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FINAL REPORT

ENERGY PROFILE: LESOTHO

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1. INTRODUCTION

This report is one of a series summarizing the energy situation in sub-equatorial Africa. The purpose of the series is to analyze the energy position for those organizations trading or intending to trade with those countries, or for organizations entering into joint ventures with those countries. It is also the intention to use the individual reports to determine the possibility for energy interchange in the region and the potential for energy supply and demand in the region.

Use has been made of a number of sources for the statistical information and the various sources do not always agree because of differences in definitions used for the various components of energy and national accounts. Therefore a perfect match in the resultant data should not necessarily be expected.

The statistical database for Lesotho is more limited than that for many other countries in the region because it is not considered significant enough for inclusion in the International Energy Agency energy balances for Africa. In many other statistical publications it is lumped together with the South African Customs Union member countries. However, substantial use has been made of World Bank information and permission to quote from their reports and to reproduce maps is gratefully acknowledged.

This series of reports has been solicited by the National Energy Council and their technical and financial assistance with the preparation of this report is gratefully acknowledged. However, the data presentation and comments made in this report are due to the authors and do not necessarily reflect the opinions of the National Energy Council.

2. COUNTRY PROFILE

2.1 Introduction[2,5]

The Kingdom of Lesotho (Basotholand) is a mountainous country situated in Southern Africa and totally surrounded by the Republic of South Africa (RSA).

Lesotho is one of the smallest countries in Africa, covering only 30 350 square kilometers.

The Basotho nation is a social, cultural and political product of several chiefdoms and fragments of nationalities which were brought together by King Moshoeshoe I of the Bakoena in the 1830's. The historical environment in which he rose to power was the internecine wars (Lifaqane) of the early nineteenth century in Southern Africa. Moshoeshoe I pursued state-building through a strategy of peace guided by advice he had received as a young man from a sage.

The British proclaimed Basotholand a Protectorate in 1868 and ushered a colonial era into the country. The introduction of commodity production and the migrant labour system integrated Lesotho into a capitalist system which contrasts with the Basothos' traditional economic, social and political systems.

In 1930 a National Council was established as an advisory political institution. In 1960 the Advisory Council became a Legislative Council and became Parliament at independence in 1966. A constitution along the lines of the Westminster Model was adopted under which the Basotho King, Moshoeshoe II, was given very limited powers and Chief Leabua Jonathan of the Basotho National Party (BNP) was Prime Minister. A 60-member National Assembly, elected on the basis of universal adult suffrage, and a 32-member senate including the 22 principal chiefs were provided for. The 'Westminster Model' came to an abrupt end in 1970. The preliminary results of elections held in that year indicated victory for the opposition Basotho Congress Party (BCP) and Chief Jonathan declared a state of emergency and suspended the constitution. Government was by decree until 1975 when an interim National Assembly of 93 nominated members, from a number of political parties, was introduced.

Chief Jonathan made some initial progress in broadening the base of government. After 1976 the Cabinet included members of the internal faction of the BCP which had split from the faction of the BCP in exile. Chief Jonathan introduced an Amnesty Act in 1980 in an attempt at a political settlement with the exiled faction of the BCP with little success. During this period a number of assassinations and sporadic bombings took place, which were mostly attributed to the Lesotho Liberation Army (LLA). The LLA appeared to enjoy support from the exiled BCP faction as well as the RSA authorities. The Lesotho Paramilitary Force held the LLA in check from 1983.

The failure to secure a political settlement with the BCP saw Chief Jonathan change his strategy to that of consolidating BNP power, and BCP elements were forced out of the Cabinet. He then fulfilled a promise to hold elections and the date for the poll was set for September 1985. The opposition parties refused to nominate candidates and launched an unsuccessful legal challenge to election regulations. A new BNP Cabinet was sworn into office in September. Relations with the RSA became severely strained and led to the closure of the border in the early part of 1986. These conditions led to the launch of a successful military coup by the Lesotho Paramilitary Force Commander, Major General Justin Lekhanya, on January 20, 1986.

Full executive powers were restored to King Moshoeshoe II, but effective power lay with a six-member Military Council chaired by General Lekhanya. Initially good progress was made; however, splits between the King and the General and within the Military Council soon opened up, especially regarding relations with the RSA. This came to a head in February 1990 and the King was stripped of his powers and went into exile in London. On November 6 after having refused to return until the Military Council was replaced by an interim administration, the King was formally deposed.

The military government, largely at the instigation of the General, has favoured the creation of a new democratic structure based on development councils. General Lekhanya has indicated that a democratic civilian administration could be in place by June 1992.

Lesotho's external relations have been dominated by the country's economic dependence on the RSA. Net factor income from abroad, mostly income from migrant labour in the RSA, still accounts for 40-45% of GNP. In 1986 the two countries signed a treaty governing the sale of water from the Lesotho Highlands Water Project whose completion cost will be more than five times Lesotho's GDP and whose viability depends on continuing strong ties between the two countries.

Lesotho is an active participant in SADCC, within which it has taken responsibility for regional co-ordination in the areas of soil and water resources and tourism. In March 1982 Lesotho signed the treaty establishing the Preferential Trade Area for East and Southern Africa (PTA). The PTA recognises the right of Lesotho to continue membership of the South African Customs Union.

2.2 Demography

Lesotho's population was estimated to be 1,7 million[(2)] in 1989. Lesotho has a land area of 30 350 km[(2)], giving a population density of 56 per km^2. Figure 1 shows the population on a yearly basis over the period 1960 to 1989. The average yearly population growth rate was 2% over the period 1960 to 1969, 2,3% over the period 1970 to 1979 and 2,6% over the period 1980 to 1989.

The crude birth rate was 41 per 1000, and the crude death rate was 13 per 1000, according to World Bank data for 1988. Forty three percent of the population is under the age of 15.

The vast majority of the population is Basotho. There are about 3000 Europeans and several hundred Asians. Over 85% of the population live in the rural areas[(5)].

It is estimated that 50% of the able-bodied men are working away from their homes as migrants[(5)]. Thus the bulk of the rural population is composed of women, the aged and children. As a result, about 70% of the agricultural development work in rural areas is undertaken by women.

It is estimated that 8% of the population is temporarily absent from Lesotho, most of whom are employed in the neighbouring RSA.

2.3 Economy

Lesotho, one of the smallest countries in Africa, is located entirely within the borders of the RSA. Most of the 30 350 km^2 of land is mountainous, and only 13% of the land is capable of cultivation[(2)]. It has few natural resources other than diamonds and the hydro-electric potential of its rivers, and it is a member of Africa's 27 least developed countries (LDC's). The economic predicament of Lesotho is aggravated by its landlocked geographical situation and its excessive economic dependence on the RSA. Lesotho is a member of the Southern African Customs Union (SACU).

The main sources of national income are remittances by migrants working in the RSA mines, revenue from SACU, and the construction and services sectors which have been encouraged by injections of foreign aid. The economy is being

transformed by the Lesotho Highlands Water Project, the construction of the necessary infrastructure having begun in 1988.

In 1989 Lesotho had an estimated GDP of 1099,7 million Lesotho Maloti (LSM), or 420,4 million US$, and a GNP of LSM 2027,4 million[2,6]. As shown in Figure 2, the GDP's contribution to GNP has decreased from 81% in 1967 to just 54% in 1989. The difference between GDP and GNP is largely made up of remittances from migrant workers in the RSA. Remittances of mine wages from workers in the RSA have increased from 20% of GNP in 1970 to 54% of GNP in 1984[5].

GDP has shown an exponential growth over the period 1960 to 1989, as shown in Figure 3. Real GDP has shown an overall upward trend over the same period, although it declined significantly in 1975. The lack of growth of real GDP from 1980 to 1983 was due to a period of drought and the closure of the Letseng diamond mine. The average annual growth rate for this period was -1%. The emergence from the drought in 1984 saw GDP increase by 8,2% over the previous year. The average yearly real GDP growth rate over the period 1984 to 1987 was 4,1%, although the GDP for 1987 was only 1% higher than that of 1986.

GDP per capita over the period 1960 to 1989 in current and real terms is shown in Figure 4. GDP per capita in real terms displayed an upward trend until 1980, after which the effect of the drought and closure of the diamond mine caused a decline. This decline was halted after the end of the drought in 1984 and subsequently GDP has barely managed to keep pace with population growth.

The sectorial contribution to GDP is shown in Figure 5. Agriculture has declined as a percentage of GDP from 32,9% in 1967 to 15% in 1989. Conversely, the manufacturing sector's share has increased from 3,2% to 11,2%. This is reflected in Figure 6 which shows the ratio of the contribution of agriculture and manufacture to GDP. The rise in the share of construction in total GDP from 8,9% in 1986 to 13,9% in 1989 can be attributed to the construction of the infrastructure required for the Lesotho Highlands Water Project. The sharp decline in the mining sector in 1983 followed the closing of the Letseng diamond mine.

3. ENERGY

3.1 Introduction

Lesotho has few natural resources and thus relies on South Africa exclusively to meet most of its energy requirements. Imports include refined petroleum products, electricity, coal, and fuelwood. Lesotho's options for reducing its dependence on the RSA for energy are somewhat limited, inter-fuel substitution possibilities are almost nonexistent, and the energy resource endowment is relatively poor(1).

The Lesotho Highlands Water Project will tap some of Lesotho's hydro potential and reduce the dependence on the RSA for electricity, as well as earning royalties for water transferred to the RSA.

3.2 Energy Institutions

The Ministry of Water, Energy and Mines was established by the Government in 1978. An Energy Planning Unit (EPU) was established within the Ministry of Water, Energy and Mines and is responsible for preparing and implementing an appropriate energy policy and a programme for the production, storage, distribution and use of all forms of energy including electricity. The EPU is inadequately staffed and lacks technical support.

The Lesotho Electricity Corporation (LEC) was established under the Electricity Act of 1 April, 1969 and is a parastatal body. It has received substantial technical assistance from the Electricity Board of Ireland. The LEC was seen to be performing its transmission and distribution functions efficiently and effectively by the World Bank(1). The LEC faces large challenges with the development of the Lesotho Highlands Water Project and will require additional expertise and manpower.

A Temporary Provision of the Forest Act of 1978 implemented the Woodlot Project under the direct supervision of the Ministry of Agriculture and Marketing. One of its major objectives was to establish a Forest Service, but by 1984 this had not been realized and the Government of Lesotho continued to rely on the management of the Woodlot Project for general forestry administration.

Five international oil majors handle the supply, storage, domestic distribution, and retailing of petroleum products. An interstate oil committee consisting of representatives from the RSA, Lesotho, Botswana and Swaziland was created in 1979 to monitor the procurement, allocation, pricing and conservation of petroleum.

4. ENERGY RESOURCES

4.1 Fuelwood

Most of Lesotho is bare and mountainous with temperatures fluctuating between 30°C in summer and below 0°C in winter, which is not favorable for tree growth. Thus fuelwood is in short supply and Lesotho relies on the RSA for most of its requirements. There is potential for reforestation and progress has been made through a Woodlot Project but has been slow.

4.2 Petroleum

Lesotho has no proven oil reserves and imports all of its petroleum product requirements. Exploration work has been undertaken in the past without success. The World Bank(1) reviewed available exploration data in 1983 and concluded that the geological structures of Lesotho is such that it is unsuitable for oil or gas. The rough terrain would make the necessary seismic work and drilling difficult and expensive. The costs would be further inflated due to Lesotho's isolated position.

The Government of Lesotho is none the less still keen to promote petroleum exploration and has approached several foreign governments for technical assistance in this regard.

4.3 Coal

Lesotho imports all its coal requirements, having no proven reserves of its own. A survey carried out by UNDP in the early 1980's ruled out the possibilities of discovering economically viable deposits of coal in Lesotho, although narrow seams of coal have been located.

These thin seams are essentially outcrops of the Beaufort and Stromberg series originating in the RSA. Thin and unpersistant views of coal are found over a belt 150 km long and 35 km wide in the Mohale's Hoek, Mafeteng, Qacha's Nek, Maseru and Leribe districts. The thickest vein is estimated to be 15 cm, with coal quality varying from poor to good grade bituminous. The possibility of economic exploitation of these deposits is remote.

4.4 Hydro-electricity

Lesotho's largest energy resource is hydro-electricity which is largely untapped. The relatively large hydro potential is based principally on the Senqu (Orange) and Senqunyane Rivers. The World Bank[1] gives the technically exploitable hydro-electric potential as being approximately 2 000 GWh per year, with an installed capacity of 450 MW. The cost of exploiting this potential is high due to the lack of natural heads and the erratic seasonal flow patterns and Lesotho will rely on the RSA buying water from any project undertaken.

The Lesotho Highlands Water Project, identified in the early 1950's, is presently under construction. It is a joint venture with the RSA and includes the construction of dams, reservoirs, tunnels, and hydro-power stations, as well as the export of large quantities of water to the RSA. Phase 1a, costed at $1,5 billion, is due for completion in 1995/96[2].

This first phase will see the construction of two dams and reservoirs, a 75 MW hydro-power station, 82 km of tunnels and a complete supporting infrastructure of roads, housing and communications[3]. This forms the beginning of a thirty-year development project which will ultimately deliver 70 m^3 of water per second to the RSA from five main storage reservoirs and have an installed capacity in excess of 200 MW. In addition to an improved infrastructure and domestic power supply, Lesotho will also receive more than 50 years' royalty fees in return for the water delivered to the RSA.

Potential also exists for mini- and micro-hydro schemes in areas remote from the grid, with installed capacities ranging from 30 kW to 7 MW. Mini-hydro schemes are presently under construction at Mantsenyane, Semonkong, Tlokoeng and Tsoelike.

4.5 Other Energy Sources

4.5.1 Solar and Wind:

Large seasonal variations in climatic conditions make the harnessing of solar and wind power difficult. A number of telecommunication stations and police outposts have been equipped with photovoltaic power kits. A number of windmills for pumping water from boreholes were installed by the Southern Cross but are now mostly inoperative due to a lack of maintenance.

Solar water heater and crop dryers have been developed to the prototype stage using locally available materials.

It is unlikely that any large-scale exploitation of solar or wind power is possible in the foreseeable future.

4.5.2 Animal Residues:

Dung in the form of dried chunks or briquettes is a widely used fuel in rural areas and is estimated to supply more than 40% of rural energy consumption[1]. The preferred source is cow dung which is obtained from livestock kraals. Households that do not own cattle collect dung from the fields in the dry winter for use in the summer.

4.5.3 Biogas:

The Government of Lesotho has recognized the potential of biogas production using dung and is supporting a pilot project on Biogas Production Systems. A number of digesters have been constructed or are under construction. Initial results are promising and indicate that underground biogas generators can produce year-round despite the frost conditions in winter. However, the application of this energy source is restricted to areas where animals are stabled and where large-scale gathering of animal waste from grazing ground is not required.

5. ENERGY SUPPLY AND DEMAND

5.1 General

Lesotho's total final consumption of commercial energy was 123 100 TOE in 1980, of which coal accounted for 37,2%, oil 56,6% and electricity 6,2%. All of these commodities are imported putting a large strain on the economy. Energy imports accounted for, in economic terms, 7,7% of total imports and 11,7% of total exchange earnings in 1981 and 7,5% of total imports and 10% of GDP in 1986.

Total final consumption of traditional fuel in 1980 amounted to 371 000 TOE[6]. This represents 75% of the total final consumption of energy (494 100 TOE). Woodfuels supply 46,6% of energy consumption and other traditional fuels 28,4%. The urban domestic sector relies on woodfuels for 15,8% of its energy needs and the rural domestic sector for 58,8%. It was estimated by the World Bank[1] that 9 700 TOE of woodfuel was imported from the RSA in 1981 at a cost of LSM 0,5 million (US$ 0,58 million).

Figure 7 shows the breakdown of total final consumption of energy for 1980. Commercial energy consumption at 0,091 TOE per capita in 1980 was one of the lowest in the world.

5.2 Fuelwood and other traditional energy

Consumption of fuelwood and other traditional energy makes up about 75% of the total energy demand. Traditional fuels for the majority of the rural population are derived from local vegetation and agricultural residues and is mostly collected by women. The country has been almost treeless for a number of decades due to its mountainous terrain and the result of overgrazing and erosion. Thus dry-cut fuelwood has to be imported from the RSA. Lesotho already has fuelwood shortages with full supply not guaranteed[6]. Collection of enough biomass for cooking and heating has become an increasingly difficult and time-consuming activity[5].

Almost 35 000 tons of fuelwood are imported from the RSA each year for urban requirements[1]. The main importers sell it wholesale to a network of 'merchants'

in the urban centres. Rural supplies are obtained from woody shrubs or brushwood known as Patsi.

Dung supplies more than 40% of the energy requirements of the rural population[1]. Dung is obtained from livestock kraals by those who own animals and from the fields by those that do not. Households which have sufficient supplies of, and rely exclusively on dung as fuel consume about 1,35 tons a year.

Crop residues in the form of dried stalks from maize, wheat and other crops are used for a short period after harvesting to supplement Patsi and dung as a fuel.

5.3 Petroleum

Lesotho imports all its petroleum requirements in their refined state through the RSA under arrangements covered by the South African Customs Union agreement.

Total final consumption of petroleum products was 69 700 TOE in 1980, 62 300 TOE in 1981[1] and 100 000 TOE in 1989[2]. As Lesotho has a storage capacity equivalent to only six days' supply of petroleum, it can be assumed that approximately all imports in a year are consumed in that year. Figure 8 shows imports of petroleum products during the period 1977-1986. Over the period 1979-1982 petroleum imports increased at an average yearly rate of 9,8%, decreasing to 4,6% during the period 1983-1986. The slow-down in imports can be partially attributed to the closure of the diamond mine and the effects of the drought. A large proportion of petroleum imports are in the form of paraffin, with the average for the period 1977-1986 being 27,4%. This is relatively much higher than other SADCC countries and is a result of the lack of indigenous fuelwood and the substitution of paraffin for cooking, lighting and heating.

Figure 9 shows petrol and diesel as a percentage of total imports for the period 1977-1986. Petrol and diesel accounted for 69,4% of petroleum imports over this period.

Table 5.1 shows the sectorial consumption of diesel and petrol. The Lesotho Highlands Water Project is expected to increase diesel consumption of the industrial sector.

Table 5.1 Sectorial Consumption of Diesel and Petrol[1] as a Percentage of Total

Sector	1979		1982	
	Petrol	Diesel	Petrol	Diesel
Retail	79,9	24,9	80,4	37,6
Commercial	14,1	42,9	14,6	26,8
Industrial	2,7	25,6	2,2	29,5
Agriculture	3,3	6,6	2,8	6,1
TOTAL	100	100	100	100

5.4 Coal[1]

Lesotho imports all its coal requirements from South Africa. Coal imports and prices are shown in Table 5.2. Two major importers, Co-op Lesotho Ltd and Kuo M.D. Thomas, supply coal for six months during the winter to Government Departments (15%), hospitals (6%), the commercial sector (76%) and local industries (3%). The Lesotho paramilitary force imports two truck loads a month for its own use. Households get their supplies from commercial traders and some small importers.

Table 5.2 Coal Imports[1,2,9]

	1975	1978	1980	1981	1989
Quantity (000's tons)	56,3	58,8	67,4	72,3	73,5
Import cost (LSM/ton)	5,3	7,7	10,1	--	--

5.5 Electricity

The Lesotho Energy Commission (LEC) imports more than 95% of Lesotho's electricity needs from ESKOM (RSA)[5]. Purchases are made via four intake points: Maseru, Maputsoe, Hololo, and Peka. More than 90% of imports are made through the Maseru connection.

In 1989 Lesotho had an installed capacity of 2,6 MW, most of which was hydro. In the same year the connections with ESKOM had a capacity of 44,2 MW, with the Maseru connection alone having a capacity of 39,6 MW[7]. Maximum demand increased from 1,2 MW in 1970 to 27,9 MW in 1983[1].

The total number of LEC customers was 8 856 in 1989, an increase of 3,3% over 1988. Of these, 6 647 were domestic customers. Electricity sales have increased from 7,8 GWh in 1970 to 152,7 GWh in 1989. The 1989 figure represents a 12,7% increase over 1988. Figure 10 shows the sectorial sale of electricity as a percentage of total sales. Domestic and industrial sales have been increasing on a percentage basis, while general purpose and commercial sales have been decreasing.

6. PRICING AND MARKETING[1]

6.1 Oil Products

An Inter-State Oil Committee created in 1979 monitors the procurement, allocation, pricing and conservation of petroleum for the BLS (Botswana, Lesotho and Swaziland) countries. The Committee meets every three months to review and monitor the developments in petroleum supplies and prices. If shortages should arise, South Africa informs the Committee of new allocations and prices and the Committee has little say on the matter.

The petroleum market is shared among five major oil companies: BP, Caltex, Mobil, Shell and Total. The main storage facilities at Maseru can handle 1,269 m^3 which was equivalent to approximately six days' demand in 1983. This has lead to shortages in the past and makes Lesotho vulnerable to delays in, or suspension of, imports.

Petroleum prices are equalised at the six largest towns. Prices elsewhere are based on the distances from these towns. The calculation of the landed cost at Maseru is shown in Table 6.1.

Table 6.1 Petroleum Pricing Formulae[1]

Pricing Components:	
(1)	FOB: based on BP, Shell, Mobil, and Caltex posted prices at Singapore
(2)	Freight
(3)	Insurance: 0,1009% of FOB plus freight (1+2)
(4)	c.i.f.: 1+2+3
(5)	Ocean leakage: 1,8% of FOB (1)
(6)	Landing/wharfage: 1,8% of FOB (1)
(7)	Coastal storage: LSM 0,004/litre
(8)	Railage: Durban/Maseru LSM 0,03-0,05/litre
(9)	Import parity price/Maseru: 4+5+6+7+8
(10)	Margin @ 12% of import parity (9)
(11)	Levy LSM: 0,03-0,10/litre
(12)	Rounding
(13)	Basic price: 9+10+11+12
(14)	Duty
(15)	Depot storage/handling
(16)	Road delivery
(17)	Price ex-Maseru depot: 13+14+15+16
(18)	Dealer margin
(19)	Road delivery to sale zones
(20)	Retail price: 17+18+19

The retailers' and marketers' margins are set by the oil companies and are equal to those of the RSA. In determining prices, the oil companies consult closely with the Department of Mineral and Energy Affairs in the RSA.

6.2 Electricity

Lesotho imports almost all of its electricity from ESKOM in the RSA under the terms of a Memorandum of Agreement signed between the Government of Lesotho and ESKOM in 1967. The Agreement has been subject to several amendments which affect the purchase price, determined by the following formulae as at January 1983:

(a) Unit charge LSM 0,01209/kWh.
(b) Demand charge: LSM7 per kW (maximum number of kW supplied in any 60-minute period over a month).
(c) Service charge of LSM 20-25 per month.
(d) Discount of ten percent, which is applied to the total unit and service charges.
(e) Surcharge (47,5%).

The Lesotho Electricity Commission (LEC) is responsible for the distribution of electricity in Lesotho. The average purchase price paid to ESKOM by the LEC was 0,033 LSM/kWh in 1982/1983.

The LEC has six electricity tariff categories itemised in Annexure 1. The tariff structure within the domestic and general purpose categories is based on a decreasing unit charge for increasing electricity usage and does not encourage conservation of electric energy use. The tariffs are based on the cost of imported electricity. Thus the development of indigenous resources and the maintenance and upgrading of existing transmission systems require a revision of the tariffs to provide sufficient funds.

6.3 Fuelwood

The price of dry-cut wood imported from the RSA was approximately LSM 20/ton excluding a LSM 14/ton railage charge in 1983. Wholesale merchants distribute the wood through a network of 'wood and coal' retailers in the urban centres and in towns along the main trunk roads. In May 1983 the retail price in Maseru was LSM 2 per 30 kg. Prices vary from district to district, depending on the haulage distance from Maseru or other import points. Generally, inland prices are 30-50% higher than Maseru.

6.4 Coal

The c.i.f. price for coal in Maseru in 1984 was LSM 27,75/ton including a LSM14/ton transport cost. The high cost of transport from the coal pits in the RSA together with the limited rail capacity have constrained demand growth.

In 1984 the retail cost of coal in Maseru was LSM 4,60 per 70 kg bag undelivered and LSM 4,80 delivered.

7. DISCUSSION

Lesotho is a land-locked country whose economy is mainly dependent on the RSA and is a member of the South African Customs Union. It relies heavily on remittances from migrant workers.

The lack of natural resources, besides hydro potential and water, makes Lesotho dependent on the RSA for most of its energy requirements. Energy imports absorb much of the foreign exchange earnings and put a strain on the economy. Lesotho will continue to rely on the RSA for the bulk of its energy needs through the 1990's, although the completion of the first phase of the Lesotho Highlands Water Project will reduce its reliance on imported electricity.

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9. APPENDICES

TABLE A: ECONOMIC DATA
MILLIONS OF NATIONAL CURRENCY UNLESS INDICATED

YEAR	POPULATION MILLIONS	GROSS DOMESTIC PRODUCT AT MARKET PRICES MALOTI								GNP	GDP/GNP	GDP DEFLATOR	GDP AT 1985 MARKET PRICES	GDP/CAPITA		EXCHANGE RATE MALOTI PER US$ DOLLAR	GDP (US$)		GDP PER CAPITA ($US)
		AGRICUL-TURE	INDUSTRY					OTHER SERVICES	TOTAL					CURRENT	REAL 1985		AT MARKET PRICES	AT 1985 MARKET PRICES	
			TOTAL INDUSTRY	MINING QUARRY	MANUFAC-TURE	ELEC,WTR GAS	CONSTRUCT-ION												
1960	0,87	NA	NA	NA	NA	NA	NA	NA	23,00	NA	NA	NA	NA	26,44	NA	0,71	32,21	NA	37,03
1961	0,89	NA	NA	NA	NA	NA	NA	NA	25,60	NA	NA	NA	NA	28,76	NA	0,71	35,85	NA	40,29
1962	0,90	NA	NA	NA	NA	NA	NA	NA	28,50	NA	NA	NA	NA	31,67	NA	0,71	39,92	NA	44,35
1963	0,92	NA	NA	NA	NA	NA	NA	NA	31,70	NA	NA	NA	NA	34,46	NA	0,71	44,40	NA	48,26
1964	0,94	NA	NA	NA	NA	NA	NA	NA	40,80	NA	NA	NA	NA	43,40	NA	0,71	57,14	NA	60,79
1965	0,95	NA	NA	NA	NA	NA	NA	NA	43,00	NA	NA	NA	NA	45,26	NA	0,71	60,22	NA	63,39
1966	0,97	NA	NA	NA	NA	NA	NA	NA	44,50	NA	NA	NA	NA	45,88	NA	0,71	62,32	NA	64,25
1967	0,99	15,30	4,40	NA	1,50	NA	NA	26,80	46,50	57,20	0,81	20,20	230,20	46,97	232,52	0,71	65,13	322,41	65,78
1968	1,02	16,00	4,00	NA	1,70	NA	NA	27,40	47,40	58,90	0,80	18,60	254,84	46,47	249,84	0,71	66,39	356,92	65,08
1969	1,04	15,60	4,70	NA	1,80	NA	NA	29,40	49,70	61,60	0,81	19,42	255,92	47,79	246,08	0,71	69,61	358,43	66,93
1970	1,06	16,72	4,31	0,65	2,07	0,15	1,44	31,45	52,49	74,80	0,70	20,40	257,28	49,52	242,72	0,71	73,51	360,34	69,35
1971	1,09	12,00	4,90	0,20	2,40	0,30	2,00	33,60	50,50	76,30	0,66	18,60	271,51	46,33	249,09	0,72	70,63	379,73	64,80
1972	1,11	20,98	6,07	0,20	2,82	0,40	2,65	37,22	64,26	95,80	0,67	23,70	271,15	57,89	244,28	0,77	83,67	353,06	75,38
1973	1,14	32,67	8,32	0,26	3,94	0,53	3,60	46,83	87,81	132,40	0,66	25,60	343,02	77,03	300,89	0,69	127,26	497,12	111,63
1974	1,16	31,74	11,32	0,90	4,83	0,79	4,79	54,95	98,00	158,10	0,62	25,80	379,84	84,48	327,45	0,68	144,33	559,41	124,42
1975	1,19	31,70	12,90	0,50	5,60	0,80	6,00	66,00	110,60	199,70	0,55	33,70	328,19	92,94	275,79	0,73	151,30	448,96	127,14
1976	1,21	31,00	21,70	0,46	6,20	1,72	13,32	75,70	128,40	247,40	0,52	35,20	364,77	106,12	301,47	0,87	147,59	419,28	121,97
1977	1,24	49,60	22,40	1,20	7,20	1,60	12,40	96,10	168,10	308,00	0,55	37,80	444,71	135,56	358,64	0,87	193,22	511,16	155,82
1978	1,28	55,20	43,50	15,40	10,10	1,80	16,20	133,10	231,80	385,10	0,60	44,10	525,62	181,09	410,64	0,87	266,44	604,17	208,15
1979	1,31	65,70	54,00	18,60	11,90	2,00	21,50	124,60	244,30	422,50	0,58	45,20	540,49	186,49	412,59	0,84	290,49	642,67	221,75
1980	1,34	70,00	64,80	20,70	13,90	2,20	28,00	162,50	297,30	502,30	0,59	54,60	544,51	221,87	406,35	0,78	382,13	699,88	285,17
1981	1,37	74,10	64,30	16,00	16,80	2,00	29,50	190,00	328,40	583,20	0,56	61,10	537,48	239,71	392,32	0,87	377,47	617,79	275,53
1982	1,41	63,90	82,70	13,50	22,20	2,50	44,50	222,60	369,20	742,10	0,50	68,10	542,14	261,84	384,50	1,08	341,22	501,06	242,00
1983	1,44	75,30	63,90	0,80	29,10	2,10	31,90	255,90	395,10	818,20	0,48	76,20	518,50	274,38	360,07	1,11	355,31	466,28	246,74
1984	1,47	98,00	83,30	0,60	40,50	3,40	38,80	289,40	470,70	957,90	0,49	83,90	561,03	320,20	381,65	1,44	327,33	390,14	222,67
1985	1,53	111,00	102,00	1,60	45,70	4,70	50,00	357,50	570,50	1084,80	0,53	100,00	570,50	372,88	372,88	2,19	260,38	260,38	170,19
1986	1,56	108,60	123,60	1,90	59,20	5,00	57,50	415,00	647,20	1230,60	0,53	107,20	603,73	414,87	387,01	2,27	285,24	266,08	182,84
1987	1,62	117,00	159,00	NA	84,00	NA	NA	473,00	749,00	1300,50	0,58	122,80	609,93	462,35	376,50	2,04	368,06	299,72	227,20
1988	1,68	NA	NA	NA	NA	NA	NA	NA	970,00	1633,80	0,59	NA	NA	577,38	NA	2,26	429,01	NA	255,37
1989	1,70	164,10	301,60	4,40	136,00	8,30	152,90	634,00	1099,70	1832,39	0,60	NA	NA	646,88	NA	2,62	420,37	NA	247,28
1990	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

APPENDIX B - LEC: Schedule of tariffs and charges

LEC: SCHEDULE OF TARIFFS AND CHARGES

The following tariffs became effective after January 1, 1983.

Tariff 1: Load Limiter Scale

For an installation where the maximum current taken at any one time is limited to 1 Ampere. The supply is unmetered and is subject to a fixed charge of LSM 5.0 per month. This tariff is not available to new consumers.

Tariff 2: Domestic Scale

For the supply of electricity to premises used solely for private residential purposes and to primary and secondary schools. The first 300 units per month are charged at LSM 0.066 per unit. All further units per month are charged at LSM 0.046 per unit.

In addition, a fixed monthly charge is payable, calculated as follows: For the first one or two living rooms, LSM 3.85 per month; for each additional living room, LSM 0.75 per month.

As regards Primary and Secondary Schools, the fixed charge is based on the number of classrooms, offices, etc.

Tariff 3: General Purpose Tariff

For the supply of electricity to all installations other than private residences/schools which have a demand of less than 50 kW for commercial purposes and less than 25 kW for industrial purposes.

This tariff applies to most shops, offices, garages, workshops and churches. The first 100 units per month are charged at LSM 0.13 per unit; all further units per month are charged at LSM 0.0725 per unit.

In addition, a fixed monthly charge applies. The amount charged depends on the total floor area of the installation being supplied. There is a minimum charge of LSM 5.50 per month and a maximum charge of LSM 78.00 per month. Details are available from LEC offices.

Tariff 5: Commercial Maximum Demand

For consumers using electricity entirely or primarily for purposes other than industrial, and regularly having a maximum demand of 50 kW measured during any 30-minute period in the course of a meter reading period.

The following tariffs and charges apply:

Tariff 5c - A demand charge of LSM 8.9 per kW for all kW of the maximum demand for each meter reading period with a minimum charge of LSM 200.00 per month.

Tariff 5a - For all units consumed LSM 0.0483 per unit.

For major non-industrial consumers it may be desirable or essential for supply to be given at high voltage. All high voltage metering equipment costs are borne by the consumer and the following tariffs and charges apply:

Tariff 5d - A demand of LSM 7.8 per kW for all kW of the maximum demand for each meter reading period.

Tariff 5b - For all units consumed, LSM 0.0483 per unit.

Tariff 6: Industrial Maximum Demand

For consumers using electricity entirely or primarily for industrial purposes and regularly having a maximum demand in excess of 25 kW measured during any 30-minute period during the course of a meter reading period. The following tariffs and charges apply:

Tariff 6c - A demand charge of LSM 7.72 per kW for all kW of the maximum demand for each meter reading period with a minimum charge of LSM 190.00 per month.

Tariff 6a - For all units consumed, LSM 0.0412 per unit.

For major industrial consumers it may be desirable or essential for supply to be given at high voltage. All high voltage metering equipment costs are borne by the consumer and the following tariffs and charges apply:

Tariff 6d - A demand charge of LSM 6.72 per kW for all kW of the maximum demand for each meter reading period.

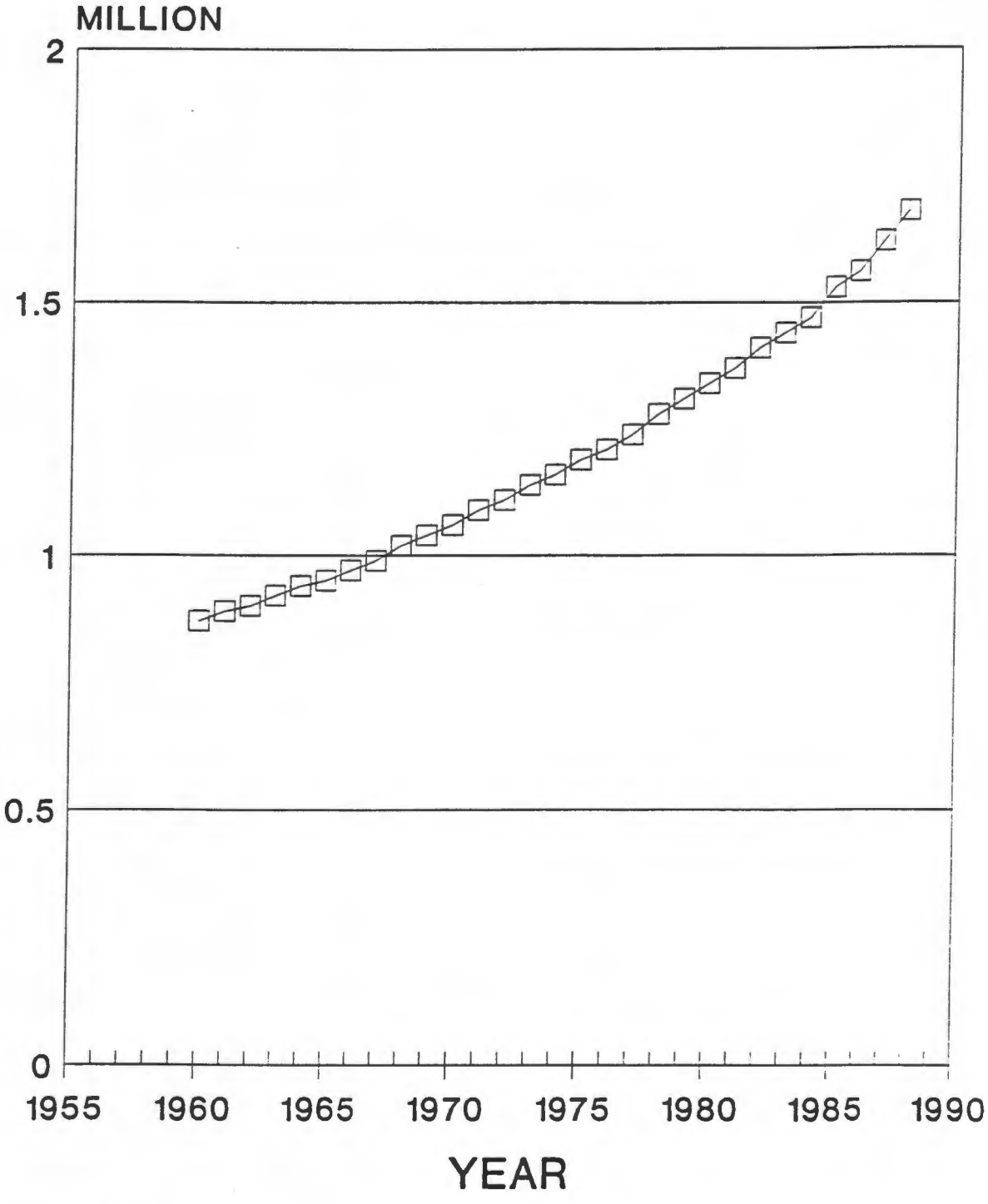
Tariff 6b - For all units consumed LSM 0.0412 per unit.

Tariff 7: Off Peak

For consumers who, at the discretion of the Corporation and subject to its conditions, require electrical energy during the Corporation's off peak hours. The supply is available for not less than 8 hours per day which is decided by the Corporation and subject to adjustment from time to time. All meter equipment costs are borne by the consumers. All units are charged at LSM 0.0336 per unit.

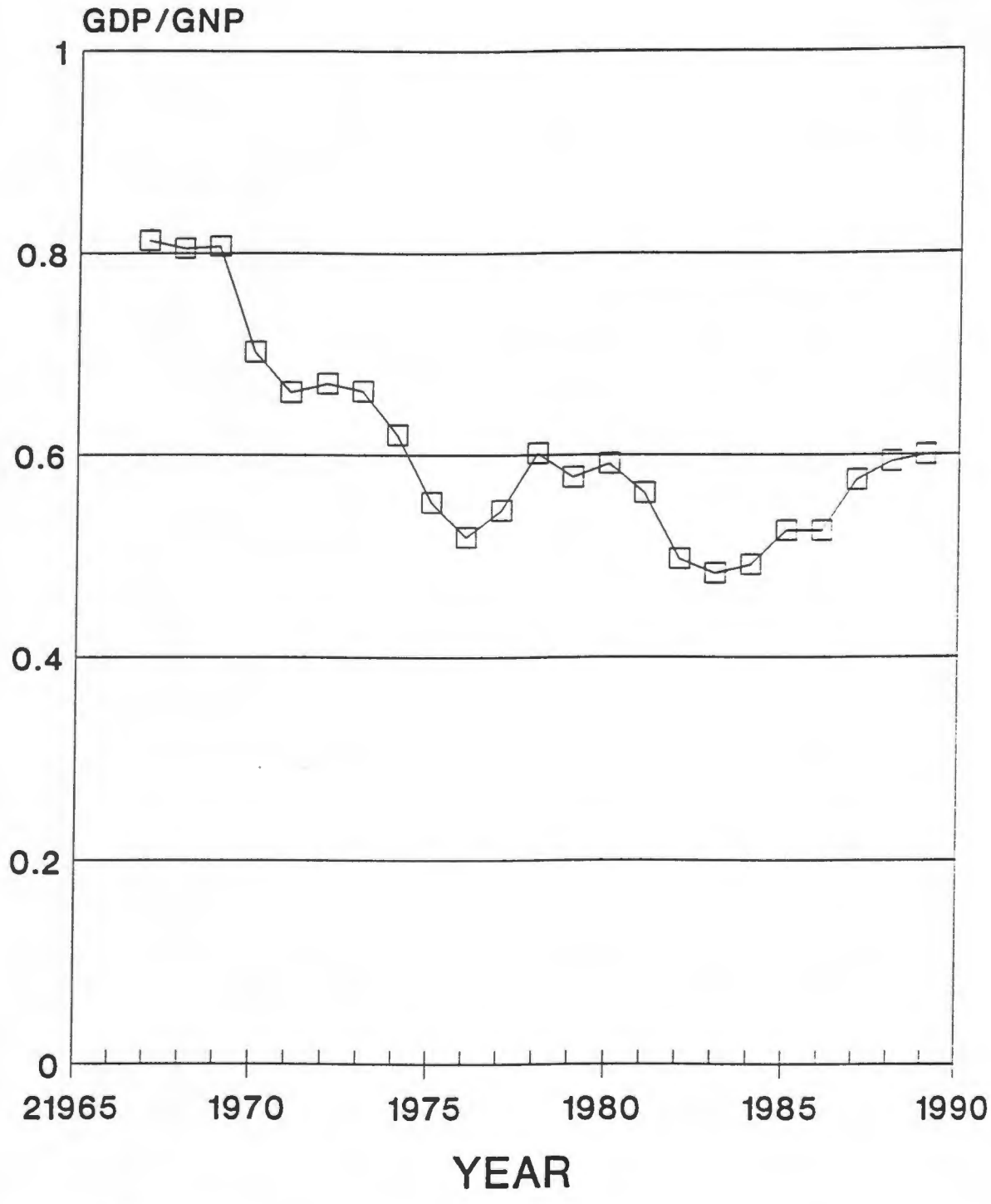
FIGURES

FIGURE 1. POPULATION



LESOTHO/POPULATION/2016

FIGURE 2. RATIO OF GDP TO GNP



LESOTHO/GNP1/2016

FIGURE 3. GROSS DOMESTIC PRODUCT (MARKET)

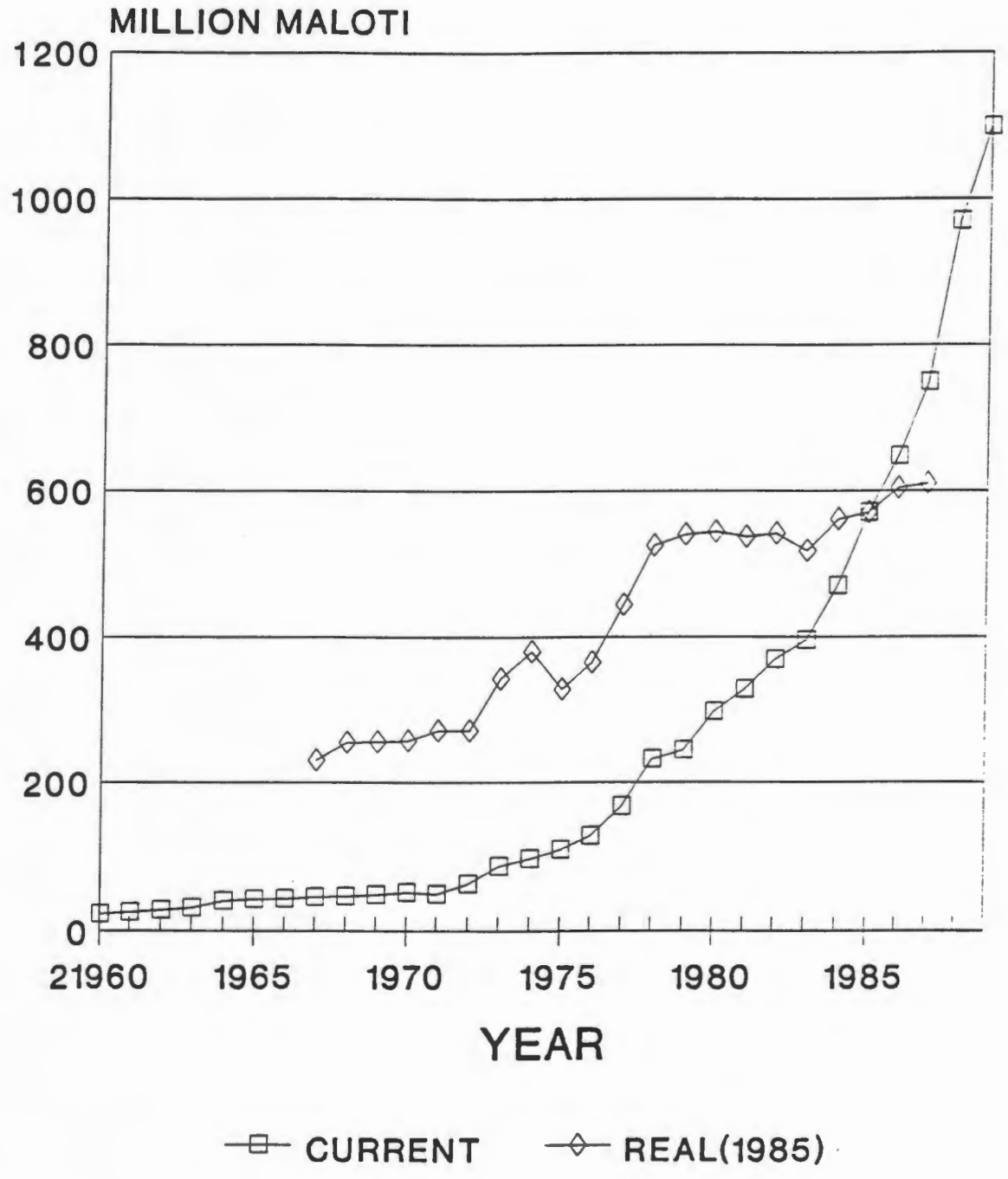


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FIGURE 4. GDP PER CAPITA

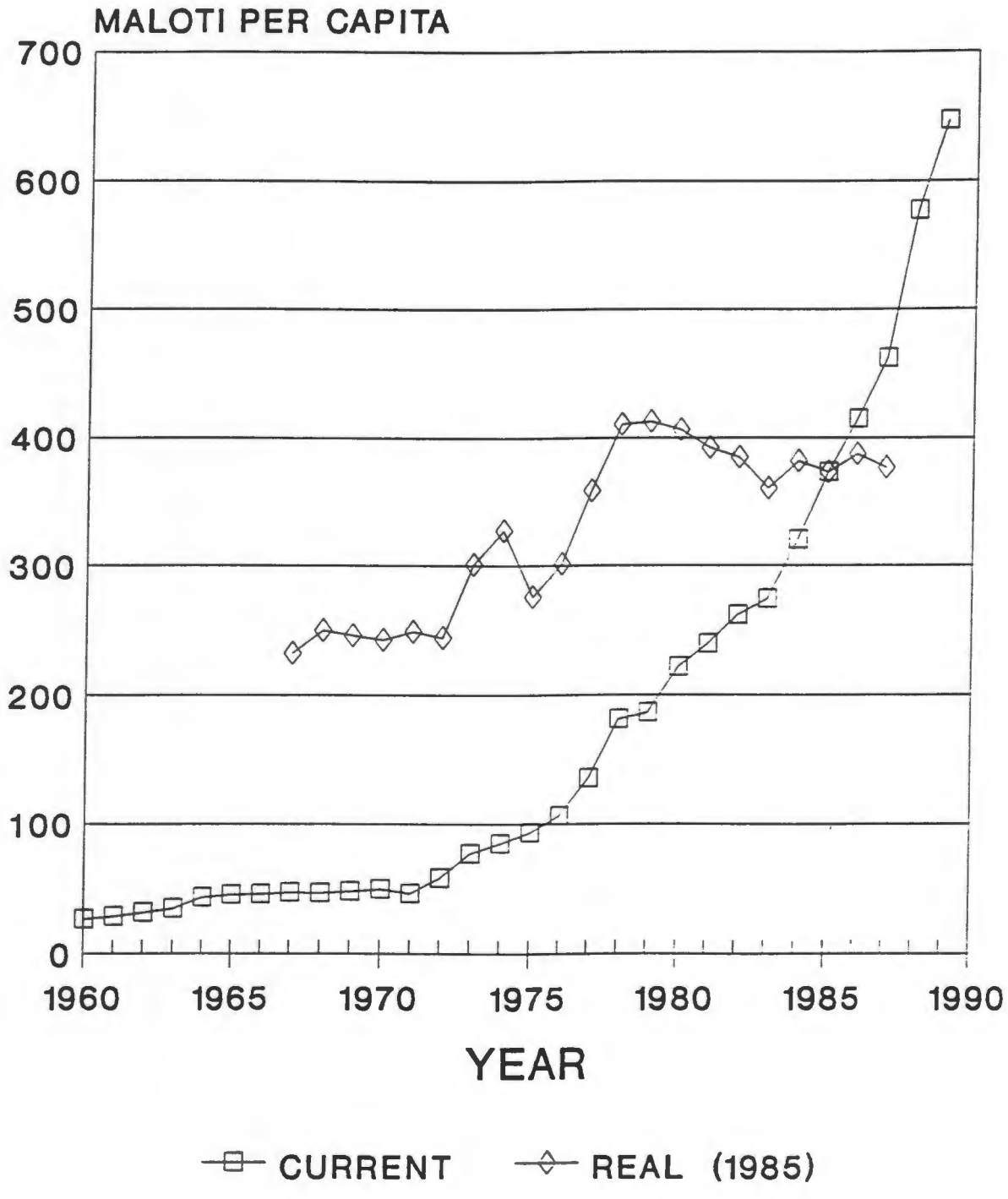

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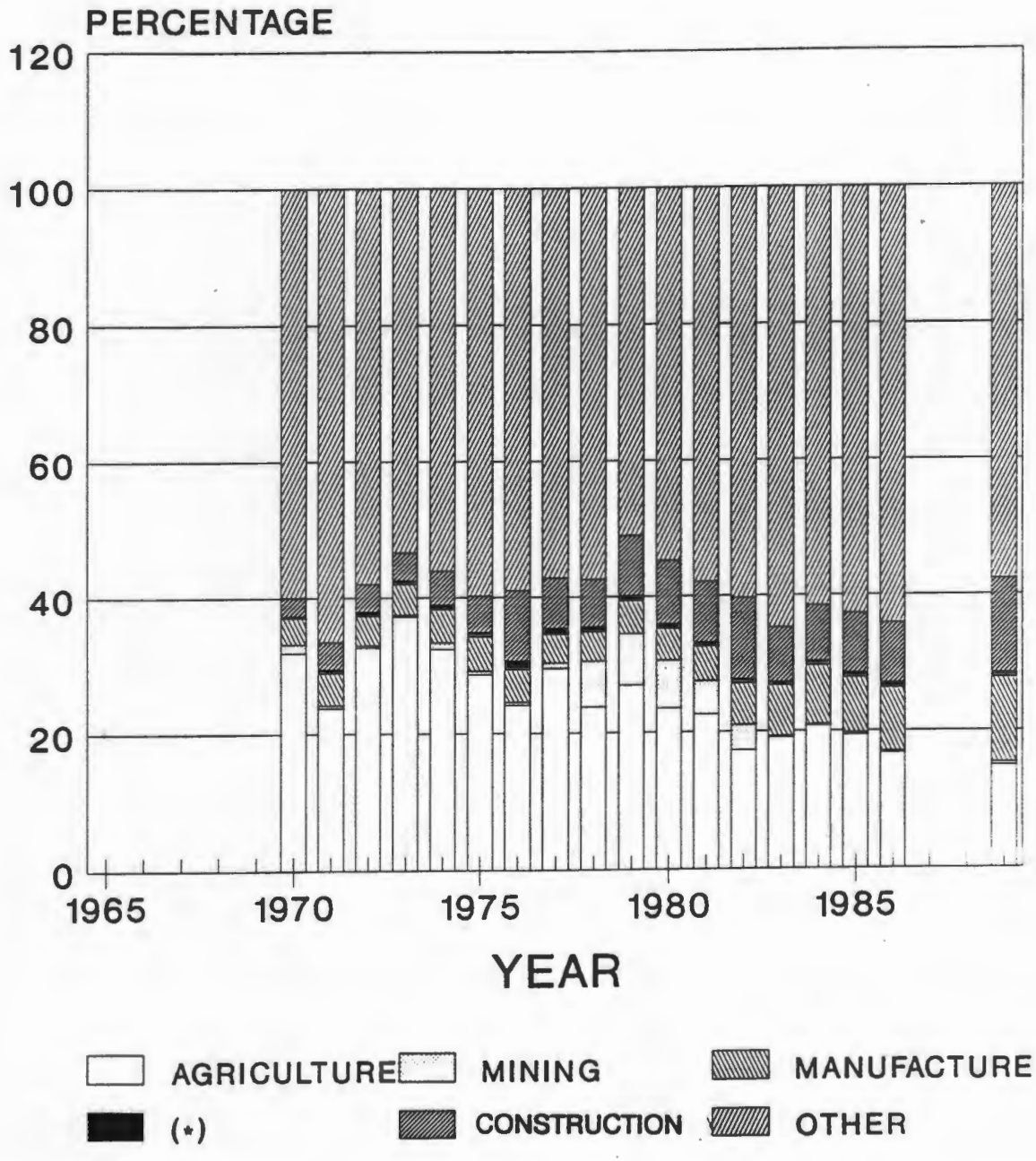
FIGURE 5. GDP COMPONENTS AS % OF TOTAL



(*) ELECTRICITY WATER, GAS

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FIGURE 6. CONTRIBUTION TO GDP

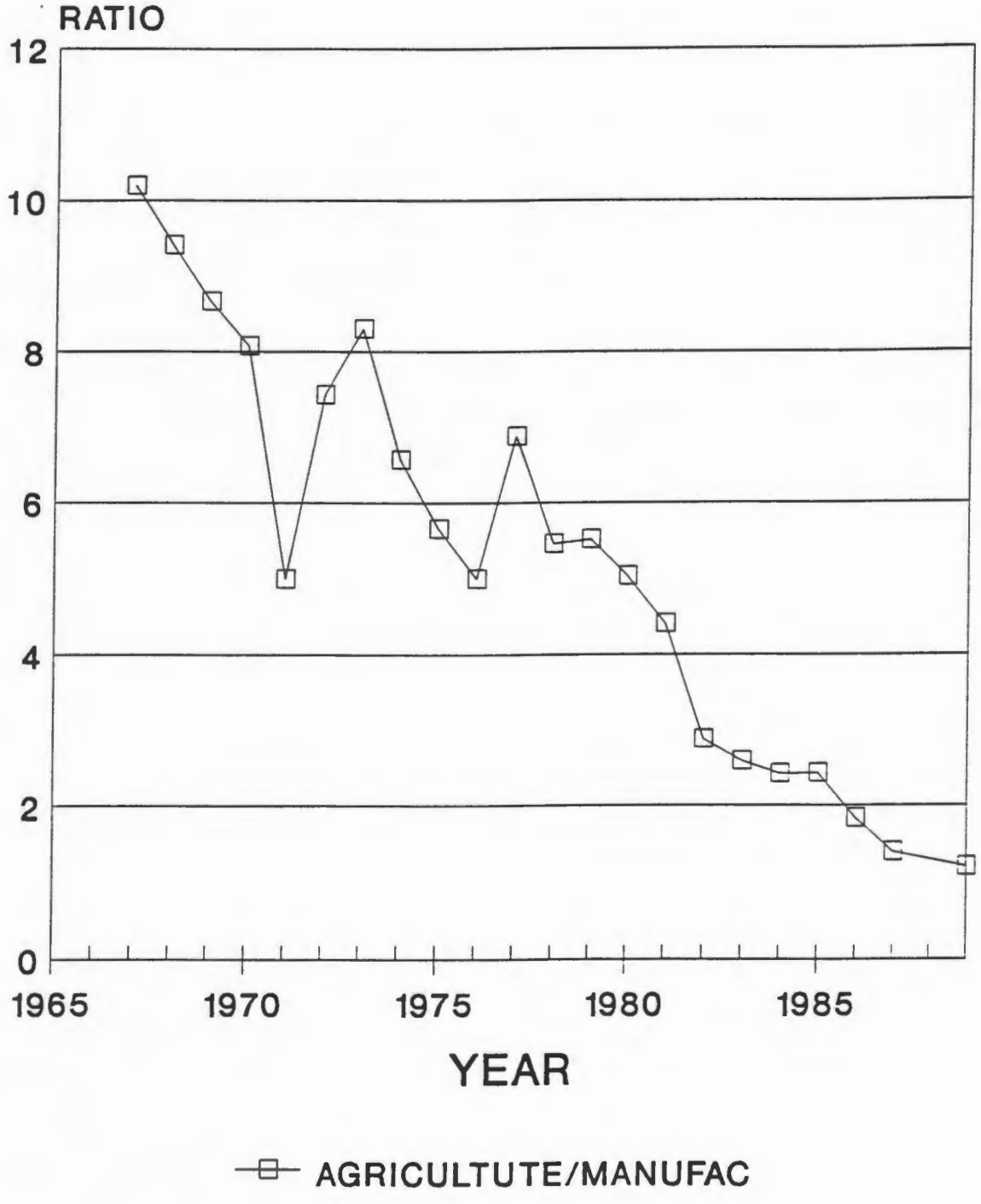

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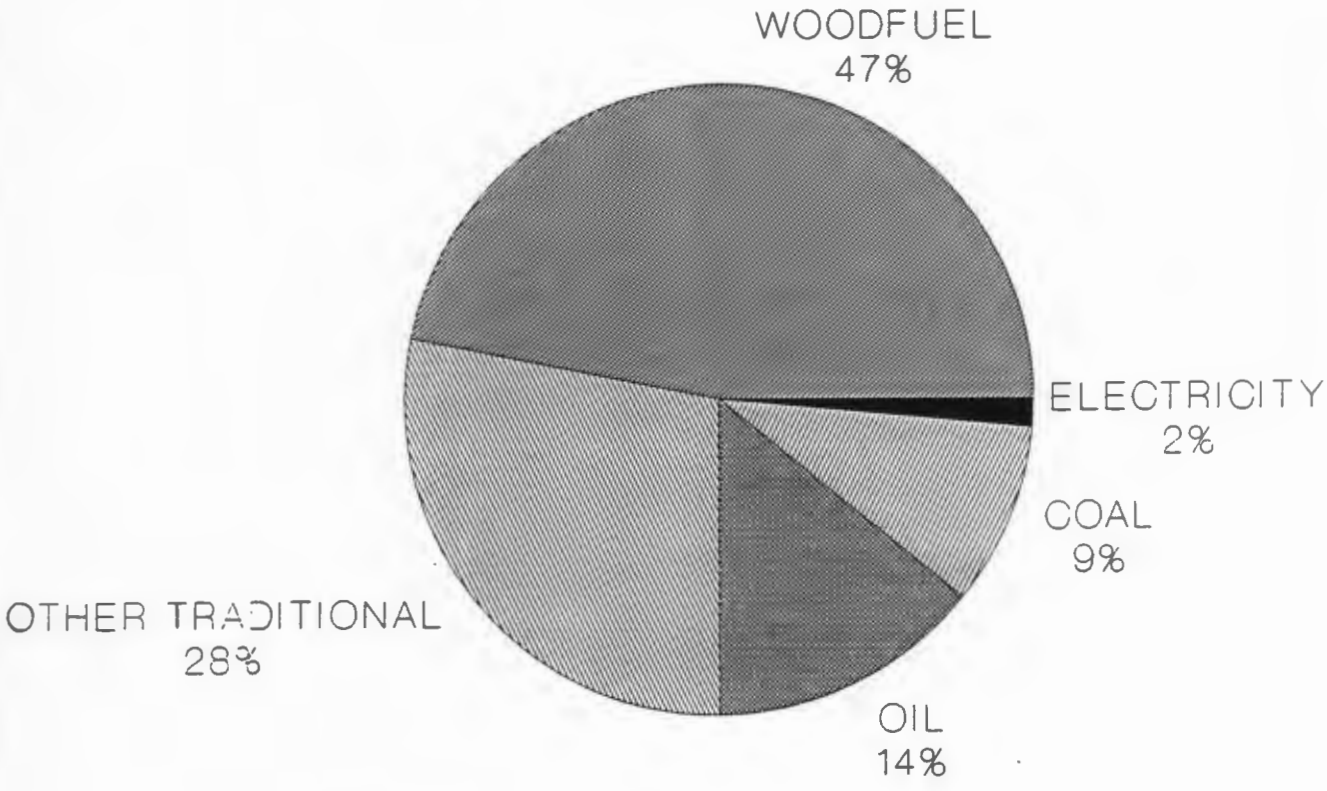
FIGURE 7. TOTAL FINAL ENERGY CONSUMPTION COMPONENTS (1980)



TFC COMMERCIAL = 123 000 toe
TFC TRADITIONAL+COMMERCIAL = 494 000 toe
HG/LESOT07/HD

FIGURE 8. OIL PRODUCT IMPORTS BY TYPE

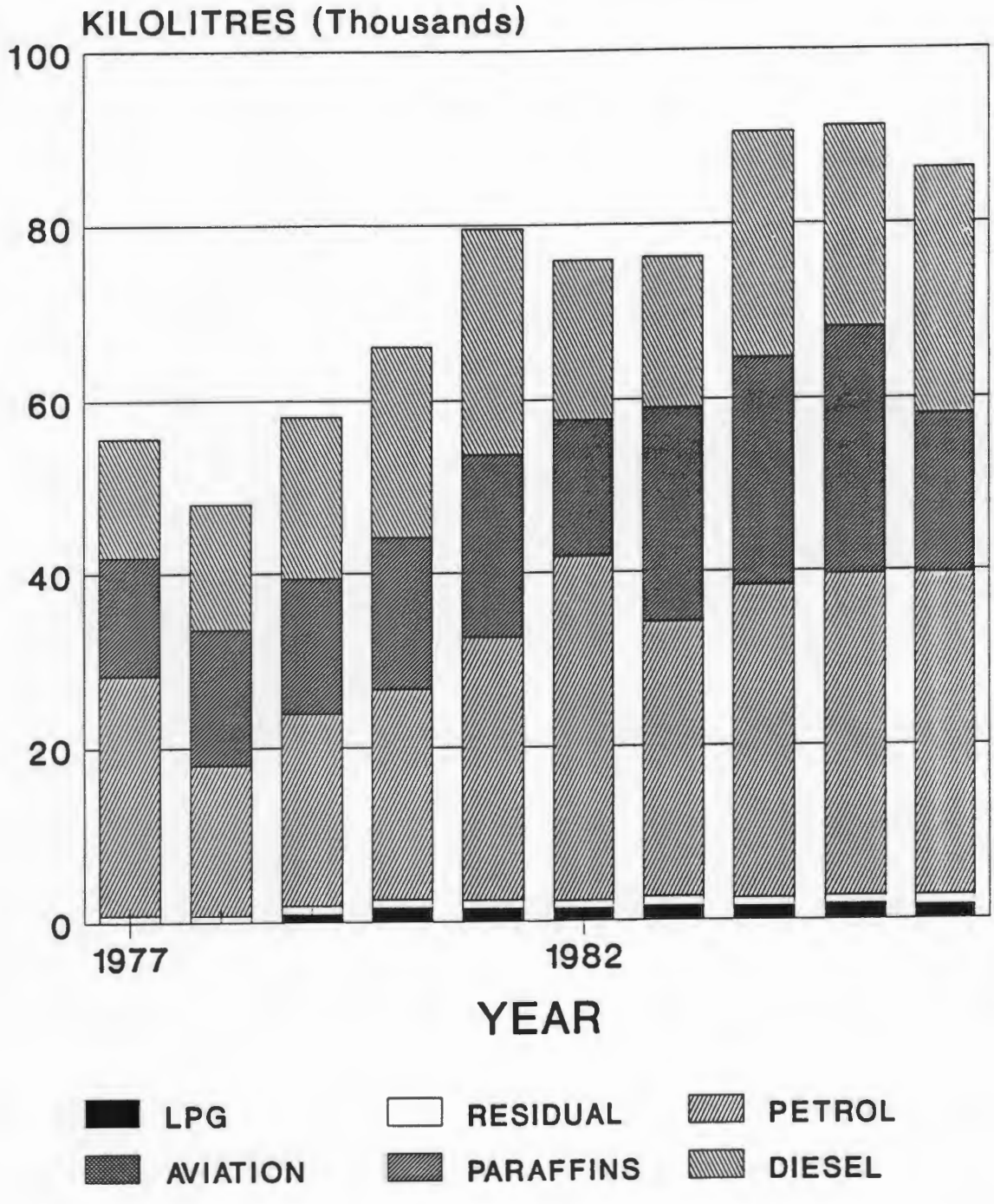


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FIGURE 9. PETROL AND DIESEL AS A PERCENTAGE OF OIL IMPORTS

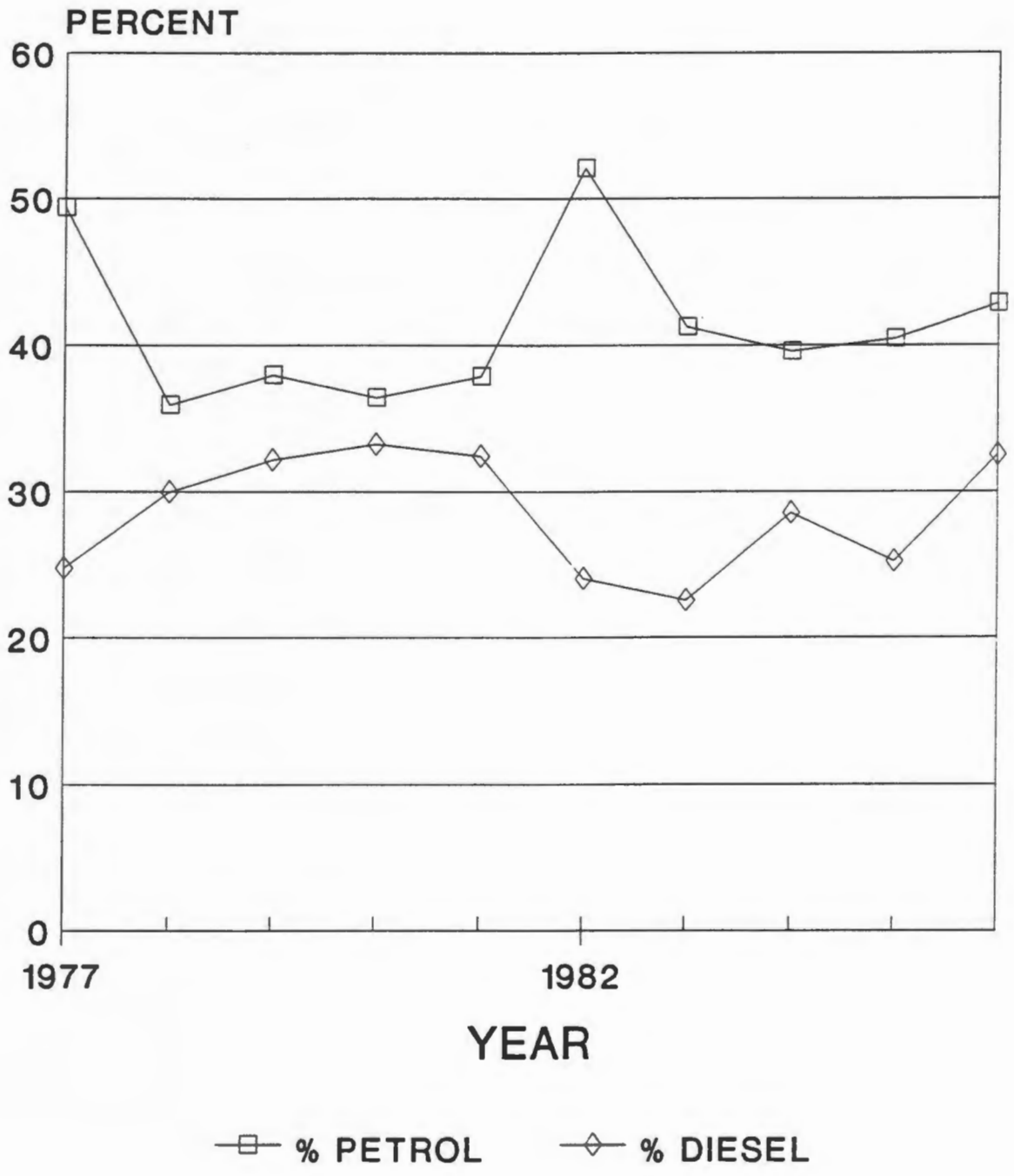

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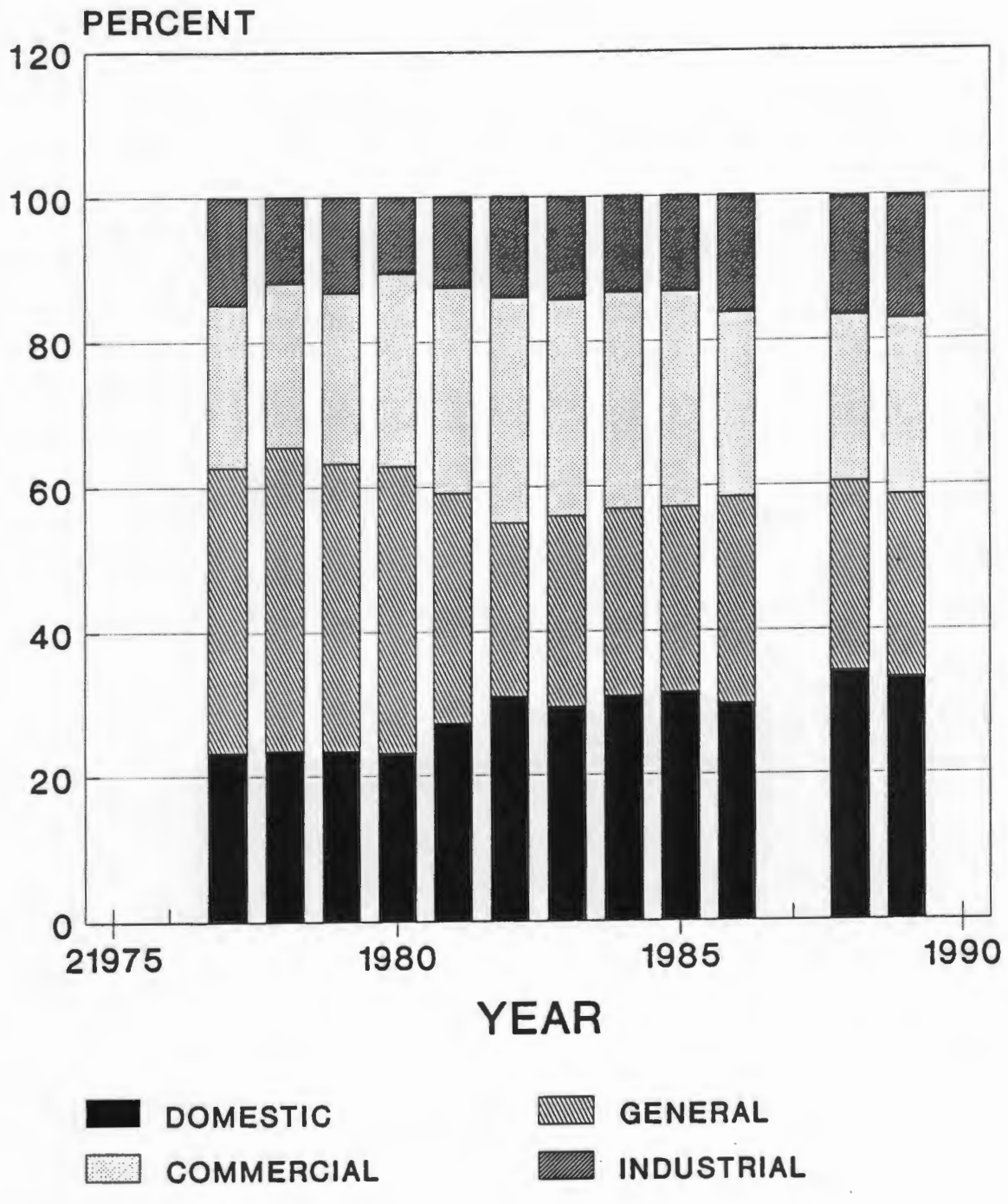
FIGURE 10. SECTORIAL ELECTRICITY SALES



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MAP

REPORT NO. IER 050

ENERGY PROFILE: LESOTHO

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NOVEMBER 1991

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