO	-	1				
	BARBADOS						ODENIO	l	_				
	BOLIVIA	3428	2579	2457	-3.63	-4.70	OUDINAME						
	BRAZIL	189990	153192	154791	-2.25	1.04	COSTA BICA			_			
	COLOMBIA	29652	19844	19668	-4.46	-0.89	VENEZICIA		1	_			
	COSTA RICA	4186	422	418	-22.58	-0.82	CUYANA						
	CUBA	2758	2225	2124	-2.86	-4.54	CLIBA						
	CHILE	21438	29346	30656	4.05	4.46	JAMAICA	I	1				
	ECUADOR	4612	3394	3012	-4.62	-11.25	BOLIVIA						
	EL SALVADOR	7460	8125	8186	1.04	0.76	URUGUAY	·					
	GRENADA	29	36	38	3.12	3.57	PANAMA						
	GUATEMALA	19621	23317	23317	1.94	0.00	ECUADOR	·····					Í
	GUYANA	1554	1673	1681	0.88	0.47	ARGENTINA						
	HAITI	8454	10945	10463	2.40	-4.41	EL SALVADOR	<u> </u>		·····			
	HONDURAS	9800	8871	8607	-1.43	-2.98	DOMINICAN REPUBLIC			1			
	JAMAICA	1970	2348	2378	2.11	1.26	NIGARAGUA	<u> </u>					
	MEXICO	40553	43382	43721	0.84	0.78	HONDURAS				i		
	NICARAGUA	6750	8220	8468	2.55	3.01	HAITI				<u> </u>		
	PANAMA	2531	2953	2953	1.73	0.00	PARAGUAY			·			
	PARAGUAY	13273	11852	11886	-1.22	0.28	PERU						
	PERU	15544	12947	12817	-2.12	-1.00	COLOMBIA		1				
	DOMINICAN REP.	6189	8236	8254	3.25	0.22	GUATEMALA		1				
	SURINAME	241	303	309	2.78	1.71	CHILE					1	
	TRINIDAD & TOBAGO						MEXICO		L				
-	URUGUAY	3603	2887	2768	~2.89	-4.12	BRAZIL	<u> </u>		······			
	VENEZUELA	0	456	491		7.65		1 10	100	1000	10000	100000	1000000
	LA&C	397396	362195	364236	-0.96	0.56				kBoo			

5.2 BAGASSE PRODUCT	ION (kBoe)			Growth	Rate (%)		BAGAS	SE PRODI	JCTION 2	000		
Countries	1991	1999	2000	91-00	99-00							
ARGENTINA	3184	5995	6000	7.29	0.08	VENEZUELA	/					1
BARBADOS	333	173	214	-4.81	23.83	SURINAME						
BOLIVIA	1379	2092	2186	5.25	4.50	CHILE						
BRAZIL	140817	172804	140705	-0.01	~18.58	GRENADA						
COLOMBIA	9251	15302	15993	6.27	4.52	URUGUAY						
COSTA RICA	1038	769	788	-3.01	2.55	PARAGUAY					ι	
CUBA	42562	19176	19906	-8.10	3.80	BARBADDA						
CHILE						NATI						
ECUADOR	1585	2391	2018	2.72	-15.61	TRINIDAD AND TOBAGO	L	l				
EL SALVADOR	1830	1835	1763	-0.41	-3.92	COSTA RICA		T T				
GRENADA	2	3	3	5.36	6.67	HONDURAS						
GUATEMALA	3410	6056	6041	6.56	-0.25	JAMAICA						
GUYANA	1272	1372	1409	1.14	2.70	GUYANA						
HAITI	477	476	476	-0.03	0.00	DOMINICAN REPUBLIC						
HONDURAS	1032	455	969	-0.69	113.08	NICARAGUA		1				
JAMAICA	1470	1051	1059	-3.58	0.77	EL SALVADOR						
MEXICO	15195	15841	15162	-0.02	-4.29	ECUADOR	1	1				
NICARAGUA	1280	1546	1716	3.31	11.06	BOLIVIA						
PANAMA	552	375	375	-4.20	0.00					_		
PARAGUAY	121	79	79	-4.63	0.00				1			
PERU	2176	2282	2339	0.81	2.51	MEXICO	1		1			
DOMINICAN REP.	2747	1832	1521	-6.36	-16.99	COLOMBIA						
SURINAME						CUBA	-					
TRINIDAD & TOBAGO	598	658	626	0.51	-4.86	BRAZIL		I			<u> </u>	1
URUGUAY	287	76	76	-13.76	0,05		10	100	1000	10000	100000	1000000
VENEZUELA							10	100	kBpe	10000	100000	1000000
LA&C	232598	252637	221424	-0.55	-12.35							

5.3 GEOTHERMAL ENER	GY SUPPLY ()	(Boe)		Growth {	Rate (%)	G	EOTHERM	AL ENERG	SY SUPPL	Y 2000		
Countries	1991	1999	2000	91-00	99-00	VCNETHER A			r			· · · · ·
ARGENTINA				1		LIEUGUAY						
BARBADOS						TRINIDAD AND TOBACO	1		t			
BOLIVIA						SURINAME						
BRAZIL						DOMINICAN REPUBLIC						
COLOMBIA						PERU						
COSTA RICA	0	2917	3575		22.6	PARAGUAY	1					
CUBA						PANAMA						
CHILE						COLOMBIA						
ECUADOR			1			BRAZIL	1					
EL SALVADOR	1947	2849	3747	7.55	31.6	JAMAICA	1					
GRENADA						HONDURAS	1		1			
GUATEMALA	0	50	126		151.1	HATT	1					
GUYANA						GUYANA	1				1	
HAITI						BOLIVIA	}			-		
HONDURAS						GRENADA	]					
JAMAICA						BARBADOS	]					
MEXICO	10021	9950	10577	0.60	6.3	ECUADOR	}				1	
NICARAGUA	740	305	340	-8.27	11.3	CHILE	1					
PANAMA						ĠĽBA						
PARAGUAY						ARGENTINA						
PERU						GUATEMALA			7			
DOMINICAN REP.						NICARAGUA					i i	
SURINAME						COSTA RICA			1			1
TRINIDAD & TOBAGO						EL SALVADOR			L			
URUGUAY						MEXICO			1			
VENEZUELA							1 1	0 1	00	1000	10000	10000
LA&C	12708	16072	18366	4 18	14 3				kBop			

5.4 SHARE OF FIREWOOD RESIDENTIAL SECTOR (%)	IN FINAL ENERG	Y DEMAND OF	THE	Growth F	tate (%)	SHARE OF FIR	EWOOD	IN FI	NAL I SEC	ENER	GY DE 2000	MAN	DOF	THEF	ESID	ENTIA	L
Countries	1991	1999	2000	91-00	99-00	RARRADOS	1	r		···1		r		<b>f</b>	····		-1
ARGENTINA	1.83	2.37	2.27	2.42	-4.08	TRINIDAD AND TOBAGO	1	1							[		11
BARBADOS						VENEZUELA	1					•					
BOLIVIA	53.81	25.54	25.10	-8.12	-1.72	CUBA	\$										11
BRAZIL	43.29	31.80	31.67	-3.41	-0.42	ARGENTINA	ΈΙ	1									
COLOMBIA	60.35	41.06	40.61	-4.31	-1.09	COSTA RICA	<u>}</u>					-			1.		
COSTA RICA	74.65	14.85	16.45	-15.47	10.80	DOMINICAN REPUBLIC	$\models$		-								
CUBA	0.31	0.76	0.63	8.13	-17.34	BOLIVIA											
CHILE	53.75	59.16	58.31	0.91	-1.44	GRENADA											
ECUADOR	47.37	32.66	30.01	-4.95	-8.12	JAMAUCA		1									
EL SALVADOR	87.77	78.47	77,61	-1.36	-1.09	000000		1		_					1		
GRENADA	29.61	26.60	26.20	-1.35	-1.48	LASC	COMPANY SCALE										
GUATEMALA	93.04	90.01	89,75	-0.40	-0.28	MEXICO											
GUYANA	88.74	85.08	83.78	-0.64	-1.53	COLOMBIA				TOTAL PARTY	1						
HAITI	78.61	79.55	79.01	0.06	-0.67	URUGUAY					2				1		
HONDURAS	91.15	87.33	85.38	-0.72	-2.23	PERU	Immedia					!					
JAMAICA	33.98	28.27	28,79	-1.82	1.86	SURINAME	<u>}</u>	-+				i i			[		
MEXICO	38.66	36.74	36.45	-0.65	-0.79	CHILE						누					
NICARAGUA	94.04	93.47	93.84	-0.02	0.39	PANAMA		-				·					
PANAMA	72.59	67.04	66.59	-0.95	-0.68	PARAGUAY	E	r				I.	i i	7			
PARAGUAY	81.98	71.20	71.02	-1.58	-0.25	EL SALVADOR							1	T			
PERU	59.14	46.29	45.27	-2.93	-2.20	GLIYANA	·					[	1	1	1		
DOMINICAN REP.	45.49	27.47	24.27	-6.74	-11.66	HONDURAS	<u> </u>					I	1		Ľ,	1	
SURINAME	45.04	47.02	46,92	0.46	-0.21	GUATEMALA	-					I	.I	. I '	· T · ···,	-	
TRINIDAD & TOBAGO						NICARAGUA						1	J	1			
URUGUAY	46.24	41.93	41.64	-1.16	-0.69		0 10	20		0 4	0 7	1	30	70	80	90	100
VENEZUELA	0.00	0.13	0.15		15.91	1	. 10	20		4						00	100
LA&C	45.35	37.05	36.31	-2.44	-2.00							%					





5.5 SHARE OF FIREWOOD	IN FINAL ENERG	Y DEMAND (%)		Growth	Rate (%)	SHARE OF	FIREWO	DOD IN	FINA	LENE	RGY DE	MAND	2000	
Countries	1991	1999	2000	91-00	99-00									
ARGENTINA	0.39	0.59	0.58	4.63	-1.94	VENEZUED A								
BARBADOS						ARGENTINA								1
BOLIVIA	20.48	12.56	13.13	-4.82	4.57	CUBA								
BRAZIL	13.30	9.08	9.13	-4.09	0.54	COSTA RICA						F		
COLOMBIA	19.43	10.49	10.44	-6.66	-0.47	JAMAICA	- [							
COSTA RICA	29.31	2.01	2.46	-24.07	22.10	MEXICO								
CUBA	2.54	2.64	2.25	-1.37	-14.77	ECUADOR	=							
CHILE	23.64	19.13	19.68	-2.01	2.90	SURINAME								
ECUADOR	12.25	8.01	6.54	-6.73	-18.32	GRENADA						1	1	
EL SALVADOR	49.90	37.11	37.92	-3.00	2.19	LAAC	(Areastan)		1					
GRENADA	8.78	7.52	7.69	-1.46	2.20	BRAZIL								
GUATEMALA	60.24	50.62	50.19	-2.01	-0.85	COLOMBIA								
GUYANA	34.46	30.00	30.36	-1.40	1,19	DOMINICAN REPUBLIC		כ		[				
HAITI	57.88	58,51	59.63	0.33	1.91	BOLIVIA								
HONDURAS	57.12	46.25	43.10	-3.08	-6.82	PERU	1							
JAMAICA	3.83	4.32	4.30	1.29	-0.42	URUGUAY								
MEXICO	6.77	6.25	6.31	-0.77	0.92	CHILE	C							
NICARAGUA	57.92	51.79	52.71	-1.04	1.77	CUVANA -			J					
PANAMA	26.54	21.10	20.97	-2.58	-0.59	PARAGUAY			Т <u> </u>					
PARAGUAY	53.16	37.14	36.02	-4.23	-3.00		L				<u> </u>			
PERU	23.16	14.95	15.05	-4.68	0.67	HONDURAS			L					
DOMINICAN REP.	26.05	13.62	12.54	-7.80	-7.94	GUATEMALA								
SURINAME	6.08	7.04	7.12	1.77	1.20	NICARAGUA								
TRINIDAD & TOBAGO						HAITI	T			1				
URUGUAY	23.83	14.85	15.22	-4.86	2.47	1	11		21	31	41	51	61	71
VENEZUELA	0.00	0.01	0.02		14.89				2,		-11	5,	07	.,
LA&C	12.03	9.05	8.99	-3.19	-0.69					74				

5.6 PER CAPITA FIREWO	DOD CONSUM	PTION (Boe/in	hab)	Growth F	Rate (%)	PE	R CAPITA P	IREWOOD	CONSUMP	TION 20	00		
Countries	1991	1999	2000	91-00	99-00	TRINIDAD AND TOBAGO	r	r					1
ARGENTINA	0.03	0.05	0.05	8.11	1.93	VENEZUELA					1		
BARBADOS						ARGENTINA	þ				ĺ		
BOLIVIA	0.49	0.32	0.30	-5.37	-6.83	COSTA RICA							
BRAZIL	0.75	0.57	0.58	-2.85	0.28	CUBA	<u></u>						
COLOMBIA	0.86	0.39	0.38	-8.60	-2.76	ECUADOR				i i			
COSTA RICA	1.28	0.09	0.10	-24.36	17.14	JAMAICA							
CUBA	0.18	0.14	0.14	-2.97	-5.49	BOLIVIA							
CHILE	1.55	1.77	1.86	2.00	5.14	GRENADA							
ECUADOR	0.44	0.27	0.24	-6.56	-12.87	COLOMBIA					, i		
EL SALVADOR	1.47	1.29	1.28	-1.57	-1.18	MEXICO							
GRENADA	0.26	0.33	0.34	3.07	1.67	PERU		1					
GUATEMALA	2.13	2.09	2.04	-0.48	-2.59	LASO	Contractory and the	669)					H
GUYANA	1.93	1.94	1.93	0.03	-0.23	BRAZIL		7					
HAIT	0.75	0.90	0.90	2.06	-0.28	DOMINICAN REPUBLIC		-					
HONDURAS	1.92	1.40	1.33	-4.02	-5.51	SURINAME		1					
JAMAICA	0.25	0.27	0.28	1.29	0.65	URUGUAY							
MEXICO	0.49	0.45	0.44	-1.09	-0.76	HAITI			1				
NICARAGUA	1.73	1.58	1.59	-0.92	0.37	PANAMA			7				
PANAMA	1.02	1.03	1.01	-0.07	-1.54	EL SALVADOR		T.					
PARAGUAY	2.62	1.94	1.90	-3.52	-2.18	HONDURAS							
PERU	0.67	0.50	0.48	-3.55	-2.57	NICARAGUA							
DOMINICAN REP.	0.68	0.60	0.59	-1.53	-1.29	CHILE				-j-			
SURINAME	0.59	0.73	0.74	2.47	1.22	PARAGUAY		L	·				
TRINIDAD & TOBAGO						GUYANA		1					
URUGUAY	1.12	0.86	0.82	-3.40	-4.72	GUATEMALA	0 0	E	1	1.5	2	,	-
VENEZUELA	0.00	0.00	0.00		18.64			.0	1	1.5	2		1.9
LA&C	0.70	0.56	0.56	-2.34	-0.49			B	oo/inhab				

6.1 ELECTRICITY GEN	ERATION BY T	YPE OF PLAN	T 2000			%			ELEC	TRICITY	GENERATI	ON BY TY	PE OF PI	ANT 199	(GWh)	
Countries	HYDRO	THERMO.	NUCLEAR	GE+OTHERS	TOTAL	REGIONAL		·								
ARGENTINA	26240	54292	8042	44	88618	9.25	MEXICO	-		амаруларынанурару	1990 - 2000 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 1					
BARBADOS	0	788	0	0	788	0.08	BRAZIL					and the second				
BOLIVIA	1624	2328	0	0	3952	0.41		0	50000	100000	150000	200000	250000	300000	350000	40000
BRAZIL	323399	19821	4521	0	347741	36.28	GRENADA									
COLOMBIA	33241	10711	0	0	43952	4.59	HAITI		ł				1	1		
COSTA RICA	5983	217	0	798	6998	0.73	BARBADOS	ē į								
CUBA	105	14924	0	0	15029	1.57	GUYANA									
CHILE	19081	20997	0	0	40078	4.18	SURINAME					1				
ECUADOR	7390	3217	0	0	10607	1.11	HONDURAS	200						· ·		
EL SALVADOR	1532	1795	0	493	3820	0.40	EL SALVADOR									
GRENADA	0	118	0	0	118	0.01	BOLIVIA	363								
GUATEMALA	2752	3291	0	5	6048	0.63	VENEZUELA	2013								
GUYANA	0	889	0	0	889	0.09	TRINDAD & TOBAGO	100000					1	1		
HAITI	210	337	0	.0	547	0.06	GUATEMALA	10011010								
HONDURAS	1987	1693	0	0	3680	0.38	JAMAICA	6168338353								
JAMAICA	199	6432	0	0	6631	0.69	COSTA RICA	376264(I)								
MEXICO	35988	138784	10720	5934	191426	19.97	DOMINICAN DEP	TABLES R.				1				
NICARAGUA	419	1760	0	109	2288	0.24	ECUADOR	270000000000000				1				
PANAMA	3132	1542	0	0	4674	0.49	CUBA	-	South State							
PARAGUAY	53460		0	0	53513	5.58	PERÚ		STOCK STOCK							
PERU	15121	4801	0	1	19923	2.08	CHILE	******			NUMBER S					
DOMINICAN REP.	1189	8800	0	0	9989	1.04	COLOMBIA	572000200000								
SURINAME	911	537	0	0	1448	0.15	PARAGUAY			******		********				
<b>TRINIDAD &amp; TOBAG</b>	0	5460	0	0	5460	0.57	VENEZUELA		100000						202	
URUGUAY	5802	1787	0	0	7589	0.79	ARGENTINA	19001199909		100000	205010000000000000000000000000000000000	COLUMN DE COLUMN		al epinetic and and		
VENEZUELA	62037	20525	0	0	82562	8.61		0 100	000 20	000 3000	0 40000	50000	60000	70000 80	300 90000	100000
LA&C	601801	325901	23283	7383	958368	100.00	#HYDRC	)	翼	THERMO.		<b>FINUCLI</b>	EAR		E+OTHER	s

6.2 ELECTRICITY G	ENERATION (	GWh)		Growth	Rate (%)				ELECTR	CITY G	ENERA	TION (GW	h)		
Countries	1991	1999	2000	91-00	99-00										
ARGENTINA	52868	80732	88618	5.91	9.77	GRENADA									
BARBADOS	580	802	788	3.46	-1.79	HAITI									
BOLIVIA	2275	3899	3952	6.33	1.37	BARBADOS	þ							1	
BRAZIL	234366	332306	347741	4.48	4.64	GUYANA	1	1							
COLOMBIA	37191	44148	43952	1.87	-0.44	SURINAME	}	1					· ·		i
COSTA RICA	3867	6181	6998	6.81	13.22	NICARAGUA									
CUBA	13247	14492	15029	1.41	3.70	HONDURAS	2								
CHILE	19961	38390	40078	8.05	4.40	BOLIVIA					1				
ECUADOR	6974	10305	10607	4.77	2.94	EL SALVAD	2								
EL SALVADOR	2231	3761	3820	6.16	1.57	PANAMA	2								
GRENADA	60	116	118	7.75	1.29	GUATEMALA	2						1		
GUATEMALA	2430	5186	6048	10.66	16.62	CORTA PICA									
GUYANA	245	891	889	15.40	-0.22	COSIA RICA									
HAITI	468	698	547	1.74	-21.67	JANACA .	Ľ								
HONDURAS	2306	3432	3680	5.33	7.24	DOMINIONI DED									
JAMAICA	2123	6609	6631	13.49	0.34	DOMINICAN REP.	Ľ								
MEXICO	118357	180917	191426	5.49	5.81	CURA									
NICARAGUA	1472	2147	2288	5.02	6.53	PERU									
PANAMA	2889	4637	4674	5.49	0.81	OWIE									
PARAGUAY	29350	51960	53513	6.90	- 2.99	COLOMBIA		ł							Í
PERU	13901	19049	19923	4.08	4.59	DAEAGUAY		<u>L</u>							
DOMINICAN REP.	3895	7675	9989	11.03	30.14	ARCENTINA		r							
SURINAME	1367	1440	1448	0.64	0.56	VENEZUELA		1							
TRINIDAD & TOBAG	3720	5246	5460	4.36	4.08	MEXICO					-				
URUGUAY	7018	7194	7589	0.87	5.50	BRAZIL		1							
VENEZUELA	63337	80585	82562	2.99	2.45			1				250000	200000		
LA&C	626498	912798	958368	4.84	4.99		50 50	000 100	000 150		200000	250000	300000	350,000	400000





6.3 INSTALLED CAPACI	TY ELECTRIC P	OWER SECTO	R (MW)	Growth	Rate (%)	INSTA	LLED CA	PACITY	ELECTRICI	TY POW	ER SECT	OR 2000		
Countries	1991	1999	2000	91-00	99-00	GRENADA				1		1		
ARGENTINA	17728	24899	25957	4.33	4.25	BARBADOS								
BARBADOS	153	186	166	0.91	-10.78	HAITI								
BOLIVIA	679	1266	1325	7.71	4.69	GUYANA								
BRAZIL	54065	68181	71807	3.20	5.32	SURIMAME	b							
COLOMBIA	9599	13190	12715	3.17	-3.60	NICARAGUA	ı ا							
COSTA RICA	1007	1529	1738	6.25	13.68	JAMAICA	P							
CUBA	4033	4284	4287	0.68	0.05	HONDURAS								1
CHILE	5117	9299	9729	7.40	4.62	EL SALVADOR								
ECUADOR	1925	3634	3499	6.86	-3.72	GUATEMALA	2							
EL SALVADOR	650	1004	1118	6.21	11.36	BOLIVIA	2							
GRENADA	18	27	27	4.69	0.00	PANAMA				1		1		
GUATEMALA	830	1359	1273	4.87	-6.38	COSTA DICA	Ľ [							1
GUYANA	156	301	301	7.57	0.00	LIPLICIUM	<u> </u>							
HAITI	209	241	240	1.53	-0.58	DOMINICAN REPUBLIC	E I	1			1			
HONDURAS	551	858	912	5.76	6.28	ECUADOR		I						
JAMAICA	506	704	704	3.73	0.00	CUBA								1
MEXICO	30070	43131	44163	4.36	2.39	PERU		1						
NICARAGUA	382	708	645	5.99	-8.89	PARAGUAY								
PANAMA	958	1206	1349	3.88	11.85	CHILE								
PARAGUAY	6529	7433	7429	1.44	-0.06	COLOMBIA		-						
PERU	4107	5742	6070	4.43	5.70	VENEZUELA								
DOMINICAN REP.	1721	3081	3081	6,68	0.00	ARGENTINA								
SURINAME	391	389	389	-0.06	0.00	- MEXICO								
TRINIDAD & TOBAGO	1253	1253	1417	1.38	13.09	BRAZIL								
URUGUAY	1751	2178	2178	2.45	0.00		100	00 200	10 30000	40000	50000	60000	20000	80000
VENEZUELA	18976	21186	21292	1.29	0.50	l l	· 100	200			22000	00000	, 0000	00000
LA&C	163363	217269	223808	3.56	3.01				MW					

6.4 INSTALLED CAPACITY	FOR POWER GEN	ERATION BY TY	PE OF PLANT 200	00 (MW)		%	INSTALLED O	CAPACITY	FOR PC	WER GE	NERATIO	N BY TY	PE OF PL	ANT 2000	(MW)
Countries	HYDRO	THERMO.	OTHERS*	NUCLEAR	TOTAL	REGIONAL									
ARGENTINA	9602	15322	15	1018	25957	11.60	GRENADA	1							
BARBADOS	0	166	0	0	166	0.07	BARBADOS	[							
BOLIVIA	376	949	0	0	1325	0.59	HATT								
BRAZIL	60661	9180	0	1966	71807	32.08	GUWAMA								
COLOMBIA	8065	4650	0	0	12715	5.68	SURINAME						ſ		
COSTA RICA	1300	244	194	0	1738	0.78	Intelico								
CUBA	57	4229	0	0	4287	1.92	LIONDIRAS								
CHILE	4089	5640	0	0	9729	4.35	EL SALVADOR	.							1
ECUADOR	1748	1751	0	0	3499	1.56	GUATEMALA	8							
EL SALVADOR	411	546	161	0	1118	0.50	BÓLIVIA	na I							
GRENADA	0	27	0	0	27	0.01	PANAMA						[		
GUATEMALA	479	771	24	0	1273	0.57	TRINIDAD AND TOBADD	4							
GUYANA	1	300	0	0	301	0.13	COSTA RICA	3				1			
HAITI	62	178	0	0	240	0.11	URUQUAY	2 <b>1</b>			[				
HONDURAS	434	478	0	0	912	0.41	DOMINICAN REPUBLIC								
JAMAICA	23	681	0	0	704	0.31	ECUADOR	200							
MEXICO	9710	32231	857	1365	44163	19.73	CUBA								
NICARAGUA	103	472	70	0	645	0.29	PERU	22122							
PANAMA	612	737	0	0	1349	0.60	PAPAGUAY	ALC: NO.					[	i	
PARAGUAY	7390	39	0	0	7429	3.32	CHILE								
PERU	2860	3210	0	0	6070	2.71	COLOMBIA	1655523657	8						
DOMINICAN REP.	401	2680	0	0	3081	1,38	VENEZUELA	100000000000000000000000000000000000000							
SURINAME	189	200	0	0	389	0.17	ARGENTINA	200200000000000000000000000000000000000							
TRINIDAD & TOBAGO	0	1417	0	0	1417	0.63	MEXICO	ananan si sina si							
URUGUAY	1534	644	0	0	2178	0.97	BRAZIL	Sector and the	and the second	100000000000000000000000000000000000000	8855158003	959 <u>999</u> 999999	and the second		1
VENEZUELA	13215	8077	0	0	21292	9.51		0 100	2000 20	000 <u>3</u>	0000	40000	50000	60000 70	000
LA&C	123320	94818	1321	4349	223808	100.00		GINDRU		m IngRMO.		LIGEOTH			ENR

(\*) GEOTHEMAL+SOLAR+WIND

6.5 SHARE OF HYDROE CAPACITY (%)	NERGY INTOT	AL INSTALLE	D	Growth R	ate (%)	SHARE OF H	YDROEN	ERGY IN	TOTAL INS	STALLED	CAPACI	ITY 20	)0
Countries	1991	1999	2000	91-00	99-00	GRENADA		1					
ARGENTINA	37.30	38.57	36.99	-0.09	-4.08	BARBADOS							
BARBADOS						GUYANA							
BOLIVIA	45.49	31.06	28.37	-5.11	-8.65	CUBA	Ł						
BRAZIL	86.22	86.53	84.48	-0.23	-2.37	JAMAIGA	2						
COLOMBIA	69.87	65.01	63.43	-1.07	-2.42	DOMINICAN REPUBLIC							
COSTA RICA	75.07	72.62	74.80	-0.04	3.00	NICARAGUA							
CUBA	1.21	1.34	1,34	1.13	0.12	MEXICO		7					
CHILE	60.59	43.17	42.03	-3,98	-2.63	HAITI		T					
ECUADOR	47.22	47.58	49.94	0.63	4.97	BOLIVIA	-						
EL SALVADOR	59.66	40.22	36.71	-5.25	-8.71	EL SALVADOR		Τ.					
GRENADA						ARGENTINA							
GUATEMALA	59.35	38.29	37.60	-4.94	-1.79	GUATEMALA		1	1				
GUYANA	0.00	0.17	0,17		0.00	CHILE		1					
HAITI	25.84	25.70	25.83	0.00	0.52	PANAMA		T					
HONDURAS	78.68	45.18	47.58	-5.43	5.30	PERU		7					
JAMAICA	4.52	3.28	3.28	-3.51	0.00	HONDURAS		1					
MEXICO	26.63	22.51	21.99	-2.11	-2.34	SURINAME		1				1	
NICARAGUA	27.06	14.60	16.03	-5.65	9,78	EGUADOR		r					
PANAMA	57.50	50.91	45.37	-2.60	-10.88	LA&C	<u>rehangen yeke her hiro</u>	T					
PARAGUAY	99.40	99.42	99.48	0.01	0.06	VENEZUELA		1		1			
PERU	59.41	46.56	47.11	-2.54	1.19	COLOMBIA		T.		T			
DOMINICAN REP.	11.94	13.00	13.00	0.95	0.00	URUGUAY				1			
SURINAME	48.34	48.59	48.59	0.06	0.00	COSTA RICA		L				İ	
TRINIDAD & TOBAGO						BRAZIL				T	T		
URUGUAY	68.48	70.43	70,43	0.31	0.00	HARAGUAY		· · · ·		1	1		<u> </u>
VENEZUELA	54.64	62.38	62.07	1.43	-0.50		1	21	41	61	81	101	
LA&C	58.77	56.02	55.10	-0.71	-1.63					%			

6.6 PER CAPITA ELECT	RICITY CONSI	JMPTION (kW	h/inhab)	Growth R	ate (%)	PER	CAPITA ELECTRICITY CONSUMPTION 2000	
Countries	1991	1999	2000	91-00	99-00	NICARAGUA	1	
ARGENTINA	1282.28	1937.83	2030.01	5.24	4.76	GUATEMALA		
BARBADOS	1887.60	2661.71	2607.59	3.66	-2.03	BOLIVIA		
BOLIVIA	287.67	389.93	387.01	3.35	-0.75	HONDURAS		
BRAZIL	1486.23	1808.05	1880.63	2.65	4.01	EL SALVADOR		
COLOMBIA	832,39	771.12	787.67	-0.61	2.15	ECUADOR		
COSTA RICA	1092.24	1359.05	1430.96	3.05	5.29	PERU		
CUBA	962.00	990,83	1023.69	0.69	3,32	COLOMBIA		
CHILE	1268.43	2309.03	2406.02	7.37	4.20	GUYANA		
ECUADOR	503.78	623.68	623.54	2.40	-0.02	PARAGUAY		
EL SALVADOR	376.90	567.99	587.27	5.05	3.39	DOMINICAN REPUBLIC		
GRENADA	571.43	1074.47	1092.55	7.47	1.68	CUBA		
GUATEMALA	232.84	358.79	335.43	4.14	-6.51	GRENADA		
GUYANA	220.00	803.51	804.88	15.50	0.17	PANAMA		
HAITI	43.93	38,27	34.79	-2.56	-9.09	COSTA RICA		
HONDURAS	311.46	446.44	496.68	5.32	11.25	LAC		
JAMAICA	697.40	2320.19	2319.01	14.28	-0.05	MEXICO		
MEXICO	1140.07	1489.18	1571.07	3.63	5.50	BRAZIL		1
NICARAGUA	319.88	315.60	317.24	-0.09	0.52	URUGUAY		
PANAMA	925.12	1309.78	1330.92	4.12	1.61	ARGENTINA		
PARAGUAY	497.81	797.56	814.65	5.63	2.14	JAMAICA		
PERU	553.14	653.59	675.33	2.24	3.33	CHILE		
DOMINICAN REP	468.03	636.10	815.07	6.36	28.14	VENEZUELA		
SURINAME	3022.17	3120.48	3122.30	0.36	0.06	BARBADOS		
TRINIDAD & TOBAGO	2482.76	3541.15	3708.88	4.56	4,74	SURINAME		
URUGUAY	1339.59	1870.93	1924.36	4.11	2.86	TRINIDAD AND TOBAGO		
VENEZUELA	2384.03	2493.05	2505.30	0.55	0.49		0 500 1000 1600 2000 2500 3000 3500	4000
LA&C	1165.09	1453.82	1510.43	2.93	3.89		kWh/inhab	





7.1 ENERGY DEMAND	OF THE INDUSTRI	AL SECTOR (	kBoe)	Growth F	Rate (%)	ENER	GY DEMAND O	F THE /NDU: 2000	STRIAL SEC	TOR (kBoe	1	
Country	1991	1999	2000	91-00	99-00	GRENADA						
ARGENTINA	62339	88377	91106	4.31	3.1	BARBADOS			<b>D</b>			
BARBADOS	475	306	355	-3.17	16.2	GUYANA					1	
BOLIVIA	3366	6567	6455	7.50	-1.7	NICARAGUA					1	
BRAZIL	314888	364516	372195	1.88	2,1	SURINAME	[					
COLOMBIA	38027	47511	48333	2.70	1.7	HAITI						
COSTA RICA	3518	3542	3844	0.99	8.5	PANAMA	<u> </u>	1		)		
CUBA	40350	33829	38091	-0.64	. 12.6	JAMAICA				5		
CHILE	31568	49600	53471	6.03	7.8	URUGUAY						· ·
ECUADOR	7732	9471	9722	2.58	2.7	COSTA RICA				_		1
EL SALVADOR	3264	4487	4534	3.72	1.1	HONDURAS	ll			<u> </u>		
GRENADA	11	16	17	5.27	4.2	EL SALVADOR				<b>_</b>		
GUATEMALA	4285	5977	6363	4.49	6.5	GUATEMALA						
GUYANA	1702	1770	1671	-0.20	-5.6	BOLIVIA					ĺ	
HAITI	1065	2443	2407	9.49	-1.5	REP.DOMINICANA						
HONDURAS	4080	4014	4430	0.92	10.4	PARAGUAY				·		
JAMAICA	1438	3341	3263	9.53	-2,3	ECUADOR	11					
MEXICO	192983	213880	212543	1.08	-0.6	PERU	L					
NICARAGUA	1685	2328	2298	3.51	-1.3	TRINIDAD Y TOBAGO						
PANAMA	2242	2749	2913	2.95	5.9	CUBA		<u> </u>				
PARAGUAY	6848	9365	9459	3.65	1.0	COLOMBIA					_	
PERU	10545	13725	14650	3.72	6.7	CHILE						
DOMINICAN REP.	4027	7002	7027	6.38	0.4	ARGENTINA				L		
SURINAME	2195	2314	2323	0.63	0.4	VENEZUELA	11					
TRINIDAD & TOBAGO	14410	20110	19872	3.64	-1.2	MEXICO						
URUGUAY	3776	3790	3465	-0.95	-8.6	BRASIL		. 1	- T.			_
VENEZUELA	94877	119471	126284	3.23	5.7			400	4000	40000	400000	
LA&C	851697	1020501	1047091	2.32	2.6		т 10	100	1000	10000	100000	1000000

7.2 ENERGY DEMAND	OF THE RESIDEN	TIAL SECTOR	(kBoe)	Growth	Rate (%)	ENER	GY DEMAND OF THE RESIDENTIAL SECTOR (kBoo) 2000
Country	1991	1999	2000	91-00	99-00	GRENADA	
ARGENTINA	47470	66580	72096	4.75	8.3	BARBADOS	
BARBADOS	347	237	237	-4.16	0.0	SURINAME	
BOLIVIA	6066	5272	4397	-3.51	-16.6	TRINIDAD Y TOBAGO	
BRAZIL	130313	144860	149111	1.51	2.9	GUYANA	
COLOMBIA	40507	30516	30545	-3.09	0.1	COSTA RICA	
COSTA RICA	4794	2172	2352	-7.61	8.3	JAMAICA	
CUBA	8240	5175	5849	-3.74	13.0	PANAMA	
CHILE	26627	33687	34513	2,92	2.5	BOLIVIA	
ECUADOR	8665	9443	9296	0.78	-1.6	URUGUAY	
EL SALVADOR	7297	9231	9409	2.86	1.9	CUBA	
GRENADA	79		121	4.86	3.2	HAITI	•
GUATEMALA	20110	25260	25332	2.60	0.3	NICARAGUA	
GUYANA	1669	1851	1886	1.36	1.9	ECUADOR	
HAITI	6583	7926	7861	1.99	-0.8	EL SALVADOR	
HONDURAS	9574	8127	9446	-0.15	16.2	HONDURAS	
JAMAICA	1724	2480	2472	4.08	-0.3	PARAGUAY	
MEXICO	104907	118074	119944	1.50	1.6	REP.DOMINICANA	* <u>************************************</u>
NICARAGUA	6527	8281	8465	2.93	2.2	GUATEMALA	
PANAMA	3157	3936	3963	2.56	0.7	PERU	
PARAGUAY	10302	9764	9788	-0.57	0.3	VENEZUELA	
PERU	24241	25663	25970	0.77	1.2	COLOMBIA	
DOMINICAN REP.	8707	14673	16630	7.45	13.3	CHILE	hannandaran and a second and a second s
SURINAME	495	596	603	2,20	1.1	ARGENTINA	
TRINIDAD & TOBAGO	629	1473	1561	10.62	6.0	MEXICO	
URUGUAY	4701	5185	5221	1.17	0.7	BRASIL	
VENEZUELA	15166	25350	26453	6.38	4.4		1 10 100 1000 10000 10000 100000
LA&C	498899	565929	583521	1.76	3.1		1 10 100 1000 10000 100000

7.3 ENERGY DEMAND OF	THE COMMERCI/	AL SECTOR (	(Boe)	Growth F	tate (%)		(kBoe) 2	000			
Country	1991	1999	2000	91-00	99-00						Т
ARGENTINA	16182	22647	24883	4.90	9.9	DOMINICAN REPUBLIC					
BARBADOS	46	319	244	20.37	-23.3						
BOLIVIA	224	473	528	10.02	11.8	GUYANA	 				
BRAZIL	33797	55552	.60373	6.66	8.7						
COLOMBIA	5470	8038	8682	5.27	8.0	BARBADOS	 I				
COSTA RICA	757	1282	1362	6.75]	6.3		 				
CUBA	2226	2512	2576	1.64	2.5	EL SALVADOR	 1				
CHILE	0	4263	4582		7.5		 	J			
ECUADOR	1484	1878	2078	3.81	10.6	BOLIVIA			- I		
EL SALVADOR	374	725	409	0.99	-43.6	-			_		
GRENADA	18	35	36	7.72	2.7	JAMAICA	 l		·		
GUATEMALA	871	1580	1415	5.54	-10.4				<u> </u>		
GUYANA	45	69	67	4.61	-2.8	PANAMA					
HAITI	319	346	295	-0.86	-14.6						
HONDURAS	539	1188	776	4.12	-34.7	GUATEMALA	 .l				
JAMAICA	486	1019	1037	8.77	1.7						
MEXICO	19955	20548	21719	0.95	5.7	PERU	 1	1	I	3	
NICARAGUA	635	1021	1168	7.01	14.4			1		J	
PANAMA	872	1564	1275	4.30	-18.5	. CUBA				_	
PARAGUAY	274	405	421	4.91	4.1						
PERU	1751	2552	1972	1.33	-22.7	COLOMBIA	 ł.,,				1
DOMINICAN REP.							 <u>.</u>				
SURINAME	154	172	173	1.31	0.7	MEXICO		1			
TRINIDAD & TOBAGO	437	0	0				 				1
URUGUAY	824	1349	1433	6.33	6.2	BRAZIL			_		1.
VENEZUELA	11279	14518	14910	3.15	2.7		 10	100	1000	41	
LA&C	99020	144055	152415	4.91	5.8		10	100	1000	10	1000

7.4 ENERGY DEMAND OF	THE TRANSPOR	TATION SECTO	R (kBoe)	Growth F	Rate (%)	ENE	RGY DEMAND OF THE TRANSPORTATION SECTOR (kBoe) 2000
Country	1991	1999	2000	91-00	99-00		
ARGENTINA	72641	101845	106309	4.32	4.4	BARBADOS	
BARBADOS	616	788	825	3.29	4.7	Brit Ibrib de	
BOLIVIA	5442	7681	6977	2.80	-9.2	GUYANA	
BRAZIL	235153	340300	332695	3.93	-2.2	50,101	
COLOMBIA	44515	53115	51708	1.68	-2.6	NICARAGUA	
COSTA RICA	4220	9135	8191	7.65	-10.3		
CUBA	15970	11616	13254	-2.05	14.1	PANAMA	
CHILE	26978	48269	50321	7.17	4.3		1
ECUADOR	18380	19924	23295	2.67	16.9	JAMAICA	f
EL SALVADOR	3390	6676	6481	7.47	-2.9		
GRENADA	153	227	220	4.11	-2.8	EL SALVADOR	
GUATEMALA	5367	10250	10911	8.20	6.4		
GUYANA	618	974	1001	5.50	2.8	COSTA RICA	
HAITI	1088	1809	1917	6.50	6.0		
HONDURAS	2575	5033	5266	8.27	4.6	GUATEMALA	
JAMAICA	3710	5552	5648	4.78	1.7		
MEXICO	234307	266602	278000	1.92	4.3	DOMINICAN REPUBLIC	
NICARAGUA	1824	3005	3085	6.01	2.7		
PANAMA	3036	5165	4986	5.67	-3.5	PERU	
PARAGUAY	3907	8407	9225	10.02	9.7		
PERU	16090	25375	24689	4.87	-2.7	COLOMBIA	
DOMINICAN REP.	5545	13957	14958	11.66	7.2		
SURINAME	767	847	854	1.20	0.8	ARGENTINA	1
TRINIDAD & TOBAGO	3754	4141	3950	0.57	-4.6		
URUGUAY	3864	6628	5997	5.01	-9.5	BRAZIL	
VENEZUELA	74266	83946	88643	1.99	5.6		1 10 100 1000 10000 100000 100000
LA&C	788177	1041268	1059404	3.34	1.7		



P

7.5 SHARE OF ENERGY SO	URCES IN FINAL	ENERGY DEM	MAND OF THE	INDUSTRIAL	SECTOR (%)										
	. E	LECTRICITY		FUEL	OIL + DIESEL	OIL	FIR	EWOOD + CA	NE	NATU	RAL GAS + G	ASES		OTHERS	
Country	1991	1999	2000	1991	1999	2000	1991	1999	2000	1991	1999	2000	1991	1999	2000
ARGENTINA	21.2	22.9	23.7	7.1	2.8	2.8	5.0	6.9	6.7	51.3	50.8	50.2	15.4	16.7	16.6
BARBADOS	8.0	18.0	24.0	36.0	30.5	25.5	53.5	46.5	49.1	1.3	2.0	NI	1.3	3.0	1.5
BOLIVIA	9.0	7.3	7.2	9.1	1.7	0.4	36.4	47.3	51.4	39.1	42.5	39.7	6.4	1.3	1.3
BRAZIL	22.6	22.4	23.0	15.7	14.4	13.8	22.1	29.7	25.8	5.8	7.4	9.6	33.8	26.1	27.8
CHILE	22.4	30.5	29.8	34.3	29.8	28.8	20.3	13.3	15.2	3.6	8.0	12.3	19.4	18.4	13.9
COLOMBIA	13.7	12.8	14.6	8.0	7.5	10.4	16.7	22.2	23.2	17.7	16.1	16.5	43.8	41.5	35.4
COSTA RICA	13.4	23.6	26.3	39.0	46.8	43.9	41.7	22.2	21.1				5.8	7.5	8.7
CUBA	6.7	7.0	6.4	18.8	9.9	9.1	70.1	41.4	38.2	0.5	7.8	8.9	3.9	33.8	37.4
ECUADOR	13.4	13.5	14.0	58.0	54.9	58.4	27.0	28.5	23.0				1.6	3.0	4.5
EL SALVADOR	11.3	15.7	25.2	30,6	45.3	45.3	52.2	31.9	22.6				5.9	7.2	6.9
GRENADA	34.8	26.6	26.7	46.5	54.9	54.5	18.7	18.4	18.9				0.0	0.0	0.0
GUATEMALA	9.9	10.2	10.1	42.2	41.6	44.7	44.1	46.1	43.2				3.9	2.1	2.0
GUYANA	1.8	2.4	2.6	39.7	35.9	31.6	58.4	61.6	65.6				0.1	0.2	0.2
HAITI	7.7	2.9	2.7	29.9	28.0	24.3	47.1	63.4	73.1				15.2	5.6	0.0
HONDURAS	8.9	12.5	12.5	41.5	31.5	35.4	47.9	44.2	34.1				1.7	11.9	18.1
JAMAICA	12.5	70.2	72.1	79.1	18.3	16.1							8.4	11.5	11.8
MEXICO	16.8	25.0	27.0	25.5	20.7	19.4	7.5	7.0	6.7	43.6	36.7	35.5	6.6	10.6	11.4
NICARAGUA	12.2	11.1	11.7	33.1	38.5	40.0	52.9	47.7	44.4				1.8	2.7	3.9
PANAMA	11.6	11.8	10.8	51.7	57.0	59.7	25.6	19.1	18.0				11.1	12.2	11.5
PARAGUAY	5.8	5.9	6.1	6.3	6.6	6.5	41.6	36.0	36.0				46.3	51.5	51.5
PERU	24.1	23.9	23.4	37.5	47.8	46.9	3.9	0.3	0.2	2.9	0.4	1.2	31.6	27.6	28.3
DOMINICAN REPUBLIC	10.4	13.3	17.3	39.7	43.4	43.0	46.7	37.7	33.2				3.1	5.5	6.5
SURINAME	23.8	23.4	23.3	8.5	8.7	8.7	0.6	0.8	0.9				67.1	67.1	67.1
TRINIDAD AND TOBAGO	8.3	9.1	9.5	4.2	2.1	2.2				86.1	.87.5	87.2	1.4	1.3	1.2
URUGUAY	26.0	25.3	28.5	32.9	41.8	38.4	35.0	19.5	18.0	0.3	4.2	6.4	5.8	9.3	8.7
VENEZUELA	16.7	13.7	13.5	9.0	10.8	12.2				73.6	66.7	63.9	0.7	8.9	10.4
LA&C	18.5	20.7	21.4	18.3	16.0	15.8	17.4	18.0	16,5	26.6	26.0	26.3	19.2	19.3	20.0

7.6 SHARE OF ENERGY SO	URCES IN FINAL	ENERGY DE	MAND OF THE	RESIDENTIA	L SECTOR (%	)							•		
	Ļ	QUID GAS			ELECTRICITY			FIREWOOD		N	ATURAL GAS		(	DTHERS	
Country	1991	1999	2000	1991	1999	2000	1991	1999	2000	1991	1999	2000	1991	1999	2000
ARGENTINA	14.7	11.1	10.6	15.7	19.1	18.5	1.8	2.4	2.3	59.7	62.1	65.0	8.0	5.2	3.7
BARBADOS	20.3	28.4	28.9	70.7	60.5	61.4				3.4	5.1	5.8	5.5	6.1	3.8
BOLIVIA	22,4	44.4	51.9	7.7	15.2	19.1	53.8	25.5	25.1	0.1	0.6	0.7	16.0	14.3	3.2
BRAZIL	27.7	30.8	30.0	24.3	34.8	34.7	43.3	31.8	31.7	0.0	0.3	1.4	4.8	2.3	2.3
CHILE	18.0	19.7	20.3	12.3	11.0	11.1	53.8	59.2	58.3	4.8	4.4	5.6	11.2	5.8	4.7
COLOMBIA	7.9	15.8	16.7	19.9	23.5	22.6	60.4	41.1	40.6	2.4	12.2	13.2	9.5	7.4	6.9
COSTA RICA	2.4	15.1	15.5	20.9	68.0	66.1	74.7	14.9	16.5				2.0	2.0	1.9
CUBA	8.2	10.2	12.0	24.4	47.8	44.8	0.3	0.8	0.6				67.0	41.3	42.6
ECUADOR	34.2	48.0	51.4	14.4	19.3	18.6	47.4	32,7	30.0				4.0	0.0	0.0
EL SALVADOR	4.0	8.5	10.0	5.7	9.2	8.7	87.8	78.5	77.6				2.5	3.8	3.7
GRENADA	26.4	32.1	31.5	17.3	21.2	21.6	29.6	26,6	26.2				26.7	20.2	20.6
GUATEMALA	3.0	5.0	5.0	2.1	3.2	3.4	93.0	90.0	89.8				1.9	1.8	1.8
GUYANA	1.2	1.8	1.8	3.2	6.0	6.0	88.7	85.1	83.8				6.9	7.1	8.4
HAITI	0.9	1.2	1.2	1.2	1.0	0.9	78.6	79.5	79.0				19.3	18.3	18.9
HONDURAS	1.0	0.3	2.8	5.3	9.0	8.8	91.1	87.3	85.4				2.6	3.4	3.1
JAMAICA	16.6	19.6	18.1	19.2	22.0	22.4	34.0	28.3	28.8				30.2	30.2	30.8
MEXICO	41.1	41.8	42,7	13.0	17.5	18.6	38.7	36.7	36.5	6.0	3.7	2.1	1.3	0.2	0.2
NICARAGUA	0.9	1.7	1.7	3.8	3.4	3.3	94.0	93.5	93.8				1.3	1.4	1.2
PANAMA	12.2	14.0	14.3	13.2	16.4	17.5	72.6	67.0	66.6				2.0	2.6	1.6
PARAGUAY	3.3	6.7	5.8	6.7	17.5	18.4	82.0	71.2	71.0				8.0	4.6	4.7
PERU	6.0	10.4	10.9	12.4	14.2	14.9	59.1	46.3	45.3				22.4	29.1	28.8
DOMINICAN REPUBLIC	11.4	19.6	20.4	19.4	16.1	18.5	45.5	27.5	24.3				23.8	36.8	36.8
SURINAME	21.2	20.2	20.2	27.4	24.5	24.6	45.0	47.0	46.9				6.3	8.2	8.3
TRINIDAD AND TOBAGO	17.0	26.7	25.6	82.5	68.1	69.8							0.5	5.2	4.6
URUGUAY	11.5	15.6	15.8	23,3	33.2	34.3	46.2	41.9	41.6	0.0	0.0	0.0	18.9	9.3	8.2
VENEZUELA	34.6	30.0	32.2	43.6	37.1	35.6	0.0	0.1	0.2	11.2	32.6	31.8	10.6	0.2	0.3
LA&C	22.0	24.6	24.7	17.1	22.2	22.3	45.3	37.1	36.3	7.7	10.6	11.3	7.8	5.6	5.3

7.7 SHARE OF ENERGY SO	URCES IN FINAL	ENERGY DEM	AND OF THE	COMMERCIA	L AND SERVIC	CES SECTOR	(%)								
	E	LECTRICITY			DIESEL OIL			LIQUID GAS		N	ATURAL GAS	3		THERS	
Country	1991	1999	2000	1991	1999	2000	1991	1999	2000	1991	1999	2000	1991	1999	2000
ARGENTINA	31.4	45.3	43.0	16.7	2.5	2.4	1,9	0.9	0.9	47.5	50.2	52.6	2.6	1.1	1.1
BARBADOS	0.0	60.9	58.9	17.4	18.6	23.8	17.5	9.9	1.3	38.9	7.5	12.0	26.2	3.1	4.0
BOLIVIA	100.0	91.1	90.6							0.0	8.9	9.4			
BRAZIL	79.0	79.5	79.2	2.7	4.1	4.4	6.5	6.3	6.5	0.1	0.6	0.8	11.7	9.4	9.2
CHILE	0.0	59.6	61.0	0.0	5.9	7.7	0.0	22.7	18.2	0.0	7.8	10.0	0.0	3.9	3.1
COLOMBIA	61.7	57.9	65.0	27.2	27.1	20.7	4.2	5.7	5.4	3.2	8.2	8.2	3.7	1.1	0.7
COSTA RICA	84.0	76.7	71.8	1.8	14.6	14.8	4.5	5.9	6.2				9.6	2.8	7.1
CUBA	63.9	70.7	69.8	18.0	9.4	9.7	3.6	5.4	5.7				14.6	14.5	14.8
ECUADOR	44.3	60.9	59.0	15.2	28.8	28.4	5.9	7.5	7.3				34.6	2.9	5.3
EL SALVADOR	100.0	85.1	69.9										0.0	14.9	30.1
GRENADA	81.6	78.7	78.9				18.4	21.3	21.1				0.0	0.0	0.0
GUATEMALA	51.1	50.5	42.3	30.0	27.3	32.0	11.0	11.4	12.8				7.9	10.7	12.8
GUYANA	49.8	58.3	60.9				18.0	19.4	20.3				32.2	22.4	18.9
HAITI	9.7	12.5	14.6										90.3	87.5	85.4
HONDURAS	0.0	43.6	78.9	27.9	30.5	21.1	0.0	16.4	N				72.1	9.5	NI
JAMAICA	90.7	76.4	76.4	0.0	3.6	3.6	0.0	5.6	4.6				9.3	14.4	15.3
MEXICO	41.3	49.4	50,5	1.2	3.0	2.8	32.1	47.6	46.7				25.4	0.0	NI
NICARAGUA	32.2	36.1	33.2	26.6	30.3	26.8	9.8	15.0	13.6				31.3	18.6	26.4
PANAMA	78.9	79.8	76.3	5.9	5,6	5.7	13.7	12.9	16.0				1.5	1.7	2.0
PARAGUAY	90.5	93.6	93.8										9.5	6.4	6.2
PERU	0.0	6.7	9.3	29.6	38.9	23.8	0.0	0.5	0.7				70.4	53.8	66.2
DOMINICAN REPUBLIC															
SURINAME	64.0	61.6	61,9	20.8	19.8	19.7	4.8	5.1	5.0				10.4	13.5	13.4
TRINIDAD AND TOBAGO	46.3	0.0	0.0	18.4	0.0	0.0	31.2	0.0	0.0				4.2	0.0	0.0
URUGUAY	61.9	77.1	74.8	24.0	14.2	15.9	1.5	0.2	0.5	0.0	0.0	0.2	12.6	8.6	8.6
VENEZUELA	63.2	74.3	73.8	2.5	1.6	1.6				.33.4	24.2	24.6	0.8	0.0	N
LA&C	57.3	64.7	65.0	7.8	6.7	6.0	9.9	11.2	10.9	11.8	11.3	12.1	13.2	6.1	6.0

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7.8 SHARE OF ENERGY SOL	JRCES IN FINAL	ENERGY DEM/	AND OF THE	TRANSPORT	SECTOR (%)							
	(	GASOLINE			DIESEL OIL		KE	ROSENE/JET I	UEL		OTHERS	
Country	1991	1999	2000	1991	1999	2000	1991	1999	2000	1991	1999	2000
ARGENTINA	44.1	28.2	28.5	46.0	52.0	51.2	6.2	10.3	10.6	3.6	9.5	9.8
BARBADOS	72.9	74.7	75.7	. 27.1	25.3	24.3				0.0	0.0	NI
BOLIVIA	50.8	48.2	48.5	38.1	35.6	34.1	11.0	14.5	14.9	0.0	1.8	2.5
BRAZIL	39.6	43.5	39.1	52.1	48.3	51.3	5.9	6.1	7.0	2.4	2.1	2.5
CHILE	42.7	39.8	38.3	43.2	42.8	42.5	8.1	9.9	8.6	5.9	7.4	10.7
COLOMBIA	75.7	68.4	63.0	16.0	20.8	26.3	7.6	9.4	8.9	0.7	1.3	1.7
COSTA RICA	39.6	43.8	49.6	53,0	37.3	41.9	7.2	9.1	8.5	0.2	9.8	0.0
CUBA	.32.6	23.7	26.1	45.4	53.6	49.7	12.6	16.0	19.1	9.3	6.7	5.1
ECUADOR	53.8	46.6	43.8	36.3	48.9	49.4	5.9	4.5	6.8	4.0	0.0	0.0
EL SALVADOR	40.2	41.0	39.7	54.4	51.5	52,4	5.4	7.5	7.8	0.0	0.0	0.0
GRENADA	68.8	76.4	75.2	10.4	7.5	8.0	15.6	14.8	15.5	5.2	1.3	1.4
GUATEMALA	41.2	50.2	51.1	54.0	45.2	44.6	4.8	3.5	3.3	0.1	1.1	1.1
GUYANA	51.8	58.5	59.4	36.0	32.2	31.1	12.3	9.4	9.6	0.0	0.0	0.0
HAITI	38.1	39.0	40.6	48.0	49.0	48.5	13.9	12.0	10.9			
HONDURAS	35.7	40.8	42.8	55.9	54.9	52.2	8.4	4.3	5.0	0.0	0.0	0.0
JAMAICA	46.4	57.6	58.2	22.6	20.8	19.1	30.2	21.6	22.7	0.9	0.0	0.0
MEXICO	66.5	61.8	61.8	25.3	27.7	27.2	5.5	7.4	7.1	2.7	3.1	3.8
NICARAGUA	35.5	34.4	35.1	55.0	60.4	59.5	9.5	5.2	5.4			
PANAMA	53.8	58.1	58.6	44.4	40.0	40.7	0.6	0.6	0.6	1.1	1.2	NI
PARAGUAY	29.6	20.0	22.1	66.6	76.8	75,5	0.0	1.4	0.9	3.8	1.8	1.5
PERU	46.4	30.4	28.6	42.2	54.5	57.8	10.0	11.6	10.4	1.5	3.5	3.2
DOMINICAN REPUBLIC	51.1	47.9	50.2	38.9	42.4	38.8	4.7	3.7	4.3	5.3	6.0	6.6
SURINAME	54.5	53.2	53.1	29.0	28.1	28.1	16.5	18.7	18.7			
TRINIDAD AND TOBAGO	67.5	55.7	62.0	16.0	31.4	36.0	12.8	12.5	1.9	3.7	0.3	0,1
URUGUAY	45.3	38.9	37.2	49.6	60.4	62.2	2.4	0.6	0.6	2.7	0.1	0.0
VENEZUELA	77.9	80.3	78.8	19.0	15.9	17.3	2.9	2.3	2.4	0.2	1.5	1.5
LA&C	54.5	50.4	48.8	36.9	39.1	40.1	6.1	7.1	7.3	2.5	3.3	3.8

8.1 TOTAL EMISSIONS OF CO	2 - (Gg)							
Country	1970	1975	1980	1985	1990	1995	1999	2000
ARGENTINA	78265	86194	96924	88554	95579	116284	134964	137432
BARBADOS	329	401	598	685	881	876	1054	1021
BOLIVIA	1972	3601	4759	4314	5603	7484	7484	7117
BRAZIL	76461	129541	168578	166754	215790	241830	293901	296149
CHILE	20554	18937	23175	21303	33030	41915	57703	54017
COLOMBIA	24822	29815	35757	39325	45608	57007	54391	54892
COSTA RICA	1141	1794	2265	2040	2781	4974	5665	5282
CUBA	18750	24055	29372	31569	33935	22682	25546	27326
ECUADOR	3605	6263	11969	13198	13353	16654	16559	18214
EL SALVADOR	1246	2105	1893	1984	2331	4816	5592	5670
GRENADA	40	46	52	67	112	159	203	202
GUATEMALA	2279	3047	4703	3737	3907	6618	8513	9531
GUYANA	1520	1796	1781	1422	1172	1518	1706	1634
HAITI	403	441	676	859	957	980	1459	1494
HONDURAS	1114	1324	1687	1688	2228	3492	4490	4601
JAMAICA	7431	7513	6819	4977	7625	8838	10121	10249
MEXICO	87915	135320	209461	246112	286685	309482	354625	367585
NICARAGUA	1359	1920	1831	1924	1920	2624	3479	3578
PANAMA	1955	2924	2716	2514	2441	4079	4747	4819
PARAGUAY	592	755	1433	1582	2084	3627	4216	4550
PERU	15449	19202	21417	18999	19835	24700	32227	30871
DOMINICAN REPUBLIC	3067	5009	6223	5916	7330	11047	16317	17345
SURINAME	1934	1942	2250	1626	1769	2106	2174	2181
TRINIDAD AND TOBAGO	6726	5531	7375	9708	11653	13524	20052	19388
URUGUAY	4943	5170	5276	3157	3693	4520	6550	5237
VENEZUELA	53409	64939	94299	97995	105233	126722	128931	135524
LA&C	417280	559584	743290	772011	907535	1038559	1202667	1225909

8.2 TOTAL EMISSIONS OF SUI	LFUR OXIDE (SOx	() - (Gg)						
Country	1970	1975	1980	1985	1990	1995	1999	2000
ARGENTINA	357.59	350.53	346.93	253.06	233.34	241.46	290.08	285.95
BARBADOS	1.35	1.24	3.72	4.67	5.88	6.04	6.26	6.05
BOLIVIA	9.76	28.43	32.81	29.36	30.40	29.99	26,42	29.68
BRAZIL	312.67	520.60	689.90	443.70	631.55	588.01	712.56	720.07
CHILE	109.14	100.18	113.85	92.26	149.36	157.34	199.17	164.77
COLOMBIA	112.64	104.85	113.35	117.79	129.65	161.08	145.71	145.91
COSTA RICA	3.54	5.77	6.91	6.81	8.36	12.33	10,19	10.13
CUBA	114.39	142.31	181.77	197.11	219.48	173.79	193.36	199.98
ECUADOR	12.79	21.70	42.96	41.59	44.61	60.33	59.11	59.55
EL SALVADOR	5.10	10.68	6.68	6.30	7.09	16.74	20.97	22.28
GRENADA	0.06	0.07	0.08	0.09	0.15	0.24	0.28	0.28
GUATEMALA	9.38	12.58	22.83	13.60	9.26	19.15	31.77	36.97
GUYANA	11.78	12.66	11.65	9.44	6.46	7.28	7.19	6.24
HAITI	1.77	1.65	2.57	3.36	2.91	1.58	2.75	2.40
HONDURAS	4.34	5.44	5.95	4.73	6.81	12.26	15.11	18.80
JAMAICA	64.40	63.68	64.24	33.38	63,72	52.53	62.44	64.80
MEXICO	335.06	584.93	878.36	1109.50	1368.28	1355.49	1626.35	1670.76
NICARAGUA	6.40	9.45	8.75	9.32	9.87	13.80	18.63	20.86
PANAMA	13.38	17.90	15.00	10.42	7.74	14.27	15.38	18.84
PARAGUAY	1.58	1.80	1.89	1.45	2.29	3.52	3.46	3.47
PERU	70.98	76.16	86.99	69.05	72.62	86.80	118.99	119.43
DOMINICAN REPUBLIC	15.24	26.60	41.54	33.43	33.43	48.35	57.14	60.02
SURINAME	14.20	12.50	14.36	7.34	9.87	13.09	13.34	13.36
TRINIDAD AND TOBAGO	18.94	23.12	26.15	38.56	34.71	39.53	61,86	72.35
URUGUAY	27.35	30.33	27.48	10.07	12.60	12.28	25.12	14.68
VENEZUELA	243.88	186.63	281.54	273.43	310.21	294.44	320.18	345.11
LA&C	1877.70	2351.76	3028.24	2819.84	3410.65	3421.74	4043.82	4112.72

8.3 TOTAL EMISSIONS OF CAL	<b>RBON MONOXIDE</b>	(CO) - (Gg)						
Country	1970	1975	1980	1985	1990	1995	1999	2000
ARGENTINA	1456.34	1454.14	1981.35	1690.39	1680.40	1926.09	1669.19	1751.51
BARBADOS	10.74	12.34	14.73	15.75	21.01	21.70	27.60	29.00
BOLIVIA	82.59	118.66	160.84	121.82	139.97	160.17	182.61	167.12
BRAZIL	2388.60	3682.18	3499.05	3516.36	4320.82	6141.72	7172.26	6420.66
CHILE	471.83	351.28	422.06	390.17	542.26	787.78	943.19	946.76
COLOMBIA	754.00	1049.68	1299,55	1426.63	1701.45	1971.73	1721.08	1556.99
COSTA RICA	33.78	46.92	50.86	50.78	77.64	154.63	198.27	206.49
CUBA	356.29	449.50	515.28	507.52	506.50	214.26	220.62	253.52
ECUADOR	141.48	249.20	450.31	444.13	454.67	470.51	462.33	507.68
EL SALVADOR	34.38	45.94	48.80	50.92	63.31	104.30	132,39	132.53
GRENADA	1.97	2.25	2.69	2.77	4.05	6.05	8.51	8.23
GUATEMALA	61.78	84.17	99.76	89.13	118.35	187.42	255.39	276.22
GUYANA	17.90	22.57	23.59	21.34	22.20	30.02	34.68	35.87
HAITI	8.91	11.59	17.44	16.31	22.92	24.78	35.44	37.53
HONDURAS	33.57	35.98	41.33	42.59	54.35	88.78	116.50	109.34
JAMAICA	71.37	86.21	66.50	70.81	90.01	144.08	188.93	193.07
MEXICO	2269.48	3130.49	5041.07	5421.83	7768.24	7812.51	8460.96	8653.52
NICARAGUA	46.77	65.80	60.60	52.19	43.12	47.52	62.17	64.86
PANAMA	57.52	78.82	77.07	71.68	73.17	107.37	139.68	136.37
PARAGUAY	19.25	20.80	41.72	42.74	56.57	94.37	93.82	110.63
PERU	460.49	585.81	452.37	421.09	461.56	496.32	539.24	495.04
DOMINICAN REPUBLIC	143.70	210.05	165.61	211.79	174.40	259.81	392.10	439.88
SURINAME	13.71	15.26	21.04	23.41	27.94	27.77	29.45	29.59
TRINIDAD AND TOBAGO	61.49	75.83	113.16	142.67	128.48	110.54	136.62	134.47
URUGUAY	107.45	89.51	95.73	73.35	88.06	123.50	141.34	122.25
VENEZUELA	1124.92	1658.94	2486.88	2551.06	2545.06	3182.86	3159.21	3277.19
LA&C	10230.33	13633.91	17249.39	17469.23	21186.51	24696.57	26523.59	26096.33

8.4 TOTAL EMISSIONS OF NIT	ROGEN OXIDE (NO	Ox) - (Gg)						· · · · · · · · · · · · · · · · · · ·
Country	1970	1975	1980	1985	1990	1995	1999	2000
ARGENTINA	507.23	573.05	640.61	611.29	673.37	870.27	1014.03	1032.77
BARBADOS	1.88	2.38	3.17	3.68	4.65	4.80	6.46	6.08
BOLIVIA	12.97	30.27	38.19	35.12	44.97	59.59	55.01	53.22
BRAZIL	488.64	854.90	1165.56	1242.45	1502.07	1842.93	2206.82	2212.50
CHILE	96,56	90.81	117.79	110.57	176.45	254.54	339.42	332.29
COLOMBIA	130,36	159.94	199,20	227.79	266.91	341.20	335.15	346.22
COSTA RICA	8.26	12.98	17,82	15.41	21.80	36.96	45.69	41.14
CUBA	127.40	163.90	195.00	206.31	222.05	143.94	155.34	160,96
ECUADOR	23.77	46,56	88.48	110.40	98.78	124.33	126.39	140.25
EL SALVADOR	8.23	13.14	12.15	13.41	16.19	30.81	35.76	35.76
GRENADA	0.17	0.20	0.25	0.37	0.62	0.84	1.06	1.06
GUATEMALA	12.60	18.74	33.02	25.81	30,37	55.43	59,71	65.59
GUYANA	11.31	15.20	15.65	12.35	10.94	15.43	18.44	17.70
HAITI	2.26	2.76	4.21	5.34	6.50	6.67	9.15	9.20
HONDURAS	6.80	8.68	11.44	11.72	15.38	23.61	35.08	30.77
JAMAICA	38.04	36.05	26.66	42.02	33.63	88.56	98.76	99.05
MEXICO	489.68	787.69	1256.27	1428.83	1622.29	1710.56	1967.76	2048.76
NICARAGUA	8.45	11.75	13.66	15.03	14.33	18.47	25,32	24.96
PANAMA	8.92	15.68	15.22	15.02	15.31	25.59	28.97	28.78
PARAGUAY	4.79	6.37	13.85	15.25	20.28	37.62	44.28	48.00
PERU	101.96	127.31	151.92	133.25	145.49	191.17	225,90	208.57
DOMINICAN REPUBLIC	24.56	40.32	43.61	39.34	58.04	87.55	132.22	136.03
SURINAME	18.98	20.11	24.95	20.39	18.97	21.51	22.06	22.14
TRINIDAD AND TOBAGO	34.29	34.71	47.24	59.38	59.96	66.30	91.15	97.03
URUGUAY	28.98	32.10	38.23	27.98	30.17	39.86	52.82	46.00
VENEZUELA	454.85	474.61	592.84	612.58	696.81	753.14	795.65	837.13
LA&C	2651.96	3580.24	4767.00	5041.09	5806.33	6851.67	7928.40	8081.96



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8.5 TOTAL EMISSIONS OF HYD	ROCARBONS (C)	l) - (Gg)			,			
Country	1970	1975	1980	1985	1990	1995	1999	2000
ARGENTINA	241.39	397.62	632.11	571.33	247.40	504.42	213.33	477.93
BARBADOS	0.76	2.71	7.89	8.49	3.36	2.08	0.88	0.80
BOLIVIA	0.58	1.18	2.83	1.78	3.46	5.85	274.39	190.61
BRAZIL	44.06	69.58	100.35	152.77	132.82	243.13	309.95	406.58
CHILE	7.36	5.42	6.37	7.66	9.53	11.63	14.90	13.64
COLOMBIA	18.90	25.28	31.23	33.73	39.00	42.74	41.03	39.97
COSTA RICA	0.19	0.28	0.32	0.39	0.95	6.48	9.42	11.72
CUBA	7.29	11.13	17.68	14.00	13.06	7.43	6.87	7.14
ECUADOR	3.65	15.99	8.40	12.39	7.22	7.75	9.13	9.86
EL SALVADOR	0.25	1.43	5.24	6.17	6.01	6.45	9.08	11.94
GRENADA	0.01	0.01	0.04	0.02	0.04	0.06	0.09	0.09
GUATEMALA	0.41	0.82	1.30	0.81	1.05	2.35	2.36	2.74
GUYANA	0.49	0.53	0.59	0.45	0.45	0.54	0.58	0.56
HAITI	0.05	0.07	0.10	0.56	0.19	0.15	0.27	0.24
HONDURAS	0.54	0.58	0.72	0.66	0.77	1.22	1.62	1.76
JAMAICA	1.09	1.49	0.85	2.04	4.60	5.56	6.26	6.33
MEXICO	258,42	207.72	256.13	241.74	130.34	144.97	170.71	168.11
NICARAGUA	0.81	1.07	1.11	2.64	3.12	2.59	1.83	1.87
PANAMA	0.34	0.48	0.49	0.70	0.71	1.10	1.33	1.31
PARAGUAY	0.12	0.14	0.26	0.36	0.53	0.71	0.71	0.79
PERU	6.74	8.55	7.94	7.24	7.75	17.02	12.74	/ 12.54
DOMINICAN REPUBLIC	3.74	5.52	3.57	4.59	3.58	4.86	6.55	7.38
SURINAME	1.09	1.04	1.40	1.21	1.29	1,43	1.48	1.48
TRINIDAD AND TOBAGO	50.22	29.29	43.34	74.60	79.13	118.18	11.97	16.07
URUGUAY	5.25	5.33	2.14	1.31	1.75	2.15	2.09	2.98
VENEZUELA	47.86	50.59	34.69	32.79	32.40	128.43	36.96	40.29
LA&C	701.65	843.83	1167.10	1180.44	730.54	1269.29	1146.56	1434.72

8.6 EVOLUTION OF CO2 EMISS	HONS IN INDUSTR	RIAL SECTOR	- (Gg)						EVO	UTION C	F CO2 EM	ISSIONS IN	INDUSTRIAL	SECTOR -	(Gg)		
		E	MISSIONS			G	owth Rate (%	)			GROW	TH RATE 00	-99 (%)				
Country	1980	1988	1991	1999	2000	88-80	00-91	00-99	HAITI						r		r
ARGENTINA	13653	12118	12359	15321	15714	-1.48	2.70	2.57	GUYANA								
BARBADOS	38	77	77	44	40	9.11	-7.11	-10.14	BOLIVIA			CL					
BOLIVIA	665	369	592	880	782	-7.11	3.15	-11.12	URUGUAY			÷					
BRAZIL	44982	62717	61551	49918	54082	4.24	-1.43	8.34	BARBADOS			-					
CHILE	6203	7285	8189	11999	12165	2.03	4.49	1.38	JAMAICA			10					
COLOMBIA	8485	9570	11365	12918	12636	1.52	1.18	-2.18	MEXICO								1
COSTA RICA	537	486	614	765	800	-1.23	2.98	4.54	COLOMBIA							1	1
CUBA	6843	6971	4002	7206	8712	0.23	9.03	20.90	TRINIDAD AND YOBAGO				9				1
ECUADOR	1119	1464	1929	2302	2565	3.42	3.21	11.40	EL SALVADOR				1				
EL SALVADOR	473	478	476	991	990	0.14	8.47	-0.12	PARAGUAY								1
GRENADA	1	0	2	4	4	-12.83	7.14	3.33	SURINAME				Ł				
GUATEMALA	919	691	825	1101	1254	-3.51	4.77	13.93	CHILE				-2				
GUYANA	626	356	291	274	228	-6.82	-2.68	-16.65	DOMINICAN REPUBLIC				L.				
HAITI	202	219	216	334	238	1.05	1.09	-28.93	GRENADA				드				
HONDURAS	525	664	733	752	1052	2.99	4.10	39,91	NICARAGUA				드				
JAMAICA	600	827	538	457	423	4.09	-2.63	-7.33	AL&C				antester .		1		
MEXICO	44874	49110	52605	54265	52776	1.13	0.04	-2.74	COSTA RICA						1		1
NICARAGUA	269	314	247	400	413	1.91	5.89	3.40	VENEZUELA					3			1
PANAMA	. 550	420	616	826	908	-3.30	4.40	9.88	PERU				1	5   C			
PARAGUAY	72	140	184	266	266	8.69	4.14	0.00	BRAZIL				-	7		1	
PERU	3117	2935	3252	4515	4883	-0.75	4.62	8.15	PANAMA					=			
DOMINICAN REPUBLIC	1333	1439	716	1387	1407	0.96	7.80	1.45	ECUADOR				<u> </u>	÷			
SURINAME	708	389	701	729	731	-7.22	0.46	0.18	GUATEMALA					÷			
TRINIDAD AND TOBAGO	1108	3512	3908	5325	5243	15.51	3.32	-1.55	CUBA				_	-	7		
URUGUAY	1196	593	557	766	681	-8.39	2.26	-11.08	HONDURAS								L
VENEZUELA	21502	22265	23915	32482	35050	0.44	4.34	7.91	~	0 -:	3D -20	-10	0	10	20 30	40	0
LA&C	160599	185408	190462	206225	214042	1.81	1.31	3.79									

8.7 EVOLUTION OF CO2 EMISS	SIONS IN TRANSP	ORTATION SE	CTOR - (Gg)						EVO	LUTION OF	CO2 EMISSIO	INS IN TRANS	PORTATION	SECTOR - (G	ig)	
		E	MISSIONS			Gi	owth Rate (%)				GROWTH R/	ATE 00-99 (%)				
Country	1980	1989	1991	1999	2000	89-80	00-91	00-99	COSTA RICA	[						
ARGENTINA	32270	28909	31325	43721	45595	-1.21	4.26	4.29	URUGUAY		(*************************************	·····				
BARBADOS	187	253	265	338	354	3.39	3.27	4.64	BOLIVIA						1	
BOLIVIA	2072	2167	2352	3310	3002	0.50	2.74	-9.32	TRINIDAD AND TOBAGO							
BRAZIL	78373	96829	102113	147515	144359	2.38	3.92	-2.14	EL SALVADOR							
CHILE	7715	10181	11652	20921	21824	3.13	7.22	4.32	GRENADA			L				
COLOMBIA	13475	16860	19013	22696	22152	2.52	1.71	-2.40	PERU							
COSTA RICA	1446	1839	1833	3962	3547	2.71	7.61	-10.49	COLOMBIA		1		1			
CUBA	8728	10017	6936	5054	5756	1.54	-2.05	13.90	PANAMA		1					
ECUADOR	4501	6361	7945	8653	10122	3.92	2.73	16.98	BRAZIL				1			
EL SALVADOR	929	1307	1477	2905	2821	3.86	7.46	-2.87	SURINAME				P			
GRENADA	22	50	65	96	94	9.42	4.16	-2.80	JAMAICA				2			
GUATEMALA	1884	2226	2337	4440	4724	1.87	8.13	6.42	AL&C				27722502			
GUYANA	242	287	267	420	431	1.90	5.47	2.73	NICARAGUA						1	
HAITI	366	495	473	786	833	3.39	6.50	5.94	GUYANA				 			
HONDURAS	659	1185	1123	2192	2291	6.73	8.25	4.51	MEXICO							
JAMAICA	1171	1609	1595	2382	2421	3.60	4.74	1.64	ARGENTINA							
MEXICO	72691	87176	100321	114160	118973	2.04	1.91	4.22	GHILE							
NICARAGUA	726	575	795	1313	1347	-2.56	6.03	2.61	RANDADOG							
PANAMA	1045	1126	1300	2206	2155	0.83	5.78	-2.28	BARGADUS					L		
PARAGUAY	1145	1697	1686	3677	4034	4.47	10.18	9.73	VENEZUELA		1			二 ししょう しょうしょう しょうしょう しょうしょう しょうしょう ビストレート ビストレート ビストレート ビストレート ビストレート ビストレート しょうしょう しょうしょ しょうしょう しょうしょう しょうしょう しょうしょう しょうしょう しょうしょ しょうしょう しょう		
PERU	7033	7384	6973	11060	10776	0.54	4.95	-2.57	GUATEMALA					TT		
DOMINICAN REPUBLIC	1754	2711	2389	6018	6436	4.96	11.64	6.94	DOMINICAN REPUBLIC							
SURINAME	330	314	330	365	368	-0.53	1.20	0.78	PARAGUAY	[		1			-	
TRINIDAD AND TOBAGO	1295	1319	1607	1781	1703	0.20	0.64	-4.42	CURA			1		]	1	
URUGUAY	1722	1572	1676	2894	2621	-1.00	5.09	-9.43	ECUADOR							
VENEZUELA	28560	28802	31710	35743	37774	0.09	1.96	5.68			40		0	6	10	16
LA&C	270341	313253	339558	448606	456513	1.65	3.34	1.76	-	15	ιu	•3	0		10	10

3.8 EVOLUTION OF CO2 EMIS	SIONS IN RESIDEN	TIAL SECTOR	t - (Gg)						EVOLUT	ION OF CO2 EMISSIO	NS IN RESIDE	NTIAL SECTO	JR - (Gg)		
		E	MISSIONS			Gr	owth Rate (%)			GROWTH RA	TE 00-99 (%)				
Country	1980	1989	1991	1999	2000	89-80	00-91	00-99	PARAGUAY		1	1			
RGENTINA	11327	10936	12404	16091	17513	-0.39	3.91	8.83	NICARAGUA						
ARBADOS	43	37	36	33	31	-1.85	-1.38	-3.61	PANAMA						
OLIVIA	552	537	497	857	834	-0.30	5.91	-2.65	JAMAICA			1	1 1	1	
RAZIL	7695	12331	12993	15612	16150	5.38	2.45	3.45	BARBADÓS						
HILE	2555	2908	3253	3497	3638	1.45	1.25	4.06	URUGUAY			1		1	
OLOMBIA	2351	2630	2669	3338	3469	1.25	2.96	3.93	BÓLIVIA						
OSTA RICA	103	56	56	119	132	-6.58	9.95	10,25	MEXICO	)	с –				
UBA	2251	2482	2338	946	1145	1.09	-7.62	21.11	TRINIDAD AND TOBAGO					1	
CUADOR	604	997	1162	1550	1632	5.73	3.84	5.28	QUATEMALA	þ					1
SALVADOR	141	150	144	374	418	0.65	12,54	11.69	SURINAME				1		
RENADA	8	11	13	19	20	3.60	4.61	2.37	PERU	þ				1	
UATEMALA	261	287	299	564	569	1.05	7.41	0.84	GRENADA	- je				1	
UYANA	60	56	52	61	72	-0.66	3.80	18.60	BRAZIL					1	
AITI	25	72	64	129	225	12.43	15.04	75.13	COLOMBIA					1	
ONDURAS	159	114	114	121	207	-3.58	6.82	71.55	CHILE			1			
AMAICA	169	247	148	278	267	4.28	6.78	-3.86	ALSC	10000					-
EXICO	11944	16275	17217	18329	18353	3.50	0.71	0.13	ECUADOR		1 1		1 1		
ICARAGUA	53	46	44	85	80	-1.57	6.90	-6.40	VENEZUELA						
ANAMA	91	132	153	223.	214	4.26	3.80	-4.22	ARGENTINA					[	
ARAGUAY	. 92	130	141	231	209	3.93	4.45	-9.76	COSTA RICA		7				
ERU	2719	3021	1803	2902	2962	1.18	5.67	2.06	EL SALVADOR						
OMINICAN REPUBLIC	210	784	933	2417	2880	15.76	13.34	19.18	GUYANA						
URINAME	39	42	47	57	58	0.82	2.43	1.56	CURA NEPOBLIC						
RINIDAD AND TOBAGO	96	38	38	163	165	-9.86	17.77	0.84	CUBA						
RUGUAY	515	407	442	472	456	-2.57	0.35	-3.41	HONDURAS				T		-1
ENEZUELA	3944	4577	2973	5153	5518	1.67	7.12	7.08	BAITI						
A&C	48007	59303	60033	73622	77218	2.38	2.84	4,88	-20	-10 0	10 20	30	40 50	60	70





8.9 EVOLUTION OF CO2 EMIS	SIONS IN OWN EN	ERGY PROD	UCTION AND	CONSUMPTIC	)N - (Gg)				EVOLUTI	ON OF CO2 EMISSIONS IN OWN ENERGY PRODUCTION AND CONSUMPTION - (Gg)	
		E	MISSIONS			G	rowht Rate (%	)		GROWTH RATE 00-99 (%)	
Country	1980	1989	1991	1999	2000	89-80	00-91	00-99	GUATEMALA		l
ARGENTINA	12628.12	13859.90	14932.30	18032.08	18279.68	1.04	2.27	1.37	CHILE		
BARBADOS	3.55	33.43	27.33	31.09	26.85	28.29	-0.19	-13.64	BARBADOS		
BOLIVIA	1052.72	1362.81	1400.55	1182.71	1327.05	2.91	-0.60	12.20	TRINIDAD AND TOBAGO		
BRAZIL	9714.16	13369.71	11896,27	16358.41	16285.41	3.61	3.55	-0.45	COLOMBIA		
CHILE	2578.09	2353,17	2318.91	1783.58	1458.28	-1.01	-5.02	-18.24	JAMAICA		1
COLOMBIA	3316.32	3252.99	3290.91	7248.36	6771.74	-0.21	8.35	-6.58	PANAMA		
COSTA RICA	80.80	119.77	62.67	0.07	0.15	4.47	-49.01	108.74	ECUADOR		
CUBA	661.61	868.53	542.31	284.59	335.39	3.07	-5.20	17.85	EL SALVADOR		
ECUADOR	1320.55	942.91	861.52	1017.65	1002.75	-3.67	1.70	-1.46	BRAZIL		
EL SALVADOR	87.33	34.23	53.91	59.78	59.38	-9.88	1.08	-0.65	SURINAME		
GRENADA									NICARAGUA		
GUATEMALA	13.54	26.74	18.63	74.76	56.75	7.86	13.17	-24.10	PERU		
GUYANA									VENEZIJELA		
HAITI	2.85	0.00	0.00	0.00	0.00	-100.00			ALAC		
HONDURAS	61.42	32.33	21.57	0.00	0.00	-6.88			URUGUAY		
JAMAICA	2.62	0.00	2.46	12.63	12.19	-100.00	19.47	-3.46	PARAGUAY		
MEXICO	30366.13	41107.40	43059.63	49108.19	52310.64	3.42	2.19	6.52	MEXICO		
NICARAGUA	36.39	60.45	75.07	79.15	79.62	5.80	0.66	0.60	BOLIVIA		
PANAMA	170.53	137.09	55.59	115.20	112.65	-2.40	8.16	-2.22	CUBA		
PARAGUAY	41.97	22.96	22.91	1.45	1.55	-6.48	-25.88	6.40	COSTA RICA		
PERU	2295.95	1605.93	1472.05	1892.90	1916.29	-3.89	2.97	1.24	DOMINICAN REPUBLIC		
DOMINICAN REPUBLIC									HONDURAS		
SURINAME	0.00	8.95	9.58	11.22	11.24		1.80	0.16	HAITI		
TRINIDAD AND TOBAGO	2908.60	2320.15	2242.94	4322.71	4032.95	-2.48	6.74	-6.70	GUYANA		
URUGUAY	184.09	167.81	209.92	230.48	240.07	-1.02	1.50	4.16	GRENADA		
VENEZUELA	17849.53	24351.74	26597.53	34358.53	34875.24	3.51	3.06	1.50	-4	40 -20 0 20 40 00 \$0 100	120
LA&C	85376.84	106039.00	109174.54	136205.53	139195.86	2.44	2.74	2,20			

9.1.1 ELECTRICITY PRIC	ES IN RESIDENTIAL	SECTOR (cUS/kWh)		Growth	Rate (%)	ELECTRICITY PRICES IN RESIDENTIAL SECTOR 2000	
Countries	1991	1999	2000	91-00	99-00	TRINIDAD AND YOUAGO	
ARGENTINA	9.33	9.29	8.92	-0.50	-3.97	ECUADOR	
BARBADOS	14.59	15.31	18.20	2.49	18.88	VENEZUELA	
BOLIVIA	5.55	6.26	6.20	1.24	-0.94	PARAGUAY	l l
BRAZIL	5.87	9.92	11.15	7.39	12.38	MEXICO	
COLOMBIA	2.32	7.70	6.33	11.80	-17.76	GUYANA	
COSTA RICA	4.53	5.04	8.32	6.99	65.08	BOLIVIA	
CUBA	9.00	13.28	13.54	4.64	1,96		
CHILE	10.79	9.21	9.06	-1.92	-1.63		
ECUADOR	2.12	5.01	3,64	6.19	-27.35	FL SALVADOR	
EL SALVADOR	3.87	8.19	8.21	8.72	0.24	COSTA RICA	
GRENADA	19.26	19.26	21.93	1.45	13.87	HAITI	
GUATEMALA	4.28	7.27	7.99	7.18	9.90	ARGENTINA	
GUYANA	6.83	6.34	6.17	-1.13	-2.67	DOMINICAN REPUBLIC	
HAITI	12.95	9.79	8.61	-4.43	-12.05	LASC Transferrence and the second sec	
HONDURAS	5.10	7.08	7.72	4.72	9.03	CHILE CHILE CHILE	
JAMAICA	10.78	12.80	15.59	4.18	21.80	PERU	
MEXICO	4.24	5.16	5.91	3.77	14.62	BRAZIL	
NICARAGUA	7.21	13.89	12.46	6.27	-10.30	PANAMA	
PANAMA	12.79	12.08	12.08	-0.63	0.00	NICARAGUA	
PARAGUAY	5.01	5.78	5.58	1.20	-3.46		
PERU	3.61	9.51	10.03	12.02	5.47	COBA	1
DOMINICAN REP.	7.49	9.15	8.93	1.97	-2.39		
SURINAME	17.08	17.08	17.08	0.00	0.00	ВАРВАЛОВ	
TRINIDAD & TOBAGO	4.08	2.74	2.74	-4.32	-0.11	GRENADA	
URUGUAY	7.58	15.21	13.08	6.24	-14.04		
VENEZUELA	1.71	4.78	5.50	13.86	15.08	0 5 10 15 20	25
LA&C	5.49	8.39	8.96	5.59	6,79	cUS#Wh	

9.1.2 NATURAL GAS PR	ICES IN RESIDENTIA	L SECTOR (US\$/10(3	)m3)	Growth	Rate (%)	NATURAL GAS PRICES IN RESIDENTIAL SECTOR 2000
Countries	1991	1999	2000	91-00	99-00	
ARGENTINA	123.28	203.98	215.55	6.40	5.67	EGDADOR
BARBADOS	616.68	750.90	738.31	2.02	-1.68	
BOLIVIA	115.64	227.56	261.21	9.48	14.79	TRINIDAD AND YOBAGO
BRAZIL	0.00	76.22	83.74		9.87	SURINAME
COLOMBIA	99.12	179.68	190.67	7.54	6.12	DOMINICAN REPUBLIC
COSTA RICA						PERU
CUBA	0.00	130.00	146.70		12.85	PARAGUAY
CHILE	31.55	422.89	506.51	36.13	19.77	PANAMA
ECUADOR						NICARAGUA
EL SALVADOR	1					MEXICO
GRENADA				· · ·		
GUATEMALA						HAITI
GUYANA			TT PAULA			GUYANA
HAITI						GUATEMALA
HONDURAS						GRENADA
JAMAICA						EL SALVADOR
MEXICO	77.74	114.55	NI			BRAZIL BRAZIL
NICARAGUA						VENEZUELA
PANAMA						
PARAGUAY					·	
PERU		TALL TRANSLELL				
DOMINICAN REP.						BOLIVIA
SURINAME						CHILE CHILE
TRINIDAD & TOBAGO						BARBADOS
URUGUAY	,					
VENEZUELA	42.68	163.37	111.00	11.20	-32.06	
LA&C	110.04	195.42	198.29	6.76	1.47	US\$/10(3)m3

9.1.3 LPG PRICES IN RE	SIDENTIAL SECTOR	(US\$/bbl)		Growth F	late (%)	LPG P	RICES IN R	ESIDENTIA	L SECTO	<b>JR 20</b>	00		
Countries	1991	1999	2000	91-00	99-00	PARAGUAY			· · · · · · · · · · · · · · · · · · ·			- 1	
ARGENTINA	30.09	87.44	87.44	12.58	0.00	ECUADOR							
BARBADOS	89.50	35.78	35.78	~9.69	0.00	DOMINICAN REPUBLIC			1 1	1	1		1
BOLIVIA	26.71	25.25	29.41	1.07	16.48	COLOMBIA				.		1	
BRAZIL	21.06	60.37	69.99	14.28	15.94	CUBA	<u> </u>						
COLOMBIA	14.87	17.87	18.47	2,44	3.32	TRINIDAD AND TOBAGO		-					1
COSTA RICA	50.05	19.13	29.43	-5.73	53.84	VENEZUELA				i		1	
CUBA	21.39	20.98	20.98	-0.21	0.00	BOLIVIA				.			
CHILE	49.55	58.33	70.11	3.93	20.20	COSTA RICA							
ECUADOR	5.24	12.08	5.73	1.00	-52.57	EL SALVADOR				1			1
EL SALVADOR	33.20	28.87	33.25	0.02	15.16	BARBADOS				i			
GRENADA	81.33	85.39	85.39	0.54	0.00	MEXICO		T					
GUATEMALA	28.84	42.25	39.88	3.67	-5.61	GUATEMALA							
GUYANA	59.97	72.19	90.32	4.65	25.10	PERU			1 1	1 1	1		
HAITI	55.64	63.73	31.93	-5.98	-49.90	NICARAGUA				i		1	1
HONDURAS	34.95	42.79	59.21	6.03	38.37	LARC	ana <mark>kasa ka</mark> na	annuna distante soore	<u>waa</u>				
JAMAICA	53.63	51.63	61.80	1.59	19.71	HONDURAS				1			1
MEXICO	12.87	32.30	39.88	13.39	23.45	JAMAICA				2			
NICARAGUA	38.50	32.32	49.72	2.88	53.84	SURINAME							
PANAMA	17.52	51.68	63.40	15.36	22.68	BBAZI.		, L _ L ``					
PARAGUAY	46.23	47.31	NI			CHILE		lu and			. 1		
PERU	42.79	33.10	41.30	-0.39	24.77	URUIGUAY					_ i		
DOMINICAN REP.	10.68	8.43	17.46	5.61	107.09	GRENADA							
SURINAME	62.95	62.95	62.95	0.00	0.00	ARGENTINA	-					···	
TRINIDAD & TOBAGO	38.73	32.35	26.50	-4.13	-18.09	GUYANA			اا			$ \rightarrow $	
URUGUAY	63.20	58.03	71.50	1.38	23,21	0	10 20	30 40	50 6	0 70	0 90	J 90	> 10
VENEZUELA	11.22	23.33	28.82	11.05	23.51			US\$/bbl					
LA&C	19.45	43.42	49.81	11.01	14.73								

9.2.1 ELECTRICITY PRI	CES IN INDUSTRIAL	SECTOR (cUS/kWh)		Growth	Rate (%)	ELECTRICITY PRICES IN INDUSTRIAL SECTOR 2000
Countries	1991	1999	2000	91-00	99-00	
ARGENTINA	6.19	7.87	7.50	2.16	-4.70	VENEZUELA
BARBADOS	15.16	16.08	19.00	2.54	18.13	PARAGUAY
BOLIVIA	6.39	6.98	6.20	-0.34	-11.24	ECUADOR
BRAZIL	3.40	4.26	3.60	0.64	-15.45	BRAZIL
COLOMBIA	5.24	7.99	5.15	-0.19	-35.57	LASC ZIEMANIA STRATEGY COM
COSTA RICA	6.60	7.55	6.75	0.25	-10.60	COLOMBIA
CUBA	5.76	6.30	7.95	3.65	26.19	
CHILE	6.09	5.11	5.15	-1.85	0.78	PERU
ECUADOR	4.17	3.62	3.56	-1.74	-1.66	
EL SALVADOR	4.96	11.10	11.12	9.39	0.22	BOLIVIA
GRENADA	16.30	16.30	18.87	1.64	15.75	HONDURAS
GUATEMALA	6.16	7.92	7.56	2.30	-4.55	COSTA RICA
GUYANA	8.37	8.46	8.25	-0.16	-2.55	ARGENTINA
HAITI	9.64	10.50	8.71	-1.12	-17.05	GUATEMALA
HONDURAS	6.21	5.84	6.37	0.28	8.99	CUBA
JAMAICA	7.92	10.19	12.24	4.96	20.13	GUYANA
MEXICO	4.20	4.71	5.63	3.31	19.58	HAITI
NICARAGUA	7.08	11.71	11.67	5.71	-0.34	PANAMA
PANAMA	10.75	9.90	9.90	-0.91	0.00	DOMINICAN REPUBLIC
PARAGUAY	3.82	3.35	3.22	-1.88	-3.88	EL SALVADOR
PERU	4.51	5.54	5.57	2.37	0.54	
DOMINICAN REP.	10.69	11.29	11.01	0.33	-2.48	SURINAME
SURINAME	13.13	13.13	13.13	0.00	0.00	GRENADA
TRINIDAD & TOBAGO	2.04	2.31	2.31	1.38	-0.26	BARBADOS
URUGUAY	6.84	7.00	5.78	-1.85	-17.40	
VENEZUELA	2.38	3.06	2.97	2.50	-2.74	
LA&C	4.07	5.03	4.94	2.19	-1.74	cUs/kWh

9.2.2 NATURAL GAS PR	ICES IN INDUSTRIAL	SECTOR (US\$/10(3)	m3)	Growth	Rate (%)	NATUR	AL PRIC	ES IN	INDUS	TRIAL	SECTO	R 2000		
Countries	1991	1999	2000	91-00	99-00	GRENADA	T 1							
ARGENTINA	134.80	121.72	128.20	-0.56	5.32	EL SALVADOR	1							
BARBADOS	550.79	710.15	671,14	2.22	-5.49	URUGUAY								
BOLIVIA	66.81	45.55	44.46	-4.43	-2.41	ECUADOR	1 1							
BRAZIL	114.43	83.37	102.69	-1.20	23,17	SURINAME	1							
COLOMBIA	69.06	128.93	131.12	7.38	1.70	DOMINICAN REPUBLIC	1			I				1
COSTA RICA						PERU	]							
CUBA	48.00	110.00	110.00	9.65	0.00	PARAGUAY			- 1					
CHILE	31.55	423.56	173.59	20.86	-59.02	PANAMA						-	1	
ECUADOR						NICARAGUA	-		[	1				
EL SALVADOR						COSTA RICA				[				
GRENADA						JAMAICA								
GUATEMALA						HONDURAS	-							
GUYANA						CUYANA	1 1						1	
HAITI						GUATEMALA	1							
HONDURAS						TRINIDAD AND YOBAGO	<del>Ь</del> І			1				1
JAMAICA						VENEZUELA	Б I			ĺ				1
MEXICO	78.41	78.90	111.60	4.00	41.44	BOLIVIA	5							
NICARAGUA						LA&C		[						[
PANAMA						BRAZIL	<u></u>				[		1	
PARAGUAY						CUBA	$\downarrow \rightarrow$							
PERU						MEXICO								
DOMINICAN REP.		a manana mata				ARGENTINA	<u></u>		1					[
SURINAME						COLOMBIA			1					
TRINIDAD & TOBAGO	37.35	37.61	28.16	-3.09	-25.11	CHILE						1		1
URUGUAY		man manual t				BARBADOS								
VENEZUELA	9.26	27.58	36.91	16.61	33.83		0 100	20	30	0 40	0 500	600	700	800
LA&C	66.57	75.52	89.28	3.31	18.21					US\$/10(3)	m3			

9.2.3 FUEL OIL PRICES	IN INDUSTRIAL SEC	TOR (US\$/bbi)		Growth I	Rate (%)	FUE	L OIL PRICE	S IN INDU	JSTRIAL	SECTO	R 2000		
Countries	1991	1999	2000	91-00	99-00	NICARAGUA	[	·/····	····			T	···· /·1
ARGENTINA	22.96	23.31	25.48	1.16	9.31	GRENADA					i	1	
BARBADOS	21.13	20.66	32.63	4.94	57.91	HAITI							
BOLIVIA	50.86	46.40	59.52	1.76	28.27	VENEZUELA							
BRAZIL	22.63	24.27	31.73	3.83	30.75	SURINAME							
COLOMBIA	13.34	10.14	20.27	4.76	99.95	ECUADOR							
COSTA RICA	24.54	13.64	20.51	-1.97	50.37	COLOMBIA							
CUBA	9.52	19.06	29.97	13.59	57.24	COSTA RICA							
CHILE	22.74	23.51	34.78	4.83	47.94	TRINIDAD AND TOBAGO				4			
ECUADOR	13.23	11.27	15.34	1.66	36.11	ARCENTINA							
EL SALVADOR	21.47	24.44	52.30	10.40	113.99	MEXICO							
GRENADA						GUYANA						1	
GUATEMALA	28.43	26.68	33.73	1.92	26.42	LASC			1000000				1
GUYANA	30.37	24.07	28.18	-0.83	17.10	CUBA							
HAITI	18.59	29.27	NI			DOMINICAN REPUBLIC							
HONDURAS	35.79	35.83	46.33	2.91	29.31	BRAZIL	<u> </u>		<u> </u>				
JAMAICA	13.84	17.42	32.28	9.87	85.36	PERU							
MEXICO	11.99	16.71	25.49	8.74	52.56	JAMAICA							
NICARAGUA	28.00	17.81	NI			BARBADOS							
PANAMA	21.41	29.90	38.15	6.63	27.60	GUATEMALA							
PARAGUAY	31.28	27.88	36.29	1.66	30.16	CHILE							
PERU	36.42	22.30	32.10	-1.39	43.95	PARAGUAY							Í
DOMINICAN REP.	26.47	0.00	30.86	1.72		HONDURAS	F				_		
SURINAME	10.65	10.65	10.65	0.00	0.00	EL SALVADOR					<u></u>		
TRINIDAD & TOBAGO	30.12	21.54	21.49	-3.68	-0.24	BOLIVIA		,		1			
URUGUAY	38.13	22.45	24.62	-4.75	9.65		40						
VENEZUELA	7.84	8.02	10.11	2.86	26.01		J 10	20	30	40	50	60	70
LA&C	18.90	21.00	28.95	4.85	37.81			0:	S\$/bbl				



9.3.1 GASOLINE PRICES I	N TRANSPORTATION	SECTOR (US\$/bbl)		Growth R	ate (%)	
Countries	1991	1999	2000	91-00	99-00	
ARGENTINA	86.23	117.01	148.35	6.21	26.78	
BARBADOS	105.50	107.31	125.37	1.94	16.83	
BOLIVIA	65.90	72.36	82.46	2.52	13.96	
BRAZIL	77.33	102.24	129.66	5.91	26.82	
COLOMBIA	24.04	48.14	54.53	9.53	13.26	TRINIDA
COSTA RICA	63.05	29.49	44.81	-3.72	51.95	
CUBA	42.93	71.54	71.54	5.84	0.00	
CHILE	59.53	80.48	97.53	5.64	21.19	
ECUADOR	22.14	53.90	36.02	5.56	-33.17	001415
EL SALVADOR	69.55	73.82	99.87	4.10	35.28	DOMIN
GRENADA	78.88	85.24	85.24	0.87	0.00	
GUATEMALA	75.14	66.25	78.04	0.42	17.80	
GUYANA	59.78	52.92	58.44	-0.25	10.45	
HAITI	55.64	91.38	81.18	4.29	-11.16	
HONDURAS	60.69	80.11	93.81	4.96	17.09	
JAMAICA	57.61	71.76	88.08	4.83	22.74	
MEXICO	65.75	75.50	84.56	2.84	12.00	
NICARAGUA	85.05	67.76	94.63	1.19	39.65	
PANAMA	80.11	72.34	82.20	0.29	13.63	
PARAGUAY	83.00	66.27	74.91	-1.13	13.04	
PERU	79.42	60.60	77.90	-0.21	28.55	
DOMINICAN REP.	66.18	52.33	78.13	1.86	49.31	
SURINAME	88.55	88.55	88.55	0.00	0.00	
TRINIDAD & TOBAGO	53.86	59.14	61.83	1.55	4.54	
URUGUAY	126.77	140.92	175.32	3.67	24.41	
VENEZUELA	10.43	15.70	14.18	3.47	-9.71	
1 480	58.62	74.93	87.73	4.58	17.09	

GASOLINE	PRICES IN	TRAN	SPORT/	TION S	ECTO	R 2000		
VENEZUELA				1				٦.
ECUADOR	L							
COSTA RICA		÷						
COLOMBIA							1	
GUYANA								
TRINIDAD AND TOBAGO		<u>+</u>						
CUBA		1						
PARAGUAY		.JL						
PERU								
GUATEMALA		لمسيل						
DOMINICAN REPUBLIC						1		
HAITI	1l	1						
PANAMA	<u> </u>	-t	h				1	
BOLIVIA		<u> </u>		1				
MÉXICO		<u> </u>						
GRENADA								
LA&C	300002020000000000000000000000000000000	1105200005	र रहेके से सारक होते.		1			
JAMAICA								
SURINAME	1							
HONDURAS				2		1		
NICARAGUA	L	l		2				
CHILE				-				
EL SALVADOR								
BARBADOS					-			
BRAZIL								
ARGENTINA	L	.L						
URUGUAY		_[	1	1				
				100 1		0 100		-
	0 20	40 60	80 JSS/bbl	100 1	20 34	0 160	180	200

9.3.2 DIESEL OIL PRICE	S IN TRANSPORTATI	ON SECTOR (US\$/bb	6)	Growth	Rate (%)	DIESE OIL PRICES IN TRANSPORTATION SECTOR 2000	)
Countries	1991	1999	2000	91-00	99-00	NICARAGUA	1
ARGENTINA	49.15	64.07	80.39	5.62	25.47	VENEZUELA	
BARBADOS	92.60	94.92	96.76	0.49	1.94	ECUADOR	
BOLIVIA	52.63	73.11	79.39	4.67	8.59	TRINIDAD AND TOBAGO	1
BRAZIL	35.86	44.48	56.45	5.17	26.91	COSTA RICA	
COLOMBIA	24.11	39.87	40.23	5.85	0.89	PARAGUAY	
COSTA RICA	48.93	23.30	35.37	-3.54	51.80	CUBA	1
CUBA	10.43	27.82	39.62	15 <i>.</i> 99	42.42	COLOMBIA	
CHILE	54.68	45.79	62.18	1.44	35.79		
ECUADOR	17.87	28.76	21.07	1.85	-26.74		
EL SALVADOR	37.09	47.33	70.95	7.47	49.91		
GRENADA	66.36	64.76	64.76	-0.27	0.00	GUTANA	
GUATEMALA	49.75	47.56	58.97	1.91	23.99		
GUYANA	55.07	48.48	57.99	0.58	19.62		
HAITI	52.15	55.58	49.73	-0.53	-10.53	PANAMA	1
HONDURAS	54.48	53.78	68.59	2.59	27.52	GRENADA	1 1
JAMAICA	49.58	60.59	80.91	5.59	33.53	SURINAME	1 1
MEXICO	32.61	62.53	70.04	8.87	12.01	PERU	1 1
NICARAGUA	52.85	53.53	NI			HONDURAS	
PANAMA	50.30	52.08	63.80	2.68	22.51	MEXICO	1
PARAGUAY	55.33	34.66	38.73	-3.89	11.74	EL SALVADOR	
PERU	48.54	49.10	68.40	3.88	39.31		
DOMINICAN REP.	45.33	0.00	48.68	0.80		BOLIVIA	
SURINAME	65.01	65.01	65.01	0.00	0.00	ARGENTINA	
TRINIDAD & TOBAGO	33.67	32.35	32.30	-0.46	-0.16	JAMAICA	
URUGUAY	68.44	65.14	78.86	1.59	21.06	BARBADOS	
VENEZUELA	7.78	12.56	11.34	4.28	-9.71	0 20 40 60 60 1	.00 120
LA&C	36.27	48.45	59.09	5.57	21.95	US3/DD: ·	

9.3.3 JET FUEL PRICES	IN TRANSPORTATION	SECTOR (US\$/bbl)		Growth	Rate (%)	KEROSENE PRICES IN TRANSPORTATION SECTOR 2000
Countries	1991	1999	2000	91-00	99-00	PERU
ARGENTINA	38.58	32.75	53.83	3.77	64.37	NICARAGUA
BARBADOS	69.37	16.75	16.75	-14.61	0.00	GRENADA
BOLIVIA	56.77	35.61	54.62	-0.43	53.37	BARBADOS
BRAZIL	29.51	23.41	41.10	3.75	75.55	ECUADOR
COLOMBIA	24.17	30.64	43.08	6.63	40.59	VENEZUELA
COSTA RICA	47.59	26.97	44.37	-0.78	64.52	HAITI
CUBA	11.91	29,78	41.97	15.02	40.93	PARAGUAY
CHILE	66.11	40.88	56.52	-1.73	38.26	EL SALVAOOR
ECUADOR	19.90	32.17	30.19	4.74	-6.15	
EL SALVADOR	45.43	40.09	40.19	-1.35	0.24	COLOMBIA
GRENADA	48.57	0.00	0.00			LASC CONTRACTOR AND A C
GUATEMALA	91.97	41.59	58.64	-4.88	41.00	GUYANA
GUYANA	47.73	33,74	43.57	-1.01	29.12	MEXICO
HAITI	44.66	44.46	38.14	-1.74	-14.22	COSTA RIGA
HONDURAS	67.42	38.86	83.16	2.36	113.99	
JAMAICA	31.11	37.01	55.86	6.72	50.95	PANAMA
MEXICO	30.56	27.29	44.01	4.13	61.25	TRINIDAD AND TOBAGO
NICARAGUA	40.81	17.81	NI			
PANAMA	47.95	38.68	52.05	0.92	34.58	
PARAGUAY	72.17	44.86	40.18	-6.30	-10.43	CHILE CHILE
PERU	26.84	33.25	N			SURINAME
DOMINICAN REP.	67.17	53.14	51.13	-2.99	-3.78	QUATEMALA
SURINAME	57.27	57.27	57.27	0.00	0.00	
TRINIDAD & TOBAGO	47.87	52.84	52.84	1.10	0.00	HONDURAS
URUGUAY	68.78	50.35	62.72	-1.02	24.57	0 10 20 30 40 50 60 70 80
VENEZUELA	20.07	15.58	32.97	5.67	111.63	1184000
LA&C	32.10	29.00	43.50	3.44	50.00	

9.4.1 ELECTRICITY PRICES	IN COMMERCIAL SECT	OR (cUS/kWh)		Growth	Rate (%)	ELECTRICITY PRICES IN COMMERCIAL SECTOR 2000
Countries	1991	1999	2000	91-00	99-00	TRINIDAD AND TOBAGO
ARGENTINA	10.52	14.04	13.95	3.19	-0.64	ECUADOR
BARBADOS	15.27	16.20	19.18	2.57	18.40	PARAGUAY
BOLIVIA	11.47	12.48	11.43	-0.04	-8.39	GUATEMALA
BRAZIL	6.94	8.48	10.05	4.20	18.54	PERU
COLOMBIA	7.04	10.22	7.91	1.30	-22.61	COLOMBIA
COSTA RICA	8.34	8.51	8.40	0.08	-1.29	CHILE
CUBA	7.12	7.97	9.42	3.16	18.19	VENEZUELA
CHILE	9.96	8.10	8.01	-2.39	-1.11	COSTA RICA
ECUADOR	4.26	3.68	3.49	-2.19	~5.16	GUYANA
EL SALVADOR	5.01	10.70	10.72	8.82	0.21	
GRENADA	20.37	20.37	23.12	1.42	13.51	
GUATEMALA	6.46	6.68	6.36	-0.17	-4.79	HAITI
GUYANA	11.84	9.63	9.38	-2.55	-2.62	EL SALVADOR
HAITI	13.15	12.14	10.70	-2.26	-11.86	HONDURAS
HONDURAS	7.61	10.01	10.90	4.07	8.89	BOLIVIA
JAMAICA	10.02	11.38	14.30	4.03	25.64	PANAMA PANAMA
MEXICO	10.74	12.35	13.27	2.38	7.43	DOMINICAN REPUBLIC
NICARAGUA	9.90	14.86	14.59	4.40	-1.82	URUGUAY
PANAMA	12.00	11.76	11.76	-0.22	0.00	MEXICO
PARAGUAY	6.47	6.14	5.94	-0.95	-3.26	ARGENTINA
PERU	7.92	7.14	7.65	-0.38	7.14	
DOMINICAN REP.	10.65	12.24	11.94	1.28	-2.46	
SURINAME	17.30	17.30	17.30	0.00	0.00	
TRINIDAD & TOBAGO	3.06	3.02	3.01	-0.18	-0.19	
URUGUAY	9,50	13.39	13.13	3.66	-1.96	
VENEZUELA	6.58	7.82	8.26	2.56	5.66	0 5 10 16 20 25
LA&C	7.91	9.64	10.44	3.13	8.30	cUS/kWh

10.1 DEMAND - GDP EL	ASTICITY			DEMAND - GDP ELASTICITY 2000										
Countries	1991	1999	2000	COSTA RICA	,	·		[***		7	1		1	ר
ARGENTINA	0.27	-0.21	52.41	EL SALVADOR			1						1	
BARBADOS	0.63	0.39	0.50	TRINIDAD AND TOBAGO							1		1	
BOLIVIA	0.69	1.52	-4.44	PERU	1				صاً ا					
BRAZIL	17.96	0.09	0.26	HAITI										
COLOMBIA	1.32	0.35	-0.17	GUYANA								[		
COSTA RICA	1.03	0.55	-1.24	COLOMBIA					9					
CUBA	1.74	0.79	2.05	MEXICO					q					
CHILE	1.22	-2.36	0.63	GRENADA						1				
ECUADOR	0.88	1.14	4.35	SURINAME					L.					
EL SALVADOR	1.41	0.74	-0.55	HANAMA	1			1			1			
GRENADA	4.26	0.59	0.00	CLUTENSIA										
GUATEMALA	0.43	3.24	0.25	BRAZIN					E					
GUYANA	-0.31	0.51	-0.24	LASC					-					
HAITI	0.56	-2.96	-0.34	BARBADOS						1			í	
HONDURAS	0.19	5.31	1.03	CHILE									1	
JAMAICA	1.00	-21.50	3.88	HONDURAS				1	·	4	1			
MEXICO	0.86	0.70	-0.02	DOMINICAN REPUBLIC						÷				
NICARAGUA	-8.38	0,74	0.24	VENEZUELA										
PANAMA	0.96	0.14	0.24	CUBA					]	1	<b>†</b>			
PARAGUAY	0.55	-9.68	2.28	PARAGUAY						1	÷			
PERU	-4.38	-4.10	-0.39	JAMAIGA			-				1		비	
DOMINICAN REP.	-1.95	0.93	1.05	ECUADOR						1			+	
SURINAME	3.74	-0.76	0.00	URUGUAY						T	1		1	Ŧ
TRINIDAD & TOBAGO	1.95	1.36	-0.43	ARGENTINA							· ·			_
URUGUAY	1.76	-0.68	6.34	-5	-4	-3	-2	-1	0	1	2	3	4	5
VENEZUELA	0.74	0.62	1.51											
LA&C	0.61	2.53	0.43	··· · · · · ·										

<b>10.2 ENERGY INTENSIT</b>	ate (%)		ENER	RGY I	NTEN	SITY 2	2000									
Countries	1991	1999	2000	91-00	99-00	BARBADOS	1		1	T			r		· ] · · · · · ·	- I
ARGENTINA	1.45	1.56	1.64	1.41	5.14	LIRUGUAY										
BARBADOS	0.99	0.91	0.90	-1.02	-1.46	PERU		1								
BOLIVIA	2.90	2.83	2.52	-1.51	-10.66	ARGENTINA						1		1		
BRAZIL	2.04	2.16	2.10	0.30	-2.84	PANAMA										
COLOMBIA	3.58	3.03	2.93	-2.20	-3.42	MEXICO										
COSTA RICA	2.36	2.06	1.99	-1.87	-3.32	COSTA RICA		ł	1							
CUBA	3.90	3.43	3,62	-0.83	5.50	BRAZIL		÷				1				
CHILE	2.69	2.76	2.70	0.05	-1.91	LASC	NORTH OF THE OWNER OWNER	592								
ECUADOR	2.97	2.98	3.17	0.73	6.57	BOLIVIA						1		1		
EL SALVADOR	2.95	2.90	2.79	-0.60	-3.79	CHILE										
GRENADA	2.15	2.72	2.70	2.58	-0.52	GRENADA	. I			1			1			
GUATEMALA	3.99	4.15	4.04	0.14	-2.55	COLOMPIA			1		1					
GUYANA	11.84	9.71	9.36	-2.58	-3.60	FCUADOR		1	1,							
HAITI	5.27	8.23	8.12	4.92	-1.33	DOMINICAN REPUBLIC		1	J							
HONDURAS	4.95	4.40	4.40	-1.29	0.12	CUBA			<u> </u>							
JAMAICA	3.94	4.06	4.12	0.49	1.43	GUATEMALA			- L	5			1		1	
MEXICO	2.19	2.00	1.87	-1.73	-6.67	JAMAICA		J	-	÷	ļ	1				
NICARAGUA	5.13	5.22	5.02	-0.25	-3.96	HONDURAS			-	÷						
PANAMA	1.62	1.73	1.70	0.52	-1.86	PARAGUAY	-	-	1	÷						
PARAGUAY	3.97	4.41	4.49	1.38	1.90	VENEZUELA	1	1		<u>+</u>	]					
PERU	1.73	1.61	1.52	-1.45	-5.36	SURINAME		1	1	T						
DOMINICAN REP.	2.91	3.52	3.53	2.19	0.37	NICARAGUA		i		1	7	ł				
SURINAME	4.92	4.70	4.73	-0.45	0.50	TRINIDAD AND TOBAGO		T	1	1		1	7			
TRINIDAD & TOBAGO	5.41	7.65	7.13	3.11	-6.83	HAIT		İ	1	1	I.		1	Τ		
URUGUAY	1.55	1.55	1.47	-0.63	-5.39	GUYANA		· · · · · · · · · · · · · · · · · · ·		·····	l		_	-	-prod	11
VENEZUELA	3.99	4.53	4.61	1.62	1.72	(	) 1	2	3	4	5	6	7	8	9	10
LA&C	2.28	2.28	2.23	-0.26	-2.25											

10.3 ENERGY INTENSIT	Y OF INDUSTR	IAL SECTOR (I	Boe/10(3)	Growth	Rate (%)	ENERGY	INTENS	ITY OF I	NDUS	TRIA	LSEC	TOF	2000		
Countries	1991	1999	2000	91-00	99-00	VENEZUELA									
ARGENTINA	1.16	1.27	NI			URUGUAY	1							.	
BARBADOS	1.86	1.09	NI			TRINIDAD AND TOBAGO	1						1		
BOLIVIA	2.04	2.93	NI			SURINAME	]								
BRAZIL	1.95	1.92	NI			DOMINICAN REPUBLIC									
COLOMBIA	2.75	3.17	NI			PERU				1			!		
COSTA RICA	2.71	1.70	NI			PARAGUAY				1			/		
CUBA	8.41	5.78	NI			PANAMA							1		
CHILE	2.67	2.85	NI			NICARAGUA				1			1 1	1	
ECUADOR	1.61	1.76	NI			MEXICO							!		
EL SALVADOR	2.50	2.39	NI			JAMAICA		Ì					1 1		1
GRENADA						HONDURAS							1 1		
GUATEMALA	3.59	3.73	NI			HAID		ł					1 1		
GUYANA	20.70	13.11	NI			GUTANA		-					1 1		
HAITI	3.34	8.97	NI			GUALEWALA					1		1 1		
HONDURAS	5.21	3,72	NI										1 1		
JAMAICA	0.94	2.34	NI			FCUADOR		ł					1 1		
MEXICO	2.87	2.45	NI			CHILE		ł					1 1		
NICARAGUA	3.74	4.11	NI			CUBA							1		
PANAMA	3.22	2.87	NI			COSTA RICA							/	.	
PARAGUAY	5.54	6.82	NI			COLOMBIA	1								
PERU	0.74	0.65	NI			· BRAZIL	i						1 1		
DOMINICAN REP.	2.51	2.63	NI			BOLIVIA	1								
SURINAME	}					BARBADOS	1								
TRINIDAD & TOBAGO	6.48	6.49	NI			ARGENTINA	1								
URUGUAY	1.39	1.38	NI			1			,	· · · · · · · · · · · · · · · · · · ·			1		
VENEZUELA	3.64	4.13	NI				- *	v	•	• I			• •	'	
LA&C	2.27	2.21	NI			1			1	30e/10{3}0	08\$1900	3			

10.4 ENERGY INTENSIT (Boe/10(3) US\$1990)	Y OF TRANSPO	ORTATION SEC	CTOR	Growth R	late (%)	ENERGY IN	TENSITY	OFTRAN	SPORT/	TION	SECTO	<b>JR 2000</b>	}
Countries	1991	1999	2000	91-00	99-00	BARBADOS		王、 !	1				
ARGENTINA	0.47	0.49	0.51	1.08	4 28	URUGUAY		I.	1				
BARBADOS	0.37	0.41	0.41	1.14	1 64	ARGENTINA		二,					
BOLIVIA	0.99	1.06	0.94	-0.55	-10.95	TRINIDAD AND TOBAGO							
BRAZIL	0.58	0.69	0.65	1.17	-5.99	PANAMA							
COLOMBIA	1.09	1.04	0.98	-1.15	-5.49	BRAZIL	·····						
COSTA RICA	0.72	1.09	0.96	3.18	-11.66	CUBA			=			, c	
CUBA	0.83	0.66	0.71	-1.67	8.16	LASC	This is a second second	entre la constante de la constante de la constante de la constante de la constante de la constante de la const					
CHILE	0.83	0.96	0.95	1.50	-1.18	MEXICO							
ECUADOR	1.45	1.40	1.61	1.13	14,63	EL SALVADOR		1 1					
EL SALVADOR	0.68	0.90	0.86	2.57	-5.29	SURINAME		1 1		-			
GRENADA	1.24	1,49	1.45	1.74	-2.83	BOLIVIA			1				
GUATEMALA	0.68	0.93	0.95	3.91	2.85	CHILE		1 1					
GUYANA	1.63	1.71	1.71	0.49	-0.21	GUATEMALA		- <u> </u>					
HAITI	0.63	1.18	1.24	7.80	4.93	COSTA RICA							
HONDURAS	0.75	1.15	1.16	4.91	0.62	COLOMBIA		T					
JAMAICA	0.96	1.39	1.40	4.36	1.21	NICARAGUA		. F					
MEXICO	0.86	0.77	0.75	-1.45	-2.55	HONDOROS		· · · · · · · · · · · · · · · · · · ·	· ·				
NICARAGUA	0.86	1.04	1.01	1.88	-2.69	DOMINICAN REPUBLIC							
PANAMA	0.52	0.65	0.61	1.77	-5.83	IAMAICA						-	
PARAGUAY	0.72	1.32	1.43	7.85	8.10	PARAGUAY	d					<u> </u>	
PERU	0.44	0.49	0.45	0.40	-6.44	GRENADA		· · · · ·		E			
DOMINICAN REP.	0.85	1.33	1.31	4.99	-1.23	VENEZUELA			1				
SURINAME	0.95	0.92	0.93	-0.23	0.78	ECUADOR		1 .1.					4
TRINIDAD & TOBAGO	0.72	0.64	0.58	-2.35	-9.17	GUYANA							
URUGUAY	0.41	0.53	0.49	2.03	-8.60		) 03	04 00					
VENEZUELA	1.39	1.50	1.53	1.06	2.02	,	, U.Z	U.4 U.5	0.8	1	1.2	1.4	1.6 1.8
LA&C	0.72	0.75	0.74	0.29	-2.25			809	/10(3)US\$1	990			

10.5 ENERGY CONSUMP		FICATION IN T	Growth Rate(%)					
Countries	1991	1999	2000	91-00	99-00			
ARGENTINA	90.13	92.40	94.05	0.47	1.79			
BARBADOS	94.47	93.93	96.15	0.20	2.3			
BOLIVIA	30.18	60.21	71.71	10.09	19.10			
BRAZIL	51.95	65.87	66.07	2.71	0.2			
COLOMBIA	30.18	51.58	52,49	6.34	1.7			
COSTA RICA	23.34	83.10	81.62	14.93	-1.70			
CUBA	32.65	57.96	56.74	6.33	-2.10			
CHILE	35.07	35.09	36.98	0.59	5.39			
ECUADOR	48.59	67.34	69.99	4.14	3.94			
EL SALVADOR	9.71	17.70	18.66	7.53	5.40			
GRENADA	43.64	53.24	53.16	2.22	-0.14			
GUATEMALA	5.10	8.17	8.41	5.73	3.00			
GUYANA	4.36	7.80	7.79	6.67	-0.14			
HAITI	2.06	2.18	2.11	0.25	-3.3			
HONDURAS	6.25	9.30	11.55	7.05	24.1			
JAMAICA	35.78	41.52	40.44	1.37	-2.6			
MEXICO	60.08	63.03	63.35	0.59	0.5			
NICARAGUA	4.65	5.13	4.99	0.78	-2.6			
PANAMA	25.43	30.37	31.81	2.52	4.7			
PARAGUAY	10.04	24.22	24.28	10.31	0.23			
PERU	18.46	24.62	25.88	3.83	5,14			
DOMINICAN REP.	30.75	35.71	38.91	2.65	8.9			
SURINAME	48.64	44.78	44.81	-0.91	0.0			
TRINIDAD & TOBAGO	99.54	94.78	95.43	-0.47	0.6			
URUGUAY	34.84	48.79	50.20	4.14	2.8			
VENEZUELA	89.40	99.62	99.58	1.21	-0.0			
1480	46.86	57.31	58.36	2.47	1.8			



10.6 ENERGY CONSUME INDUSTRIAL SECTOR (9	TION DIVERS	FICATION IN	THE	Growth	Rate(%)	ENERGY CO	NSUMPT	ION DIVE	RSIFICA	TION IN	THE IN	DUSTR	IAL
Countries	1991	1999	2000	91-00	99-00	PARAGUAY							
ARGENTINA	80.87	76.87	77.11	-0.53	0.32	CUBA	<u> </u>				1		
BARBADOS	45.23	50.46	49.44	0.99	-2.04	HAITI							
BOLIVIA	57.20	51.38	47.30	-2.09	-7.94	SURINAME				-			
BRAZIL	57.93	44.69	46.86	-2.33	4.86	COLOMBIA			_4			1	
COLOMBIA	39.84	36.95	41.74	0.52	12.98	BRAZIL		1	T			· ·	
COSTA RICA	52.43	70,40	70.24	3.30	-0.23	BOUVIA		1					
CUBA	26.45	25.03	24.64	-0.78	-1.53	HONDURAS	<u> </u>		÷				
CHILE	64.33	72,51	73.89	1.55	1.90	BARBADOS					1		
ECUADOR	71.42	68.49	72.44	0.16	5.77	NICÁRAGUA		+				[	
EL SALVADOR	41.89	61.03	70.55	5.96	15.59	GUATEMALA		1				1	
GRENADA	81.29	81.58	81.14	-0.02	-0.53	DOMINICAN REPUBLIC							
GUATEMALA	52.03	51.80	54.80	0.58	5.79	LASC	222223210100000	of the second second second second second second second second second second second second second second second	an bannan ya kasiki d	10000000		1	
GUYANA	41.56	38.25	34.20	-2.14	-10.59	DOSIA RICA RANAMA							
HAITI	37.67	30.97	26.95	-3.65	-13.00	FL SALVADOR	<u> </u>	1	· · · · ·				1
HONDURAS	50.51	43.93	47.85	-0.60	8.93	PERU	·	.1					
JAMAICA	91.55	88.52	88.18	-0.42	-0.38	ECUADOR		1	1		l		
MEXICO	90.88	89.90	89.73	-0.14	-0.19	URUGUAY	<u> </u>	1					1
NICARAGUA	45.35	49.59	51.72	1.47	4.30	CHILE	<u> </u>		,		1		
PANAMA	63.28	68.77	70.52	1.21	2.55	ARGENTINA	<u>}</u>	+	-		-		
PARAGUAY	12.14	12.53	12.57	0.39	0.38	GRENADA					<b></b>		
PERU	64.51	72.05	71.46	1.14	-0.82	JAMAICA				-		_	
DOMINICAN REP.	50.12	56.74	60.32	2.08	6.30	VENEZUELA		1					
SURINAME	32.33	32.07	32.05	-0.10	-0.08	MEXICO		1		[		1	
TRINIDAD & TOBAGO	98.58	98.73	98.85	0.03	0.11	TRINIDAD AND YOBAGO							
URUGUAY	59.25	71.22	73.28	2.39	2.89		0	20	40	60	80	100	120
VENEZUELA	99.31	91.12	89.60	-1.14	-1.67				%				
LA&C	69.88	64.66	65.47	-0.72	1.26								
10.7 PER CAPITA ENER	GY END-USE	(Boe/inhab)	1	Growth R	ate (%)	PER CAPITA ENERGY END-USE 2000							
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Countries	1991	1999	2000	91-00	99-00	BOLIVIA							
ARGENTINA	6.83	8.81	9.16	3.32	3.95								
BARBADOS	6.31	6.58	6.65	0.58	1.12	HONDURAS							
BOLIVIA	2.37	2.52	2.25	-0.58	-10.91	PERU 3							
BRAZIL	5.62	6.33	6.31	1.30	-0.26	EL SALVADOR							
COLOMBIA	4.41	3.74	3.65	-2.07	-2.30	ECUADOR							
COSTA RICA	4.38	4.41	4.23	-0.38	-4.06	COLOMBIA							
CUBA	7.00	5.44	6.04	-1.63	10.88	GUATEMALA							
CHILE	6.58	9.24	9.44	4.10	2.17	COSTA RICA							
ECUADOR	3.58	3.41	3.64	0.18	6.68	GRENADA							
EL SALVADOR	2.95	3.48	3,37	1.48	-3.30								
GRENADA	2.92	4.40	4.38	4.60	-0.52								
GUATEMALA	3.53	4.13	4.06	1.56	-1.75								
GUYANA	5.60	6.46	6.37	1.44	-1.40								
HAITI	1.29	1.54	1.50	1.72	-2.16								
HONDURAS	3.36	3.04	3.08	-0.96	1.41	BRAZIL							
JAMAICA	6.41	6.34	6.41	0.00	1.07	GUYANA							
MEXICO	7.21	7.13	7.01	-0.32	-1.66	JAMAICA							
NICARAGUA	2,98	3.05	3.01	0.12	-1,37	BARBADOS							
PANAMA	3.83	4.87	4.82	2.58	-0.96	MEXICO							
PARAGUAY	4.93	5.22	5.27	0.75	0.85	ARGENTINA							
PERU	2.90	3.33	3.22	1.18	-3.22	CHILE							
DOMINICAN REP.	2.62	4.41	4.73	6.80	7.22	SURINAME							
SURINAME	9.77	10.39	10.39	0.69	0.02	VENEZUELA							
TRINIDAD & TOBAGO	22.71	38.59	37.55	5.75	-2.70	TRINIDAD AND TOBAGO							
URUGUAY	4.72	5.82	5.41	1.53	-7.01	0 5 10 15 20 25 30 35 40							
VENEZUELA	10.58	10.69	11.04	0.47	3.26								
LA&C	5.76	6.22	6.23	0.88	0.20	Boolinhab							

10.8 PER CAPITA RESID (Boe/inhab)	DENTIAL ENER	GY CONSUM	PTION	Growth	Rate (%)	PER CA	PITA RESIDENTIAL EN	ERGY CONS	UMPTION 20	000	
Countries	1991	1999	2000	91-00	99-00	CUBA	<u></u>				
ARGENTINA	1.44	1.82	1.95	3.41	6.96	BOLIVIA	······				
BARBADOS	1.34	0.88	0.88	-4.64	-0.38	COS IA RECA					
BOLIVIA	0.90	0.65	0.53	-5.77	-18.46	FCUADOR					
BRAZIL	0.89	0.86	0.87	-0.21	1.61	BRAZIL					
COLOMBIA	1.22	0.73	0.72	-5.65	-1.69	8ARBADOS					
COSTA RICA	1.52	0.55	0.58	-10.10	5.86	HAITI					
CUBA	0.76	0.46	0.52	-4.13	12.59	JAMAICA		1			11
CHILE	2.00	2.24	2.27	1.42	1.15	PERU	]	⇒			
ECUADOR	0.83	0.76	0.74	-1.27	-3.39	VENEZUELA		÷			
EL SALVADOR	1.47	1.50	1.50	0.23	-0.06	LASC		Analaidade			
GRENADA	0.87	1.25	1.28	4.48	3.20	TRINIDAD AND TOBAGO		· · · · · · · · · · · · · · · · · · ·			
GUATEMALA	2.24	2.28	2.23	-0.08	-2.31	GRENADA					
GUYANA	2.09	2.16	2.19	0.54	1.18	PANAMA		T			
HAITI	0.93	0.97	0.94	0.09	-2.62	SURINAME		·····			
HONDURAS	1.90	1.29	1.46	-2.93	13.20	HONDURAS		T			
JAMAICA	0.72	0.97	0.96	3.17	-1.19	EL SALVADOR					
MEXICO	1.26	1.21	1.21	-0.44	0.03	URUGUNY		1	5 1		
NICARAGUA	1.78	1.68	1.67	-0.72	-0.49	NICARAGUA					
PANAMA	1.29	1.40	1.39	0.80	-0.87	PARAGUAY					
PARAGUAY	2.37	1.82	1.78	-3.14	-2.24	ARGENTINA					11
PERU	1.10	1.02	1.01	-0.96	-0.50	DOMINICAN REPUBLIC					
DOMINICAN REP.	1.20	1.75	1.96	5.59	11.60	GUYANA					11
SURINAME	1.22	1.44	1.45	1.90	0.66	SUNTEMALA			I ľ		11
TRINIDAD & TOBAGO	0.50	1.14	1.21	10.16	5.44	Office					
URUGUAY	1.50	1.56	1.56	0.44	-0.03		0 0.5	1 1	.5 2		2.5
VENEZUELA	0.75	1.07	1.09	4.23	2.35			Boe/inhab			
LA&C	1.15	1.12	1.14	-0.12	1.54						

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10.9 PER CAPITA RESID (kWh/inhab)	ENTIAL ELECT	RICITY CON	SUMPTION	Growth R	ate (%)	PER CAPITA RESIDENTIAL ELECTRICITY CONSUMPTION 2000	
Countries	1991	1999	2000	91-00	99-00	NICARAGUA	1
ARGENTINA	364.41	562.43	580.38	5.31	3.19	GUATEMALA	1
BARBADOS	1534.88	858.74	868.96	-6.13	1,19		
BOLIVIA	112.18	158.63	162.26	4.19	2.29	HONDURAS	
BRAZIL	348.59	482.68	489.16	3.84	1.34	EL SALVADOR	
COLOMBIA	391.07	278.89	262.99	-4.31	-5.70	GUYANA	
COSTA RICA	513.99	605.73	623,85	2.18	2.99		
CUBA	300.67	357.60	377.15	2.55	5.47		
CHILE	396.41	397.82	406.38	0.28	2.15		
ECUADOR	191.89	236.97	220.84	1.57	-6.81	MEXICO	
EL SALVADOR	135.30	221.81	209.64	4.99	-5.49	CUBA	
GRENADA	241.76	425.53	448.94	7.12	5.50	PANAMA	
GUATEMALA	75.42	116.59	121.77	5.47	4.45	CHILE	
GUYANA	106.25	209.36	211.38	7.94	0.97	LASC ADDITIONAL ADDITION	
HAITI	18.00	15.59	13.92	-2.82	-10.74	GRENADA	
HONDURAS	161.89	186.17	206.57	2,75	10.96	BRAZIL	
JAMAICA	223.39	343.23	345.33	4.96	0.61	PARAGUAY	
MEXICO	264.46	342,73	364.11	3.62	6.24	SURINAME	
NICARAGUA	108.29	93.10	88.33	-2.24	-5.12	ARGENTINA	
PANAMA	276.19	370.52	391.49	3.95	5.66	DOMINICAN REPUBLIC	
PARAGUAY	258.01	515.69	530.31	8.33	2.83	COSTA RICA	Ĺ
PERU	212.31	233.09	243.95	1.56	4.66	VENEZUELA	L
DOMINICAN REP.	375.14	455.80	584.03	5.04	28.13		
SURINAME	539.41	568.67	573.14	0.68	0.79		
TRINIDAD & TOBAGO	672.01	1256.99	1358.30	8.13	8.06		
URUGUAY	565.65	839.30	867.40	4.86	3.35	0 200 400 600 800 1000 1200 1400 1	600
VENEZUELA	530.61	639.72	627.97	1.89	-1.84		
LA&C	316.21	400.47	409.90	2.93	2.35	k <b>W</b> himhab	

10.10 EXTERNAL BALAI SUPPLY	NCE : (EXPORT	S - IMPORTS)	/TOTAL	Growth R	ate (%)		EXTERNAL BALANCE 2000
Countries	1991	1999	2000	91-00	99-00	GRENADA	
ARGENTINA	0.04	0.31	0.39	27.08	26.48	JAMAICA	
BARBADOS	-0.71	-0.57	-0.61	-1.72	7.23	DOMINICAN REPUBLIC	
BOLIVIA	0.69	0.13	0.32	-8.32	136.03	CHILE	
BRAZIL	-0.26	-0.24	-0.23	-1.43	-6.07	LIRUGUNY	
COLOMBIA	0.87	1.70	1.58	6.85	-7.47	BARBADOS	
COSTA RICA	-0.46	-0.63	-0.55	1.82	-12.70	GUYANA	
CUBA	-0.58	-0.52	-0.49	-2.01	-5.83	COSTA RICA	
CHILE	-0.49	-0.71	-0.68	3.63	-4.32	SURINAME	
ECUADOR	1.65	1.82	1.68	0.21	-7.78	CUBA	
EL SALVADOR	-0.37	-0.49	-0.48	2,94	-0.42	EL SALVADOR	
GRENADA	-0.88	-0.93	-0.93	0.56	-0.16	HONDURAS	
GUATEMALA	-0.26	-0.24	-0.26	0.29	12.19	NICARAGUA	
GUYANA	-0.49	-0.57	-0.55	1.44	-3.17	GUNTEMALA	
HAITI	-0.19	-0.23	-0.24	2.41	4.79	HAITI	
HONDURAS	-0.32	-0.50	-0.48	4.73	-4.48	PERU	
JAMAICA	-0.84	-0.84	-0.92	1.08	10.03	<b>BRAZIL</b>	
MEXICO	0.53	0.48	0.47	-1.45	-2.53	BOLIVIA	
NICARAGUA	-0.34	-0.43	-0.43	2.80	1.68	LASC	autoriai)
PANAMA	-0.67	-0.66	-0.71	0.60	6.52	ARGENTINA	
PARAGUAY	0.49	0.57	0.58	1.79	1.15	MEXECO	
PERU	0.00	-0.20	-0.24	62.88	19.67	PARAGUAY	
DOMINICAN REP.	-0.73	-0.81	-0.81	1.19	1.01	TRINIDAD AND TOBAGO	
SURINAME	-0.50	-0.50	-0.50	-0.07	-0.06	ECUADOR	
TRINIDAD & TOBAGO	0.73	0.86	0.90	2.39	3.91	VENE7/JELA	
URUGUAY	-0.57	-0.72	-0.63	1.06	-12.86	VENEZUELA	
VENEZUELA	1.85	2.09	2.04	1.10	-2.45	-1.5	-1 -0.6 0 0.5 1 1.5 2 2.5
LA&C	0.32	0.37	0.37	1.91	1.14		(EXPORTS-IMPORTS)/TOTAL SUPPLY

10.11 TOTAL EFFICIENCY OF US	EFUL CONSUMPTION IN	N RESIDENTIAL SECTO	DR (%)	Growth F	Rate (%)		TOTAL EFFIC RES	IENCY OF U	SEFUL CON ECTOR (%)	SUMPTION I 2000	N		
Country	1991	1999	2000	00-91	00-99	NICADAGUA							
ARGENTINA	63.95	64.41	65.11	0.20	1.09	HAITI						1	
BARBADOS	63.17	63.08	63.78	0.11	1.11	GUATEMALA							
BOLIVIA	24.69	42.37	49.12	7.94	15,93	GUYANA		1					
BRAZIL	37.62	45.20	45.34	2.10	0.32	HONDURAS	- 1						
CHILE	30.88	29.17	29.98	-0.33	2.80	EL SALVADOR							
COLOMBIA	26.87	38.44	38.81	4.17	0.96	PARAGUAY							
COSTA RICA	20.58	55.14	54.26	11.37	-1.58	PANAMA			3				
CUBA	46.60	55.10	54.50	1.76	-1.07	PERU							
ECUADOR	36.04	45.70	47.24	3.05	3.35	CHILE					1		1
EL SALVADOR	12.85	17.82	18.31	4.01	2.73	JAMAICA			<u> </u>				
GRENADA	38.85	43.46	43.50	1.27	0.11	SURINAME							
GUATEMALA	10.07	11.91	12.05	2.02	1.23	DOMINICAN REPUBLIC							
GUYANA	11.17	13.17	13.53	2.15	2.79	URUGUAY							
HAITI	9.07	9.43	10.16	1.27	7.74	COLOMBIA							
HONDURAS	11.01	13.11	14.32	2.97	9.26	AL&C	A REAL PROPERTY AND A REAL						
JAMAICA	30.31	34.61	34.07	1.31	-1.56	GRENADA							
MEXICO	42.18	43.48	43.57	0.36	0.20	MEXICO	1						
NICARAGUA	9.74	10.07	9.92	0.21	-1.44	BRAZIL							
PANAMA	21.97	24.98	25.53	1.69	2.23	ECUADOR							
PARAGUAY	13.01	21.00	21.08	5.50	0.34	COSTA BICA	· · · · · · · · · · · · · · · · · · ·						
PERU	21.69	26.41	27.09	2.50	2.58	CUBA	· · · · · · · · · · · · · · · · · · ·			1			
DOMINICAN REPUBLIC	30.01	35.04	37.22	2.42	6.20	TRINIDAD AND TORAGO							
SURINAME	36.44	34.57	34.61	-0.57	0.12	BARBADOS		1					
TRINIDAD AND TOBAGO	64.49	63.33	63.41	-0.19	0.13	ARGENTINA							
URUGUAY	30.63	37.93	38.38	2.54	1.18	VENEZUELA	L				1		
VENEZUELA	62.06	66.13	66.07	0.70	-0.09		10			10	50		
AL&C	36.03	41.57	42.17	1.76	1.44		U 10	20	30	40	50	00	10

10.12 PER CAPITA USEFUL ENE	RGY CONSUMPTION IN	RESIDENTIAL SECTO	R (Boe/hab)	Growth F	Rate (%)		PER CAPITA USE RESIDENTI	FUL ENERGY	CONSUMPT os/hab) 200	FION IN 80			
Country	1991	1999	2000	00-91	00-99	MAIT		· · · · · · · · · · · · · · · · · · ·		<u> </u>	1	·/·····	٦
ARGENTINA	0.92	1.17	1.27	3.62	8.12	NICARAGUA			1				
BARBADOS	0.85	0.56	0.56	-4.54	0.72	HONDURAS							
BOLIVIA	0.22	0.27	0.26	1.71	-5.46	BOLIVIA	I						
BRAZIL	0.33	0.39	0.40	1.88	1.94	GUATEMALA							
CHILE	0.62	0.65	0.68	1.09	3.98	PERU							
COLOMBIA	0.33	0.28	0.28	-1.72	-0.75	EL SALVADOR							
COSTA RICA	0.31	0.30	0.32	. 0.12	4.18	COLOMBIA							
CUBA	0.36	0.26	0.28	-2.45	11.38	CUBA							
ECUADOR	0.30	0.35	0.35	1.74	-0.15	GUYANA							
EL SALVADOR	0.19	0.27	0.27	4.25	2.68	COSTA RICA							
GRENADA	0.34	0.54	0.56	5,80	3.31	JAMAICA	· · · · · · · · · · · · · · · · · · ·						
GUATEMALA	0.23	0.27	0.27	1.94	-1.12	EGUADÓR		1					
GUYANA	0.23	0.28	0.30	2.70	4.01	PANAMA		1		1			
HAITI	0.08	0.09	0.10	1.36	4.92	PARAGUAY		-	1				
HONDURAS	0.21	0.17	0.21	-0.05	23.68	BRAZIL							
JAMAICA	0.22	0.34	0.33	4.52	-2.72	ALAC		Contraction of the second second second second second second second second second second second second second s	1		1		
MEXICO	0.53	0.53	0.53	-0.08	0.23	SURINAME							
NICARAGUA	0.17	0.17	0.17	-0.51	-1.92	GRENADA							
PANAMA	0.28	0.35	0.35	2.50	1.34	BARRADOS	J						
PARAGUAY	0.31	0.38	0.38	2.19	-1.91	IRINGUAY							
PERU	0.24	0.27	0.27	1.52	2.07	CHILE		1					
DOMINICAN REPUBLIC	0.36	0.61	0.73	8.14	18.52	VENEZUELA	-						
SURINAME	0.44	0.50	0.50	1.32	0.77	DOMINICAN REPUBLIC							
TRINIDAD AND TOBAGO	0.33	0.72	0.76	9.95	5.57	TRINIDAD AND TOBAGO				1			
URUGUAY	0.46	0.59	0.60	2.99	1.16	ARGENTINA					J	<u> </u>	
VENEZUELA	0.47	0.71	0.72	4.95	2.26		0.0	0.4 0.1	e 01		4 4	4	7
AL&C	0.41	0.47	0.48	1.65	3.00		0.2	0.4 0.1	U U,I	<sup>b</sup>			1.4

Country	NATIONAL	VEAD
Country	COVERAGE	1 CAR
ARGENTINA	94.6	1998
BARBADOS	98.0	1997
BOLIVIA	51.9	2000
BRAZIL	94.1	1999
CHILE	95.5	1997
COLOMBIA	81.0	1999
COSTA RICA	94.4	1999
CUBA	94.3	1999
ECUADOR	77.7	2000
EL SALVADOR	73.5	1999
GRENADA	82.0	1993
GUATEMALA	76.4	2000
GUYANA	82.0	1997
HAITI	34.0	1997
HONDURAS	54.0	2000
JAMAICA	82.0	2000
MEXICO	94,7	2000
NICARAGUA	51.3	1999
PANAMA	73.7	1999
PARAGUAY	83.0	1999
PERU	72.2	1999
DOMINICAN REPUBLIC	84.0	1997
SURINAME	97.0	1997
TRINIDAD AND TOBAGO	97.0	1997
URUGUAY	97.3	1997
VENEZUELA	94.0	1999



10.14 TOTAL PER CAPITA CO	2 EMISSIONS					TOTAL	PER CAPITA	CO2 EMISS	IONS 200	Gg CO2/	10(3)Hab			
	Gg Cl	02/10(3)Inhab		Growth	Rate (%)	HAITI				1	1	1	1	٦
Country	1991	1999	2000	00-91	00-99	NICARAGUA								
ARGENTINA	3.09	3.69	3.71	2.07	0.58	HONDURAS		ļ						
BARBADOS	3.42	3.92	3.78	1.13	-3.48	PARAGUAY								ł
BOLIVIA	0.85	0.92	0.85	0.11	-7.03	GUATEMALA								
BRAZIL	1.54	1.74	1,73	1.31	-0.53	BOLIVIA					[			
CHILE	2.38	3.84	3,55	4.53	-7.57	EL SALVADOR				1.				
COLOMBIA	1.41	1,31	1.30	-0.94	-0.88	PERU							1	
COSTA RICA	0.94	1.44	1.31	3.80	~8.84	COLOMBIA					1			
CUBA	2.50	2.29	2.44	-0.27	6.57	COSTA RICA				1			1	
ECUADOR	1.35	1.33	1.44	0.73	7.95	ECUADOR								
EL SALVADOR	0.60	0.91	0.90	4.67	-0.57	URUGUAY								
GRENADA	1.40	2.16	2.15	4.93	-0.28	PANAMA								
GUATEMALA	0,49	0.77	0.84	6.14	9.05	BRAZIL								
GUYANA	1.43	2.00	1.90	3.21	-4.92	GUYANA								
HAITI	0.14	0.18	0.18	3.04	0.51	DOMINICAN REPUBLIC								ł
HONDURAS	0.44	0.71	0.71	5.41	-0.19	GRENADA	<u> </u>							
JAMAICA	3.15	3.95	3.97	2.60	0.40	AL&C								
MEX/CO	3.55	3.64	3.72	0.50	2.07	CUBA								
NICARAGUA	0.53	0.70	0.71	3.15	0.10	CHILE								ł
PANAMA	1.19	1.69	1.69	3.91	-0.05	ARGENTINA								
PARAGUAY	0.48	0.79	0.83	6.29	5.24	MEXICO								
PERU	0.86	1.28	1.20	3.79	-5.81	BARBADOS								
DOMINICAN REPUBLIC	1.03	1.95	2.04	7.95	4.66	JAMAICA				1	1	1		1
SURINAME	5.06	5.24	5.23	0.36	-0.15	SURINAME	<u> </u>							
TRINIDAD AND TOBAGO	9.92	15.57	14.97	4.68	-3.84	VENEZUELA			5	1		1		
URUGUAY	1.35	1.98	1.57	1.67	-20.62	TRINIDAD AND TOBAGO	<u> </u>				<u> </u>		Jan	1
VENEZUELA	5.10	5.44	5.61	1.05	3.10	-		4	e		40	4	44	
AL&C	2.13	2.38	2.39	1.26	0.38		u 2	4	o	Ŷ	· v	14	14	10

10.15 INTENSITY OF CO	2 EMISSIONS					INT	ENSITY OF C	O2 EMISSK	ONS 2000	Gg CO2/10	)(6)US\$ 199	0	_
CO2 EMISSIONS/GDF	Ga CO2	2/10(6)US\$ 199	0	Growth	Rate (%)	BARBADOS		b I					
Country	1991	1999	2000	91-00	99-00	PERU		2					
ARGENTINA	0.65	0.65	0.67	0.18	1.73	BRAZIL		2					
BARBADOS	0.53	0.54	0,51	-0.47	-5.94	PANAMA							
BOLIVIA	1.03	1.03	0.96	-0.83	-6.77	COSTA RICA	Anare .						
BRAZIL	0.56	0.60	0.58	0.31	-3.11	ARGENTINA							
CHILE	0.98	1.15	1.02	0.46	-11.27	PARAGUAY							
COLOMBIA	1.15	1.06	1.04	-1.07	-2.02	EL SALVADOR		<u></u>					
COSTA RICA	0.51	0.67	0.62	2,25	-8.14	GUATEMALA			1				
CUBA	1.39	1.44	1.46	0.54	1.39	AL&C		105010010000000000000000000000000000000					
ECUADOR	1.12	1.16	1.26	1,28	7.84	BOLIVIA			1				
EL SALVADOR	0.60	0.76	0.75	2.53	-1.07	HAITI							
GRENADA	1.03	1.33	1.33	2.91	-0.28	MEXICO			-		1		
GUATEMALA	0.55	0.77	0.83	4.66	8.17	HONDURAS			ц.				
GUYANA	3.02	3.00	2.79	-0.89	-7.04	CHIE		L	ц,				
HAITI	0.56	0.95	0.97	6.28	1.36	001000			I,				
HONDURAS	0.65	1.03	1.01	5.07	-1.47	COLUMBIA		1	T				
JAMAICA	1.94	2.53	2.55	3.10	0.76	NICAPAGUA		1					
MEXICO	1.08	1.02	0.99	-0.93	-3.13	ECUADOR			· · · · · ·	_			
NICARAGUA	0.92	1.21	1.17	2.78	-2.52	GRENADA			T		í		
PANAMA	0.50	0.60	0.59	1.83	-0.96	CUBA			-				
PARAGUAY	0.38	0.66	0.71	6.97	6.33	DOMINICAN REPUBLIC		T	1				
PERU	0.51	0.62	0.57	1.09	-7.89	VENEZUELA		-			L		
DOMINICAN REPUBLIC	1.14	1.56	1.52	3.30	-2.03	SURINAME							
SURINAME	2.55	2.37	2.38	-0.76	0.33	JAMAICA							
TRINIDAD AND TOBAGO	2.36	3.09	2.84	2.07	-7.92	GUYANA							
URUGUAY	0.44	0.53	0.43	-0.49	-19.23	TRINIDAD AND TOBAGO							
VENEZUELA	1.92	2.30	2.34	2.21	1.56		1		4.0	4 5		+	 Ξ.
AL&C	0.84	0.87	0.85	0.11	-2.07	(	.0	).5	1.0	1.5	2.0	2.5	,

10.16 CO2 EMISSIONS/F	INAL DEMAND					CO2 E	MISSIONS/FINAL DEMAND 2000Gg CO2/10(3)Boo
	Gg	CO2/10(3)Boe	,	Growth	Rate (%)	HAITI	
Country	1991	1999	2000	91-00	99-00	PARAGUAY	
ARGENTINA	0.45	0.42	0.41	-1.21	-3.24	GUATEMALA	
BARBADOS	0.54	0.60	0.57	0.55	-4.55	HONDURAS	
BOLIVIA	0.36	0.36	0.38	0.70	4.36	NICARAGUA	
BRAZIL	0.27	0.28	0.27	0.01	-0.28	EL SALVADOR	
CHILE	0.36	0.42	0.38	0.41	-9.54	BRAZIL	
COLOMBIA	0.32	0.35	0.36	1.15	1.45	URUGUAY	
COSTA RICA	0.21	0.33	0.31	4.20	-4.99	GUYANA	
CUBA	0.36	0.42	0.40	1.38	-3.89	COSTA RICA	
ECUADOR	0.38	0.39	0.40	0.55	1.19	PANAMA	
EL SALVADOR	0.20	0.26	0.27	3.14	2.82	COLOMBIA	
GRENADA	0.48	0.49	0.49	0.32	0,25	PERU	
GUATEMALA	0.14	0.19	0.21	4.51	11.00	CHILE	
GUYANA	0.26	0.31	0.30	1.74	-3.57	BOLIVIA	
HAITI	0.11	0.12	0.12	1.29	2.72	ALAC	2020/00/2020/00/00/00/00/00/00/00/00/00/
HONDURAS	0.13	0.23	0.23	6.43	-1.58	ECUADOR	
JAMAłCA	0.49	0.62	0.62	2.60	-0.66	TRINIDAD AND TOBAGO	
MEXICO	0.49	0.51	0.53	0.82	3.79	CUBA	
NICARAGUA	0.18	0.23	0.23	3.03	1.49	ARGENTINA	
PANAMA	0.31	0.35	0.35	1.30	0.92	DOMINICAN REPUBLIC	
PARAGUAY	0.10	0.15	0.16	5.51	4,35	GRENADA	
PERU	0.30	0.38	0.37	2.58	-2.68	SURINAME	
DOMINICAN REPUBLIC	0.39	0.44	0.43	1.09	-2.39	VENEZUELA	
SURINAME	0.52	0.50	0.50	-0.32	-0.17	MEXICO	
TRINIDAD AND TOBAGO	0.44	0.40	0.40	-1.01	-1.17	BARBADOS	
URUGUAY	0.29	0.34	0.29	0.14	-14.63	JAMAICA	
VENEZUELA	0.48	0.51	0.51	0.58	-0.16		
AL&C	0.37	0.38	0.38	0.38	0.18		0 0.1 0.2 0.3 0.4 0.0 0.6 0

10.17 CO2 EMISSIONS IN P	OWER SECTOR /	<b>ELECTRIC PO</b>	WER GENERA	ATION		CO2 EMISSI	ONS IN	POWER	SECTOR	I / ELEC	TRIC P	OWER G	ENERA	TION 2	000 Gg (	CO2/G	٧h		
	G	g CO2/GWh		GROWTH	RATE (%)	PARAGUAY	1						1						
Country	1991	1999	2000	00-91	00-99	COSTA RICA	<b>b</b>						]						
ARGENTINA	0.37	0.32	0.27	-3.49	-17.27	URUGUAY	F												
BARBADOS	0.77	0.68	0.66	-1.74	-3.12	BRAZIL	-	1											
BOLIVIA	0.27	0.29	0.28	0.23	-4.02	COLOMBIA													
BRAZIL	0.04	0.07	0.07	7.18	5,40	ECUADOR	1	<u>l</u>											
CHILE	0.29	0.48	0.35	2.02	-26.00	VENEZUELA	$\vdash$	1	1	1									
COLOMBIA	0.18	0.11	0.15	-2.08	35.83	AL&C	bounder		Loyal Epicycol Mars	1033									
COSTA RICA	0.05	0.05	0.03	-3.72	-28.86	HONDURAS													
CUBA	0.79	0.69	0.61	-2.80	-10.92	ARGENTINA	<u> </u>												
ECUADOR	0.24	0.24	0.22	-0.89	-8.62	PANAMA	1												
EL SALVADOR	0.32	0.32	0.34	0.72	9.12	BOLIVIA	1					1	1						
GRENADA	0.72	0.64	0.65	-1.17	0.59	PERU	1			· · · · · · · · · ·									
GUATEMALA	0.26	0,34	0.40	5.04	19.33	HAITE	<u> </u>												
GUYANA	1.35	0.75	0.70	-7.07	-6.87	EL SALVADOR	]				+								
HAITI	0.43	0.28	0.33	-2.95	19.69	CHILE													
HONDURAS	0.00	0.23	0.26	88.20	15.03	GUATEMALA		_											
JAMAICA	0.88	0.80	0.80	-1.01	-0.17	MEKICO					-	1						1	
MEXICO	0.57	0.54	0.56	-0.14	3.14	SURINAME		 											
NICARAGUA	0.41	0.60	0.60	4.19	0.50	NICARAGUA						-		1					
PANAMA	0.25	0.26	0.27	1.07	4.27	CUBA		1					- 1	1					
PARAGUAY	0.00	0.00	0.00	1.27	-13.76	TRINIDAD AND TOBAGO	_	1											
PERU	0.14	0.34	0.29	.8.13	-14.97	DOMINICAN REPUBLIC													
DOMINICAN REPUBLIC	0.84	0.80	0.63	-3.18	-21.85	GRENADA	_	1											
SURINAME	0.59	0.58	0.58	-0.17	-0.30	BARBADOS					1								
TRINIDAD AND TOBAGO	0.67	0.64	0.62	-0.85	-2.74	GUYANA					1						L		
URUGUAY	0.09	0.18	0.06	-5.51	-69.51	JAMAICA					-							≠	
VENEZUELA	0.22	0.22	0.22	0.19	2.86		0.0	0.1	0.2		0.3	0.4	0.	.5	0.6	0	.7	8.0	C
AL&C	0.24	0.25	0.25	0.43	-2.31														

	GaC	O2/10(3)Boe	1	GROWTH	RATE (%)	GRENADA		
Country	1991	1999	2000	00-91	00-99	VENEZUELA		
ARGENTINA	0.43	0.43	0.43	-0.06	-0.09	MEXICO		
BARBADOS	0.43	0.43	0.43	-0.02	-0.05	COLOMBIA		
BOLIVIA	0.43	0.43	0.43	-0.05	-0.17	BARBADOS		
BRAZIL	0.43	0.43	0.43	-0.01	0.10	JAMAICA		
CHILE	0.43	0.43	0.43	0.05	0.07	ARGENTINA		
COLOMBIA	0.43	0.43	0.43	0.03	0.26	BOLIVIA		
COSTA RICA	0.43	0.43	0.43	-0.04	-0.17	DOMINICAN REPUBLIC		
CUBA	0.43	0.44	0.43	0.00	-0.18	SURINAME		
ECUADOR	0.43	0.43	0.43	0.06	0.05	GUYANA		
EL SALVADOR	0.44	0.44	0.44	-0.01	0.05	ALAC		
GRENADA	0.42	0.43	0.43	0.04	0.03	TRINIDAD AND TOBAGO		
GUATEMALA	0.44	0.43	0.43	-0.06	-0.03	PANAMA		
GUYANA	0.43	0.43	0.43	-0.03	-0.06	GUATEMALA		
HAITI	0.43	0.43	0.43	0.00	-0.04	COSTA RICA		
HONDURAS	0.44	0.44	0.44	-0.03	~0.13	CHILE		
JAMAICA	0.43	0.43	0.43	-0.03	-0.07	BRAZIL		
MEXICO	0.43	0.43	0.43	-0.01	-0.06	CUBA		
NICARAGUA	0.44	0.44	0.44	0.02	-0.04	ECUADOR		
PANAMA	0.43	0.43	0.43	0.10	1.24	HAITI		
PARAGUAY	0.43	0.44	0.44	0.15	0.01	HONDURAS	s	
PERU	0.43	0.44	0,44	0.08	0.14	EL SALVADOR		
DOMINICAN REPUBLIC	0.43	0.43	0.43	-0.01	-0.21	PERU		
SURINAME	0.43	0.43	0.43	0.00	0.00	NICARAGUA		
TRINIDAD AND TOBAGO	0.43	0.43	0.43	0.08	0.21	URUGUAY		
URUGUAY	0.43	0.44	0.44	0.08	0.09	PARAGUAY		
VENEZUELA	0.43	0.43	0.43	-0.02	0.08	ń.	1418 0.42 0.422 0.424 0.426 0.428 0.43 0.432 0.434 0.43	36
AL&C	0.43	0.43	0.43	0.00	0.02	0.		

10.19 DURABILITY OF OIL RESERVES						DURABILITY OF OIL RESERVES 2000 YEARS								
	1991	1999	2000	91-00	99-00	HONDURAS			1					
Country		YEARS		GROWTH F	RATE (%)	HAIT			1				1	
ARGENTINA	9.4	9,4	10.9	1.7	15.6	URUGUAY								
BARBADOS	7.3	3.4	4.3	-5.7	26.3	GUYANA				1	l.			
BOLIVIA	12.7	33.5	38.4	13.1	14.8	COSTA RICA		ŀ			1			
BRAZIL	21.2	20.3	18.3	-1.6	-9.7	DOMINICAN REPUBLIC		1						
CHILE	47.5	16.4	14.6	-12.3	-11.1	GRENADA								
COLOMBIA	12.2	7.7	7.9	-4.7	2.4	PARAGUAY			1				1	
COSTA RICA						PANAMA								
CUBA	19.3	3.9	3.1	-18.5	-20.7	NICARAGUA					1			
ECUADOR	13.9	32.5	31.2	9.4	-4.0	EL SALVADOR		1						
EL SALVADOR						JAMAICA								
GRENADA					1	CUBA							1	
GUATEMALA	40.3	61.7	110.9	11.9	79.8	BARBADOS					1			
GUYANA						COLOMBIA					1			
HAITI						PERU		1						
HONDURAS						ARGENTINA			1					
JAMAICA						SURINAME			1					
MEXICO	52.1	44.5	42.5	-2.2	-4.5	CHILE							1	
NICARAGUA						TRINIDAD AND TODAGO								
PANAMA						ORAZIL	· · · ·							
PARAGUAY						ECUADOR								
PERU	9.1	8.3	9.3	0.2	12.0	BOLIVIA		·[]				-		
DOMINICAN REPUBLIC						AL&C								
SURINAME	16,6	13.3	13.2	-2.5	-0.7	MEXICO		1	Τ'		_			
TRINIDAD AND TOBAGO	9.2	15.0	16.4	6.6	8.8	VENEZUELA		1	1					
URUGUAY						GUATEMALA		·	T	·····		`		
VENEZUELA	71.8	71.4	70.3	-0.2	-1.6	(	)	20 /	40	60	80	100	120	
AL&C	47.3	42.4	41.8	-1.4	-1.4									

10.20 DURABILITY OF N	DURABILITY OF NATURAL GAS RESERVES 2000 YEARS															
	1991	1999	2000	91-00	99-00	CURANA	r	1	<u></u>	_			r			-
Country		YEARS		GROWTH	RATE (%)	CURA	1				1					
ARGENTINA	24.1	16.7	15.3	-4.9	-8.1	LIQUON	-					1				1
BARBADOS	6.1	4.3	5.3	-1.5	23.7	OPENADA	1		1					1		
BOLIVIA	17.9	103.6	118.7	23.4	14.6	SURINAME										
BRAZIL	30.0	21.1	19.3	-4.8	-8.4	DOMINICAN REPUBLIC	1									
CHILE	67.2	20.0	9.4	-19.6	-53.0	EL SALVADOR										
COLOMBIA	19.7	25.7	25.2	2.8	-1.9	PARAGUAY				1	1			1		
COSTA RICA						PANAMA	-						1			
CUBA						NICARAGUA	1									
ECUADOR	23.4	29.7	27.8	1.9	-6.4	COSTA RICA	1									
EL SALVADOR						JAMAICA										
GRENADA						HONDURAS										
GUATEMALA	75.0	5.9	20.4	-13.5	246.9	HAITI		1								
GUYANA						BARBADOS	6									
HAITI						CHILE	<u> </u>						1			
HONDURAS						MEXICO										
JAMAICA						ARGENTINA										
MEXICO	42.7	14.1	13.9	-11.7	-1,6	BRAZIL		ł								
NICARAGUA						GUATEMALA	·	5							:	
PANAMA						COLOMBIA							[			
PARAGUAY						ECUADOR		ļ								
PERU	197.3	155.3	147.5	-3.2	-5.0	AL&C			a di se di s			1	1			
DOMINICAN REPUBLIC						TRINIDAD AND TOBAGO	1		÷		1		- · 1	1		
SURINAME						VENEZUELA		L	1							
TRINIDAD AND TOBAGO	33.3	45.7	42.8	2.8	-6.3	BOLIVIA										
URUGUAY						PERU								····		11
VENEZUELA	123.6	106.7	106.0	-1.7	-0.7		0 2	0	40	60	80	100	12	0 141	٥	160
AL&C	55.5	41.3	40.4	-3.5	-2,2	LAVE					50					

				Growth	n Rate (%)	SHARE OF SELF-GENERATION IN TOTAL GENERATION 2000
10.21 SHARE OF SELF-0	GENERATION IN	TOTAL GENER	ATION (%)			
Countries	1991	1999	2000	91-00	99-00	ECUADOR
ARGENTINA	7.1	9.3	8.5	2.12	-8.75	HAM
BARBADOS	4 1	4.7	4.6	1.20	-2.73	MEXICO
BOLIVIA	10.4	4.8	4.8	-8.29	-1.35	GRENADA
BRAZIL	5.3	7.2	7.3	3.56	0.92	HONDURAS
COLOMBIA	6.0	4.4	4.5	-3.05	1.35	
COSTA RICA	1.5	12.4	13.4	27.57	7.85	
CUBA	11.5	8.7	8.6	-3.12	-1.04	
CHILE	24.6	5.8	5.3	-15.71	-9.26	
ECUADOR						PANAMA
EL SALVADOR	1.8	26.4	9.0	19.27	-66.00	NICARAGUA
GRENADA						COLOMBIA
GUATEMALA	0.4	0.0	2.1	19.96		BARBADOS
GUYANA	53.1	48.8	49.6	-0.75	1.61	BOLIVIA
HAITI	7.1	0.0	0.0			CHILE
HONDURAS	0.0	0.0	0.0		74.85	
JAMAICA	3.3	49.9	49.8	35.43	-0.06	
MEXICO						
NICARAGUA	5.3	3.6	4.2	-2.64	15.99	
PANAMA	3.4	3.8	3.6	0.43	-7.21	EL SALVADOR
PARAGUAY	0.1	0.1	0.1	1.16	-2.89	COSTA RICA
PERU	27.6	8.8	8.0	-12.85	-9.41	
DOMINICAN REP.	37.0	30.6	30.6	-2.11	0.00	GUYANA
SURINAME	91.4	91.0	91.0	-0.06	-0.10	
TRINIDAD & TOBAGO	3.0	1.0	0.8	-13.41	-15.22	SURINAME
URUGUAY	1.3	1.0	0.6	-8.88	-45.82	0 10 20 30 40 50 60 70 80 90
VENEZUELA	4.8	2.2	2.2	-8.29	0.00	
LA&C	7.1	7.0	6.9	-0.37	-1.60	1