ENERGY AND WATER STATISTICS - 2003

Introduction

This issue of the Economic and Social Indicators on Energy and Water Statistics contains data for the years 2002 and 2003 and was compiled in close collaboration with the Ministry of Public Utilities, Central Electricity Board, Central Water Authority, Water Resources Unit and the Meteorological Services. A table on rainfall (Table 12) has been included for the first time.

All data refer to the Republic of Mauritius unless otherwise stated.

2. Energy

2.1 The energy commodity balance

The energy commodity balance (Tables 1 & 2) shows the flow of electricity and the different types of fuel from supply through transformation to final uses. The supply forms the 'Primary energy requirement', which is obtained as the sum of the indigenous production (hydro, fuel wood and bagasse) and imports less re-exports and bunkering, after stock adjustments. The transformation process is the conversion of primary energy into secondary energy, for example, transformation of coal and fuel oil into electricity. Own use and losses during transformation are also recorded. 'Final energy consumption' is the total amount of energy required by end users as a final product. End-users are categorised into five sectors, namely manufacturing, transport, commercial and distributive trade, household and agriculture.

It should be noted that for meaningful analysis, the quantities of the different types of fuel have been expressed in common energy unit, namely, tonnes of oil equivalent (**toe**). The conversion factors used are given on page 7.

2.2 Total primary energy requirement

During the year 2003, the total primary energy requirement rose by 6%, from 1,169 ktoe to 1,239 ktoe (Table 3). Important increases were registered for the following energy sources: hydro electricity from 18.9 ktoe to 25.9 ktoe (+37%) and dual purpose kerosene from 127.7 ktoe to 147.4 ktoe (+15%). Increases in the other sources of energy ranged from 1% to 8%.

In 2003, most (77%) of the total primary energy requirement was met from imported fuels, and the remaining 23% was supplied from indigenous sources. Imports consisted of 760.3 ktoe (80%), of petroleum products and 196.0 ktoe (20%) of coal. The indigenous sources were mainly bagasse, 249.1 ktoe (88%) and hydro electricity, 25.9 ktoe (9%) (Table 3).

The total primary energy requirement index, expressed with 1990 as reference year (1990 = 100), increased by 6% from 156.6 in 2002 to 166.0 in 2003. Per capita primary energy requirement increased by 4% from 0.97 toe to 1.01 toe (Table 16).

Energy intensity, defined as total primary energy requirement (toe) per Rs 100,000 of GDP (in 1990 rupees), provides a measure of the efficiency with which energy is being used in production. A lower ratio indicates a more efficient use of energy. Energy intensity rose to 1.66 in 2003, an increase of 2% compared to 2002.

2.2.1 Local production

Total energy production from local sources increased by 5%, from 270.1 ktoe in 2002 to 282.3 ktoe in 2003. Production of electricity from hydro went up by 37% from 18.9 ktoe to 25.9 ktoe while that from bagasse registered an increase of 2%, from 243.9 ktoe to 249.1 ktoe (Table 3).

2.2.2 Imports of energy sources

Table 4 shows data on imports of energy sources. Some 1,154 ktoe of petroleum products and coal were imported in 2003 compared to 1,125 ktoe in 2002, representing an increase of 3%. Imports of petroleum products increased by 5%, from 931.7 ktoe to 974.5 ktoe and coal decreased by 7% from 193.5 ktoe to 179.4 ktoe.

The import bill was 10% higher in 2003, Rs 6,991 million against Rs 6,337 million in 2002 (Table 4).

2.2.3 Re-exports and bunkering

Of the 974.5 ktoe of imported petroleum products, 224.3 ktoe (23%) were re-exported to bunkers and foreign aircraft. Re-exports consisted of 98.6 ktoe of diesel oil, 92.3 ktoe of aviation fuel and 33.4 ktoe of fuel oil (Table 5).

2.3 Electricity generation

In 2003 some 2,058 GWh (177 ktoe) of electricity was generated, as compared to 1,949 GWh (167.6 ktoe) in 2002, representing an increase of 6%. The Central Electricity Board (CEB) generated 55% and the Independent Power Producers (IPP's) of the sugar industry, 45%. Thermal energy represented 94% and hydro, the remaining 6%. The peak demand in 2003 reached 323.8 MW (Tables 6 - 8).

2.3.1 Fuel input for electricity generation

The different types of fuel used for electricity generation are shown in Table 9. Fuel input increased by 4%, from 532.5 ktoe in 2002 to 556 ktoe in 2003.

In 2003, the major components of the fuel input were fuel oil (35%), coal (32%) and bagasse (30%).

2.3.2 Number of electricity consumers and sales

The total number of electricity consumers increased from 340,125 in 2002 to 348,848 in 2003. The highest number of consumers (311,523) fell in domestic category, followed by commercial (29,779) and industrial (7,218).

Electricity sales increased by 8% from 1,509.8 GWh in 2002 to 1,626.9 GWh in 2003. The average sales price of electricity increased from Rs 3.03 per kWh in 2002 to Rs 3.07 per kWh in 2003 (Table 10).

The consumption of electricity per capita per annum stood at 1,330 kWh in 2003 while it was 1,248 kWh in 2002 (Table 16).

2.4 Final energy consumption

Final energy consumption increased by 6% from 765.0 ktoe in 2002 to 812.9 ktoe in 2003. Changes in the different sectors were as follows: “Commercial and Distributive Trade” (+14%), "Transport" (+7%), "Manufacturing" (+4%) and "Household" (+4%). No change has been registered in the consumption of energy by the agricultural sector.

In 2003, "Transport" and "Manufacturing” were the two largest energy-consuming sectors accounting for 48% and 32% of total consumption respectively. Consumption by "Household" sector represented 13%, followed by "Commercial and Distributive Trade", 6% and "Agriculture", 1%. Details on the different types and amount of fuel consumed by each sector are given in Table 11.

2.4.1 Manufacturing

Energy used for manufacturing process increased by 4% to reach 260.3 ktoe in 2003 with bagasse contributing 81.6 ktoe (31%), electricity, 61.8 ktoe (24%), fuel and diesel oil, 95.1 ktoe (36%).

2.4.2 Transport

Energy consumption in “Transport” sector went up by 7% from 364.1 ktoe in 2002 to 390.2 ktoe in 2003. For the year 2003 the contributions of the different energy sources to the transport sector were diesel oil (42%), aviation fuel, (33%), gasolene, (25%) and LPG, (1%).

When compared to 2002, consumption of gasolene increased by 2% from 94.5 ktoe to 96.4 ktoe and that of, aviation fuel by 14% from 113.3 ktoe to 128.6 ktoe. Consumption of diesel oil went up by 5% from 155.0 ktoe to 162.9 ktoe. A significant increase of 85% was noted in the use of LPG in the transport sector, from 1.3 ktoe in 2002 to 2.4 ktoe in 2003.

2.4.3 Commercial and Distributive Trade

Total energy consumption by "Commercial and Distributive Trade" sector rose by 14% from 41.7 ktoe in 2002 to 47.7 ktoe in 2003. Electricity was the main source of energy and its consumption increased from 36.5 ktoe to 41.2 ktoe (+13%) while consumption of LPG rose from 4.9 ktoe to 6.2 ktoe (+27%).

2.4.4 Household

In 2003, energy consumed by households went up by 4% to reach 107.0 ktoe. The two main sources of energy used were electricity (45%) and LPG (41%). Consumption of electricity increased from 45.8 ktoe to 48.6 ktoe, (+6%) whereas LPG, from 42.1 ktoe to 43.8 ktoe (+4%). Consumption of kerosene used mainly for cooking remained at same level, i.e 8.6 ktoe or 1% of total final consumption.

2.4.5 Agriculture

No change has been registered in the energy consumption of the agricultural sector. Electricity and diesel oil were the only two sources of energy used in this sector. In 2003, about 2.3 ktoe of electricity were used for irrigation and 2.4 ktoe of diesel oil were used for derocking of land and for the preparation of soil prior to plantation.

3 Water

3.1 Rainfall

During the year 2003, the mean annual rainfall recorded around the island of Mauritius was 2,148 mm, a 3% increase compared to 2,082 mm in 2002. February is normally the wettest month but in 2003 the mean rainfall was highest during the month of April with 454 mm. The driest month, October, registered 36 mm of rainfall (Table 12).

In Rodrigues, at Pointe Canon, the mean annual rainfall showed a considerable increase of 32% from 997 mm in 2002 to 1,320 mm in 2003 (Table 12).

3.2 Water storage level

In 2003, the increase in rainfall kept the reservoirs' level much above the normal, except for La Nicoliere. The mean level for the 5 main reservoirs, excluding Midlands Dam, was above normal for nine months of the year; the mean water level even reached more than 90% during the period May to September.

3.3 Water production

In 2003, the total volume of potable water treated by the different water plants amounted to 184.1 Mm^3, a 4% increase compared to 177.1 Mm^3 in 2002. Average water production from surface and ground water represented 48% and 52% respectively (Table 14).

3.4 Water sales and revenue collectible

Table 15 shows water sales by type of tariff of subscriber. Total volume of water sold increased from 100.8 Mm^3 in 2002 to 103.8 Mm^3 in 2003 (+3%). Potable water made up 86% of the volume sold and the remaining 14% consisted of non-treated water used in agriculture and industry. Water sales for domestic consumption amounted to 70.3 Mm^3, accounting for nearly 68 % of the water sales.

Consumption of potable water per capita per day was 207 litres in 2003 compared to 201 litres in the previous year (Table 16).

Revenue collectible for the year 2003 totalled to Rs 904 million, that is an increase of 16% over the amount of Rs 780 million for 2002 (Table 15).

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Concepts and Terminology

The energy data have been compiled according to the recommendations of the United Nations Manual, Series F No. 29 on Energy Statistics.

- **Energy**
  Energy means the capacity for doing work or for producing heat. Producing heat is a common manifestation of "doing work" as are producing light and motive force.

- **Primary energy**
  Primary energy designates energy from sources that involve only extraction or capture, with or without separation from contiguous material, cleaning or grading, before the energy embodied in that source can be converted into heat or mechanical work. Primary energy is not derived from any other form of energy. By convention, sources of energy that occur naturally such as coal, natural gas, fuel wood are termed primary energy.

- **Secondary energy**
  Secondary energy designates energy from all sources of energy that results from transformation of primary sources.

- **Fuels**
  The term fuel is used to describe those energy sources, whether primary or secondary, that must be subjected to combustion or fission in order to release for use the energy stored up inside them.

- **Re-export of bunkers and aviation fuel**
  Bunkers relate to fuels sold to ships irrespective of their flags of ownership or registration. Re-exports include aviation fuel delivered to foreign aircraft. Aviation fuel delivered to aircraft owned by the national airline is included as final consumption in the transport sector.

- **Primary energy requirement**
  It is the sum of imported fuels and locally available fuels less re-exports of bunkers and aviation fuel to foreign aircraft after adjusting for stock changes.

- **Primary energy input to hydro electricity**.
  The primary energy input to hydro electricity is defined as the energy value of the electricity generated from hydro.

Energy conversion factors

The following energy conversion factors have been used to express the energy content for the different fuels in terms of a common accounting unit, tonnes of oil equivalent (toe)

	Tonne	toe
Gasolene	1	1.08
Diesel Oil	1	1.01
Dual Purpose Kerosene (DPK)	1	1.04
Fuel oil	1	0.96
Liquefied Petroleum Gas (LPG)	1	1.08
Coal	1	0.62
Bagasse	1	0.16
Fuel Wood	1	0.38
Charcoal	1	0.74

	GWh	toe
Hydro (primary)	1	220
Electricity	1	86

Note: 1 toe = 41.84 gigajoule (net calorific value)

SYMBOLS

The following technical abbreviations have been used throughout the report.

toe	Tonne of oil equivalent
ktoe	Thousand tonnes of oil equivalent
LPG	Liquefied Petroleum Gas
MW	Megawatt (1,000 kW)
MWh	Megawatt hour
kWh	Kilowatt hour
GWh	Gigawatt hour
mm	millimitres
Mm^3	Million cubic metres
GDP	Gross Domestic Product

ACRONYMS

CEB	Central Electricity Board
IPP	Independent Power Producers of the Sugar Industry

Table 1 - Energy commodity balance, 2003

Tonne of oil equivalent (toe)

Source / Flow	Coal	Gasolene	Diesel	Aviation Fuel	Kerosene	Fuel Oil	LPG	Fuel Wood	Charcoal	Hydro	Bagasse	Electricity	Total
Local Production	-	-	-	-	-	-	-	7,262	-	25,910	249,126	-	**282,298**
Imports	179,411	93,746	311,893	215,811	20,992	276,466	55,636	-	-	-	-	-	**1,153,956**
Re-Exports and Bunkering	-	-	(98,644)	(92,274)	-	(33,379)	-	-	-	-	-	-	**(224,297)**
Stock change / Statistical error	16,618	2,635	(2,315)	5,035	(2,138)	6,585	197	-	-	-	-	-	**26,616**
Total Primary Energy Requirement	**196,029**	**96,381**	**210,934**	**128,572**	**18,854**	**249,671**	**55,833**	**7,262**	**-**	**25,910**	**249,126**	**-**	**1,238,573**
Electricity Generation	-	-	(3,935)	-	(10,259)	(196,281)	-	-	-	(25,890)	-	97,602	**(138,672)**
Autoproducer plants	(178,049)	-	-	-	-	-	-	-	-	(20)	(167,487)	79,402	**(266,154)**
Other transformation	-	-	-	-	-	-	-	(722)	352	-	-	-	**(371)**
Own use	-	-	-	-	-	-	-	-	-	-	-	(3,875)	**(3,875)**
Distribution losses	-	-	-	-	-	-	-	-	-	-	-	(16,547)	**(16,547)**
Total Final Energy Consumption	**17,980**	**96,381**	**207,000**	**128,572**	**8,596**	**53,390**	**55,833**	**6,540**	**352**	**-**	**81,639**	**156,581**	**812,864**
Manufacturing Sector	17,980	-	41,686	-	-	53,390	3,201	543	-	-	81,639	61,823	**260,263**
Transport Sector	-	96,381	162,880	128,572	-	-	2,401	-	-	-	-	-	**390,324**
Commercial and Distributive Trade Sector	-	-	-	-	-	-	6,209	-	259	-	-	41,216	**47,684**
Household	-	-	-	-	8,596	-	43,804	5,996	93	-	-	48,556	**107,044**
Agriculture	-	-	2,434	-	-	-	-	-	-	-	-	2,318	**4,752**
Other	-	-	-	-	-	-	218	-	-	-	-	2,668	**2,886**

Note: figures in brackets represent negative quantities

Table 2 - Energy commodity balance, 2002

Tonne of oil equivalent (toe)

Source / Flow	Coal	Gasolene	Diesel	Aviation Fuel	Kerosene	Fuel Oil	LPG	Fuel Wood	Charcoal	Hydro	Bagasse	Electricity	Total
Local production	-	-	-	-	-	-	-	7,288	-	18,889	243,901	-	**270,078**
Imports	193,459	86,721	349,865	219,572	14,912	200,238	60,408	-	-	-	-	-	**1,125,175**
Re-exports and bunkering	-	-	(139,932)	(96,527)	-	(25,631)	-	-	-	-	-	-	**(262,090)**
Stock change / Statistical error	461	7,787	(11,207)	(9,715)	(505)	56,807	(7,952)	-	-	-	-	-	**35,676**
Total Primary Energy Requirement	**193,920**	**94,508**	**198,726**	**113,330**	**14,407**	**231,414**	**52,456**	**7,288**	**-**	**18,889**	**243,901**	**-**	**1,168,839**
Public electricity generation plant	-	-	(3,516)	-	(5,660)	(172,432)	-	-	-	(18,832)	-	85,223	**(115,217)**
Autoproducer plants	(177,869)	-	-	-	-	-	-	-	-	(57)	(173,066)	82,379	**(268,613)**
Other transformation	-	-	-	-	-	-	-	(714)	348	-	-	-	**(366)**
Own use	-	-	-	-	-	-	-	-	-	-	-	(3,794)	**(3,794)**
Distribution losses	-	-	-	-	-	-	-	-	-	-	-	(15,796)	**(15,796)**
Total Final Consumption	**16,051**	**94,508**	**195,210**	**113,330**	**8,747**	**58,982**	**52,456**	**6,574**	**348**	**-**	**70,835**	**148,012**	**765,053**
Manufacturing sector	16,051	-	37,783	-	-	58,981	3,782	551	-	-	70,836	61,206	**249,190**
Transport sector	-	94,508	154,972	113,331	-	-	1,313	-	-	-	-	-	**364,124**
Commercial and distributive trade sector	-	-	-	-	-	-	4,924	-	252	-	-	36,543	**41,719**
Household	-	-	-	-	8,745	-	42,145	6,023	96	-	-	45,799	**102,808**
Agriculture	-	-	2,454	-	-	-	-	-	-	-	-	2,363	**4,817**
Other	-	-	-	-	-	-	292	-	-	-	-	2,100	**2,392**

Note: figures in brackets represent negative quantities

Table 3 - Primary energy requirement , 2002 - 2003

Energy source	2002			2003		
	Tonne/GWh	Ktoe	%	Tonne/GWh	Ktoe	%
Imported						
Gasolene	87,507	94.5	8.1	89,242	96.4	7.8
Diesel Oil	196,759	198.7	17.0	208,846	210.9	17.0
Dual Purpose Kerosene	122,824	127.7	10.9	141,756	147.4	11.9
Kerosene	*13,852*	*14.4*	*1.2*	*18,129*	*18.9*	*1.5*
Aviation Fuel	*108,972*	*113.3*	*9.7*	*123,627*	*128.6*	*10.4*
Fuel Oil	241,055	231.4	19.8	260,074	249.7	20.2
LPG	48,570	52.5	4.5	51,697	55.8	4.5
Sub total (petroleum products)		***704.8***	***60.3***		***760.3***	***61.4***
Coal	312,774	193.9	16.6	316,176	196.0	15.8
Sub total (Imported)		**898.8**	**76.9**		**956.3**	**77.2**
Local						
Electricity (hydro) ***GWh***	86	18.9	1.6	118	25.9	2.1
Bagasse *	1,524,383	243.9	20.9	1,557,040	249.1	20.1
Fuel Wood *	19,180	7.3	0.6	19,110	7.3	0.6
Sub total (Local)		**270.1**	**23.1**		**282.3**	**22.8**
Total		**1,168.8**	**100.0**		**1,238.6**	**100.0**

* estimates

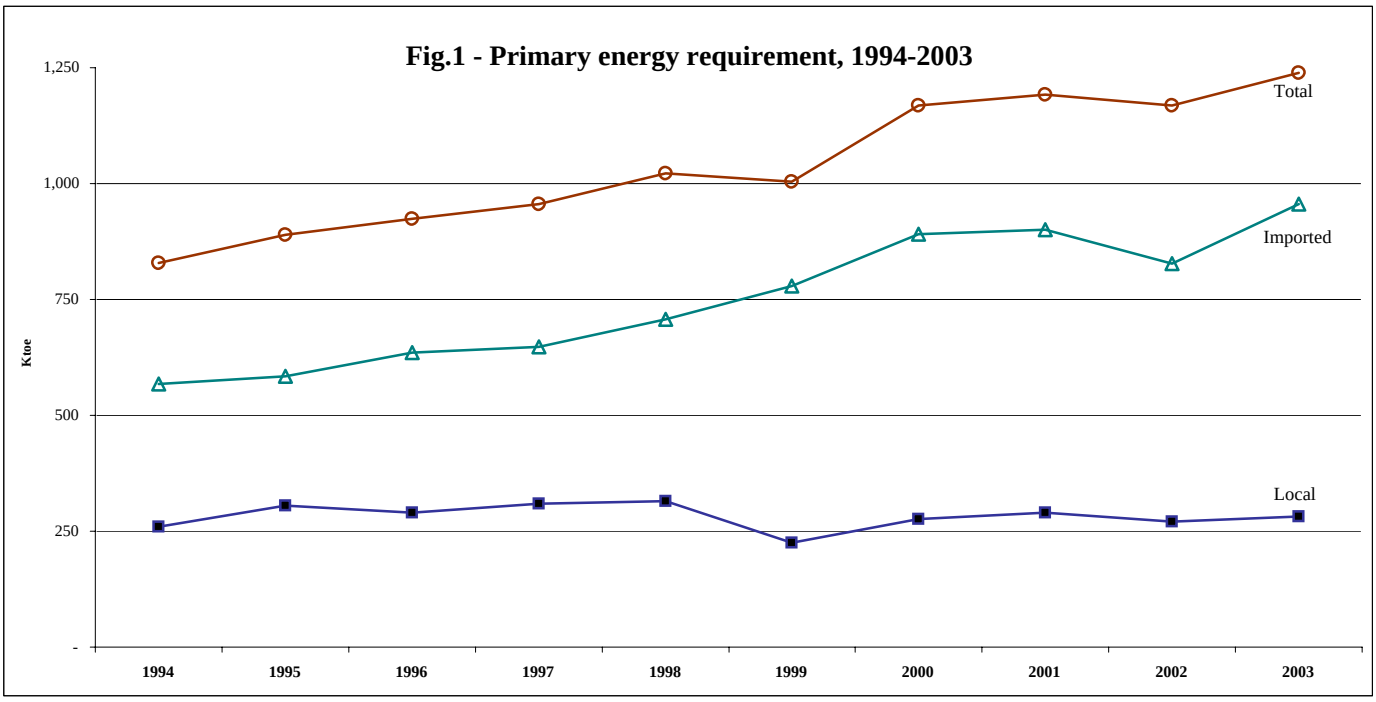


Table 4 - Imports of energy sources , 2002-2003

Energy source	2002				2003			
	Tonne (000)	Ktoe	%	C.I.F value (Rs million)	Tonne (000)	Ktoe	%	C.I.F value (Rs million)
Gasolene	80.3	86.7	7.7	605.7	86.8	93.8	8.1	748.5
Diesel Oil	346.4	349.9	31.1	2,223.6	308.8	311.9	27.0	2,206.9
Dual Purpose Kerosene	225.5	234.5	20.8	1,563.8	227.7	236.8	20.5	1,757.0
Kerosene	*14.3*	*14.9*	*1.3*	*102.8*	*20.2*	*21.0*	*1.8*	*168.5*
Aviation Fuel	*211.1*	*219.6*	*19.5*	*1,461.0*	*207.5*	*215.8*	*18.7*	*1,588.5*
Fuel Oil	208.6	200.2	17.8	1,067.2	288.0	276.5	24.0	1,452.9
LPG	55.9	60.4	5.4	534.5	51.5	55.6	4.8	518.2
Sub total (petroleum products)		***931.7***	***82.8***	***5,994.6***		***974.5***	***84.5***	***6,683.5***
Coal	312.0	193.5	17.2	342.7	289.4	179.4	15.5	307.8
Total imports		**1,125.2**	**100.0**	**6,337.4**		**1,154.0**	**100.0**	**6,991.4**

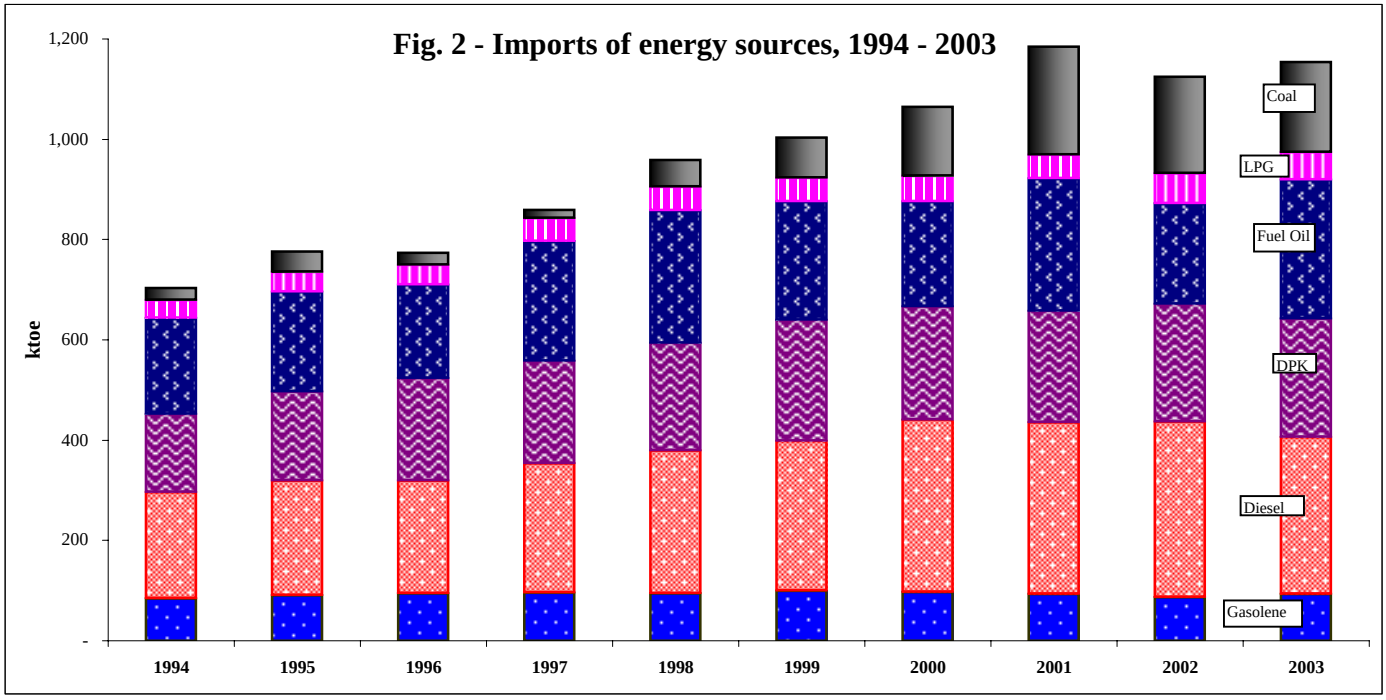


Table 5 - Re-exports of energy sources to foreign aircraft and bunkers, 2002-2003

Energy Re-exported	2002			2003		
	Tonne	**Ktoe**	**%**	**Tonne**	**Ktoe**	**%**
Aviation fuel to foreign aircraft	92,820	96.5	36.8	88,725	92.3	41.1
Diesel oil	138,540	139.9	53.4	97,667	98.6	44.0
Fuel oil	26,700	25.6	9.8	34,770	33.4	14.9
Total		**262.1**	**100.0**		**224.3**	**100.0**

Table 6 - Evolution of plant capacities, peak demand and electricity generation, 2002-2003

Year	Installed capacity (MW)	Effective capacity (MW)	Peak demand (MW)	Electricity generated (GWh)		
				Hydro	Thermal	Total
2002	650.9	569.7	308.6	85.9	1,863.0	1,948.9
2003	650.8	568.3	323.8	117.8	1,940.4	2,058.2

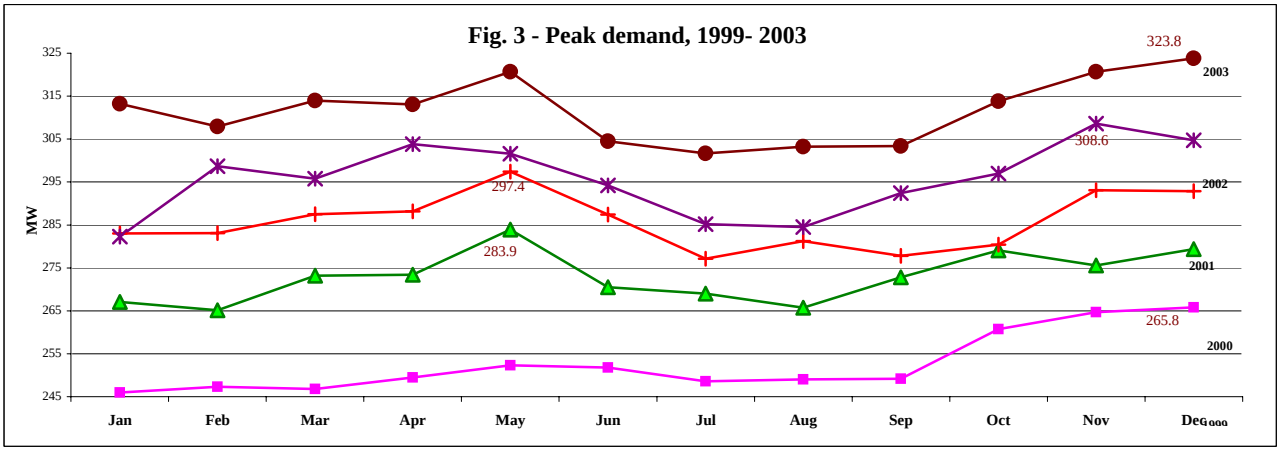


Table 7 - Electricity production by source of energy, 2002-2003

Source of energy	2002		2003	
	GWh	%	GWh	%
Primary energy	**85.9**	**4.4**	**117.8**	**5.7**
Hydro	85.9	4.4	117.8	5.7
Secondary energy	**1,863.0**	**95.6**	**1,940.4**	**94.3**
Gas turbine (kerosene)	18.0	0.9	32.3	1.6
Diesel & Fuel oil	887.4	45.5	1,003.5	48.8
Coal	505.5	25.9	467.1	22.7
Bagasse	452.1	23.2	437.6	21.3
Total	**1,948.9**	**100.0**	**2,058.2**	**100.0**

Table 8 - Generation of electricity by CEB and IPP, 2002 - 2003

Power producer	2002		2003	
	GWh	%	GWh	%
CEB	**991.0**	**50.8**	**1,134.9**	**55.1**
Island of Mauritius	968.4	**49.7**	1,110.5	**54.0**
Hydro	*85.6*	**4.4**	*117.7*	**5.7**
Thermal	*882.8*	**45.3**	*992.8*	**48.2**
Island of Rodrigues(*Thermal*)	22.6	**1.2**	24.4	**1.2**
IPP	**957.9**	**49.2**	**923.3**	**44.9**
Total hydro	0.3	**0.0**	0.1	**0.0**
of which: exported to CEB	*0.0*	***0.0***	*0.0*	***0.0***
Total thermal	957.6	**49.1**	923.2	**44.9**
of which: exported to CEB	*746.7*	***38.3***	*729.5*	***35.4***
Total	**1,948.9**	**100.0**	**2,058.2**	**100.0**
Island of Mauritius				
CEB	968.4	56.5	1,110.5	60.4
IPP export to CEB	746.7	43.5	729.5	39.6
Total units generated for sales	**1,715.1**	**100.0**	**1,840.0**	**100.0**

Source: Central Electricity Board and Annual Sugar Industry Energy Survey

Fig. 4 - Generation of electricity by CEB and IPP(export to CEB), 1994-2003

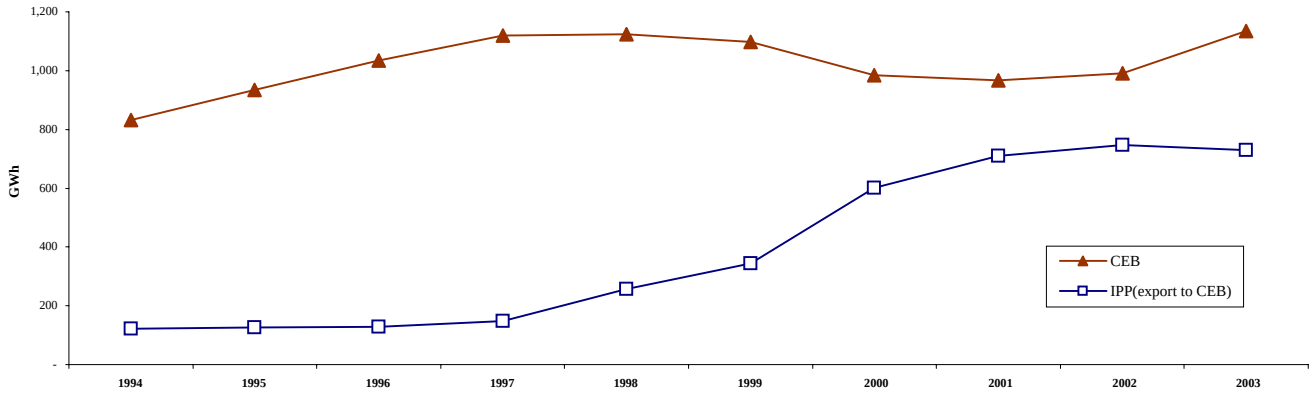


Table 9 - Fuel input for electricity production, 2002 - 2003

Fuel	2002			2003		
	Tonne	Ktoe	%	Tonne	Ktoe	%
Fuel oil	179,616	172.4	32.4	204,459	196.3	35.3
Diesel oil	3,482	3.5	0.7	3,896	3.9	0.7
Kerosene	5,443	5.7	1.1	9,864	10.3	1.8
Coal	286,886	177.9	33.4	287,176	178.0	32.0
Bagasse	1,081,661	173.1	32.5	1,046,794	167.5	30.1
Total		**532.5**	**100.0**		**556.0**	**100.0**

Source: Central Electricity Board and Annual Sugar Industry Energy Survey

Table 10 - Sales of electricity by type of tariff, 2002 - 2003

Type of tariff	2002			2003		
	No. of consumers	Consumption (MWh)	Average sales price[1] per KWh (Rupees)	No. of consumers	Consumption (MWh)	Average sales price[1] per KWh (Rupees)
Domestic	303,620	532,549	3.10	311,523	564,606	3.14
Commercial	29,030	424,918	4.02	29,779	479,255	4.00
Industrial	7,164	527,948	2.12	7,218	552,006	2.12
of which: irrigation	376	27,479	1.62	401	26,955	1.62
Other	311	24,412	4.28	328	31,027	4.31
Total	**340,125**	**1,509,827**	**3.03**	**348,848**	**1,626,894**	**3.07**

1 Excluding VAT & meter rent

Source: Central Electricity Board (CEB)

Fig. 5 - Electricity consumption 2003

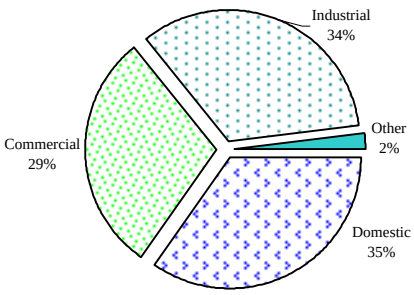


Fig. 6- Sales value 2003

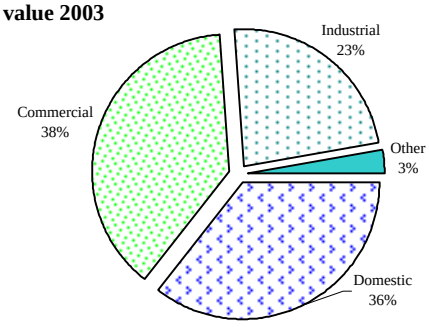


Table 11 - Final energy consumption by sector and type of fuel, 2002 - 2003

Sector	2002			2003		
	Tonne/GWh	Ktoe	%	Tonne/GWh	Ktoe	%
1. Manufacturing		**249.2**	**32.6**		**260.3**	**32.0**
1.1 excluding bagasse		**178.4**	**23.3**		**178.6**	**22.0**
Fuel oil	61,439	59.0	7.7	55,615	53.4	6.6
Diesel oil	37,409	37.8	4.9	41,273	41.7	5.1
LPG	3,502	3.8	0.5	2,964	3.2	0.4
Coal	25,888	16.1	2.1	29,000	18.0	2.2
Fuel wood [1]	1,450	0.6	0.1	1,430	0.5	0.1
Electricity (*GWh*)	711.70	61.2	8.0	718.88	61.8	7.6
1.2 bagasse	**442,722**	**70.8**	**9.3**	**510,246**	**81.6**	**10.0**
2. Transport		**364.1**	**47.6**		**390.2**	**48.0**
Gasolene	87,507	94.5	12.4	89,242	96.4	11.9
LPG	1,216	1.3	0.2	2,223	2.4	0.3
Diesel oil	153,437	155.0	20.3	161,267	162.9	20.0
Aviation Fuel	108,972	113.3	14.8	123,627	128.6	15.8
3. Household		**102.8**	**13.4**		**107.0**	**13.2**
Kerosene	8,409	8.7	1.1	8,265	8.6	1.1
LPG	39,023	42.1	5.5	40,559	43.8	5.4
Fuel wood [1]	15,850	6.0	0.8	15,780	6.0	0.7
Charcoal [1]	130	0.1	0.0	125	0.1	0.0
Electricity (*GWh*)	532.55	45.8	6.0	564.61	48.6	6.0
4. Commercial and Distributive Trade		**41.7**	**5.5**		**47.7**	**5.9**
LPG	4,559	4.9	0.6	5,749	6.2	0.8
Charcoal [1]	340	0.3	0.0	350	0.3	0.0
Electricity (*GWh*)	424.9	36.5	4.8	479.3	41.2	5.1
5. Agriculture		**4.8**	**0.6**		**4.8**	**0.6**
Diesel oil [1]	2,430	2.5	0.3	2,410	2.4	0.3
Electricity (*GWh*)	27.5	2.4	0.3	27.0	2.3	0.3
6. Other (n.e.s)		**2.4**	0.3		**2.9**	0.4
TOTAL		**765.0**	**100.0**		**812.9**	**100.0**

1 Estimates

Fig.7 - Final energy consumption, 1994-2003

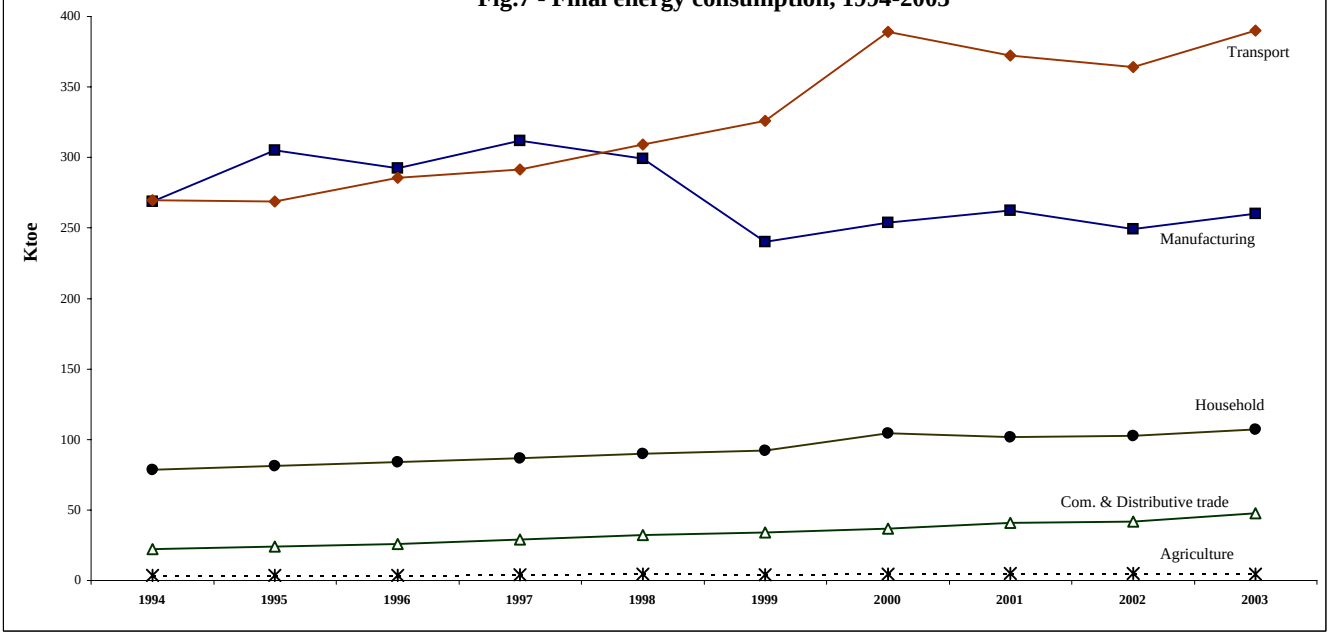
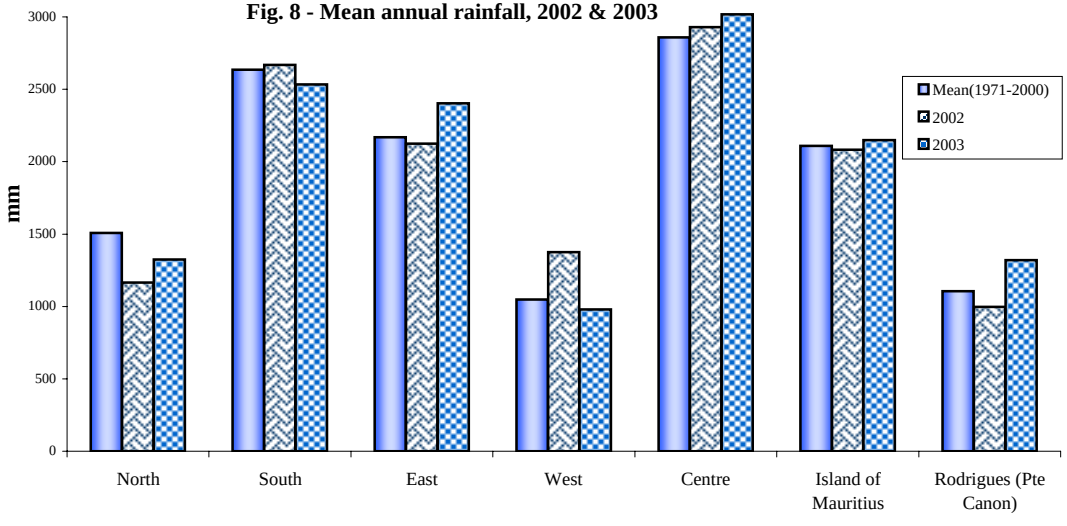


Table 12 - Mean rainfall 2002 & 2003

Millimetres

Period	Long Term Mean (1971-2000)	2002		2003		Long Term Mean (1971-2000)	2002		2003		Long Term Mean (1971-2000)	2002		2003		Long Term Mean (1971-2000)	2002		2003		Long Term Mean (1971-2000)	2002		2003	
		Mean	% of Long Term Mean	Mean	% of Long Term Mean		Mean	% of Long Term Mean	Mean	% of Long Term Mean		Mean	% of Long Term Mean	Mean	% of Long Term Mean		Mean	% of Long Term Mean	Mean	% of Long Term Mean		Mean	% of Long Term Mean	Mean	% of Long Term Mean
	North					**South**					**East**					**West**					**Center**				
Year	***1,310***	**1,166**	**89**	**1325**	**101**	***2,557***	**2,537**	**99**	**2,533**	**99**	***2,065***	**2,124**	**103**	**2403**	**116**	***918***	**1,374**	**150**	**981**	**107**	***2,790***	**2,930**	**224**	**3,018**	**230**
Jan	***186***	358	**192**	103	**55**	***290***	546	**188**	181	**62**	***260***	588	**226**	136	**52**	***167***	793	**475**	93	**56**	***354***	804	**432**	197	**106**
Feb	***245***	56	**23**	237	**97**	***366***	99	**27**	424	**116**	***336***	135	**40**	352	**105**	***219***	103	**47**	192	**88**	***464***	174	**71**	490	**200**
Mar	***161***	190	**118**	139	**86**	***325***	284	**87**	212	**65**	***243***	260	**107**	265	**109**	***112***	90	**80**	83	**74**	***337***	313	**194**	269	**167**
Apr	***134***	67	**50**	316	**236**	***280***	253	**90**	434	**155**	***245***	157	**64**	579	**236**	***97***	32	**33**	319	**329**	***293***	209	**156**	521	**389**
May	***107***	83	**78**	139	**130**	***212***	192	**91**	258	**122**	***180***	184	**102**	229	**127**	***56***	31	**55**	83	**148**	***210***	247	**231**	354	**331**
Jun	***72***	71	**99**	60	**83**	***157***	234	**149**	187	**119**	***123***	136	**111**	142	**115**	***33***	68	**206**	38	**115**	***163***	207	**288**	195	**271**
Jul	***73***	100	**137**	77	**105**	***180***	202	**112**	319	**177**	***116***	181	**156**	216	**186**	***25***	32	**128**	47	**188**	***181***	200	**274**	315	**432**
Aug	***68***	61	**90**	70	**103**	***180***	212	**118**	111	**62**	***114***	117	**103**	117	**103**	***26***	21	**81**	29	**112**	***192***	218	**321**	163	**240**
Sep	***44***	19	**43**	78	**177**	***112***	56	**50**	214	**191**	***79***	51	**65**	173	**219**	***20***	6	**30**	23	**115**	***126***	63	**143**	245	**557**
Oct	***41***	39	**95**	21	**51**	***96***	70	**73**	47	**49**	***74***	68	**92**	34	**46**	***18***	27	**150**	6	**33**	***102***	87	**212**	65	**159**
Nov	***47***	20	**43**	56	**119**	***110***	51	**46**	100	**91**	***86***	35	**41**	97	**113**	***31***	7	**23**	27	**87**	***105***	87	**185**	119	**253**
Dec	***132***	102	**77**	29	**22**	***249***	338	**136**	46	**18**	***209***	212	**101**	63	**30**	***114***	164	**144**	41	**36**	***263***	321	**243**	85	**64**
	Island of Mauritius					**Island of Rodrigues (Pointe Canon)**																			
Year	***2,006***	**2,082**	**104**	**2,148**	**107**	***1,105***	**997**	**90**	**1,320**	**119**															
Jan	***261***	602	**231**	142	**54**	***150***	127	**85**	91	**61**															
Feb	***336***	118	**35**	358	**107**	***185***	66	**36**	87	**47**															
Mar	***242***	242	**100**	204	**84**	***131***	189	**144**	365	**279**															
Apr	***221***	151	**68**	454	**205**	***117***	62	**53**	336	**287**															
May	***159***	157	**99**	218	**137**	***78***	81	**104**	115	**147**															
Jun	***115***	144	**125**	128	**111**	***78***	69	**88**	61	**78**															
Jul	***120***	151	**126**	208	**173**	***81***	76	**94**	65	**80**															
Aug	***122***	129	**106**	105	**86**	***59***	154	**261**	35	**59**															
Sep	***81***	43	**53**	150	**185**	***44***	46	**105**	69	**157**															
Oct	***70***	63	**90**	36	**51**	***41***	63	**154**	24	**59**															
Nov	***80***	43	**54**	86	**108**	***70***	14	**20**	56	**79**															
Dec	***199***	239	**120**	59	**30**	***71***	50	**70**	16	**23**															

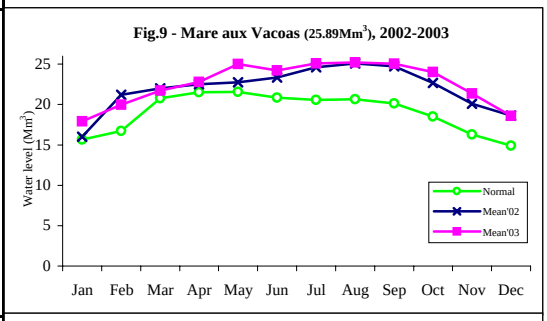
Fig. 8 - Mean annual rainfall, 2002 & 2003

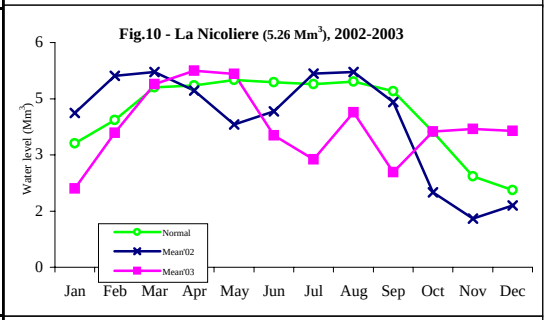


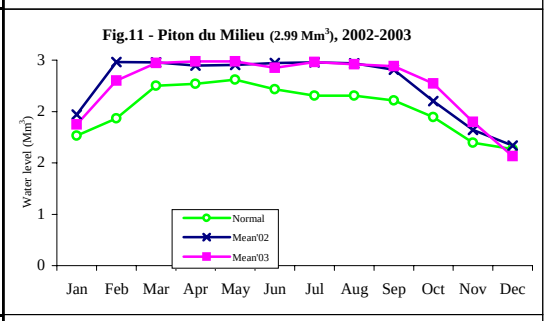
Source: Mauritius Meteorological Services

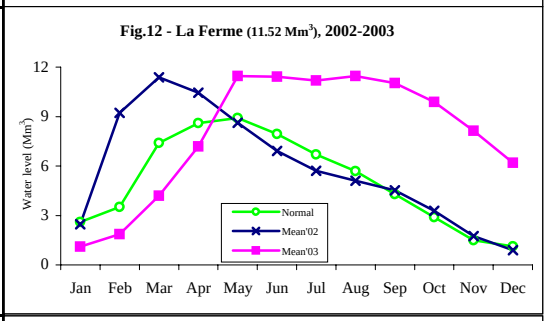
Table 13 - Percentage water level by month and reservoir - 2002, 2003

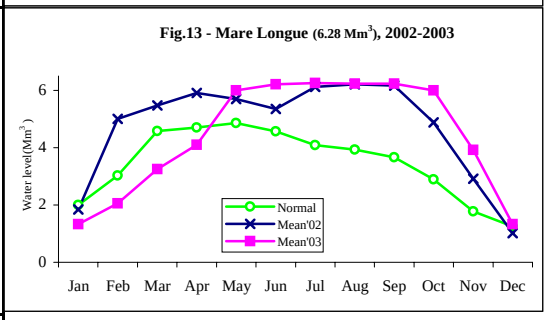
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mare aux Vacoas													
Normal*		*60*	*65*	*80*	*83*	*83*	*81*	*79*	*80*	*78*	*72*	*63*	*58*
2002	Mean	62	82	85	87	88	**90**	**95**	**97**	**96**	88	78	72
	Min	73	80	80	85	87	89	93	96	93	83	73	70
	Max	82	84	87	89	89	93	96	98	98	92	82	73
2003	Mean	69	77	84	88	**97**	**94**	**97**	**97**	**97**	**93**	83	72
	Min	66	68	81	83	92	92	94	95	95	88	79	65
	Max	73	85	86	91	99	95	98	98	98	97	88	78
La Nicoliere													
Normal*		*63*	*75*	***91***	***92***	***95***	***94***	***93***	***94***	*89*	*69*	*46*	*39*
2002	Mean	78	**97**	**99**	**90**	74	80	**98**	**99**	85	39	25	31
	Min	19	93	96	78	66	67	92	96	61	31	19	20
	Max	31	100	100	98	79	91	100	100	98	59	31	40
2003	Mean	40	68	**93**	**100**	**98**	67	55	79	48	69	75	69
	Min	36	45	84	97	89	38	28	52	29	50	63	49
	Max	44	93	100	100	100	88	96	100	82	92	91	88
Piton du Milieu													
Normal*		*64*	*72*	*88*	*89*	***91***	*86*	*83*	*83*	*81*	*73*	*60*	*57*
2002	Mean	72	**98**	**99**	**98**	**98**	**99**	**99**	**99**	**96**	80	66	59
	Min	58	70	98	95	96	98	98	97	88	74	58	55
	Max	73	100	100	100	99	100	100	100	99	88	73	67
2003	Mean	69	**90**	**99**	**100**	**100**	**97**	**99**	**99**	**97**	89	70	54
	Min	65	74	97	98	98	94	98	97	95	79	64	45
	Max	74	100	100	100	100	99	100	100	100	97	79	64
La Ferme													
Normal*		*23*	*30*	*64*	*75*	*77*	*69*	*58*	*49*	*37*	*25*	*13*	*10*
2002	Mean	21	80	**98**	**91**	75	60	50	44	39	29	15	8
	Min	10	59	74	83	66	54	46	42	35	21	10	5
	Max	21	95	100	98	82	66	54	46	43	35	21	10
2003	Mean	10	16	36	62	**100**	**99**	**97**	**99**	**96**	86	71	54
	Min	9	8	30	43	94	96	94	98	93	80	63	44
	Max	11	29	43	92	100	100	100	100	98	93	79	62
Mare Longue													
Normal*		*32*	*48*	*73*	*75*	*77*	*73*	*65*	*63*	*58*	*46*	*28*	*20*
2002	Mean	28	80	87	**94**	**91**	85	**98**	**99**	**98**	78	46	16
	Min	27	76	83	90	82	82	93	99	94	62	27	11
	Max	61	99	90	97	96	93	99	99	99	93	61	25
2003	Mean	21	33	52	65	**96**	**99**	**100**	**99**	**99**	**96**	63	21
	Min	19	16	48	57	76	98	98	98	98	85	43	4
	Max	22	47	57	74	100	100	100	100	100	99	84	42
All reservoirs (excluding Midlands Dam)													
Normal*		*49*	*56*	*77*	*82*	*83*	*79*	*75*	*73*	*68*	*58*	*46*	*41*
2002	Mean	51	84	**90**	**90**	84	82	86	86	82	68	54	46
2003	Mean	47	58	71	81	**97**	**93**	**93**	**96**	**92**	89	76	60
Midlands Dam													
2003	Mean	24	49	70	**90**	**100**	**100**	**99**	**100**	**100**	**94**	81	69
	Min	*19*	31	64	78	100	99	99	99	99	83	74	65
	Max	31	63	78	100	100	100	100	100	100	99	83	74

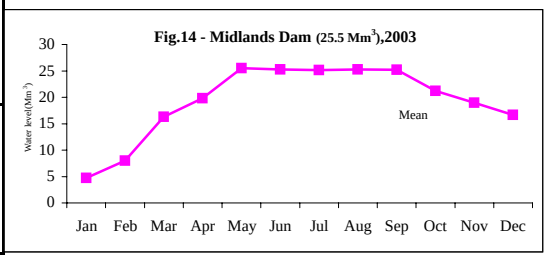












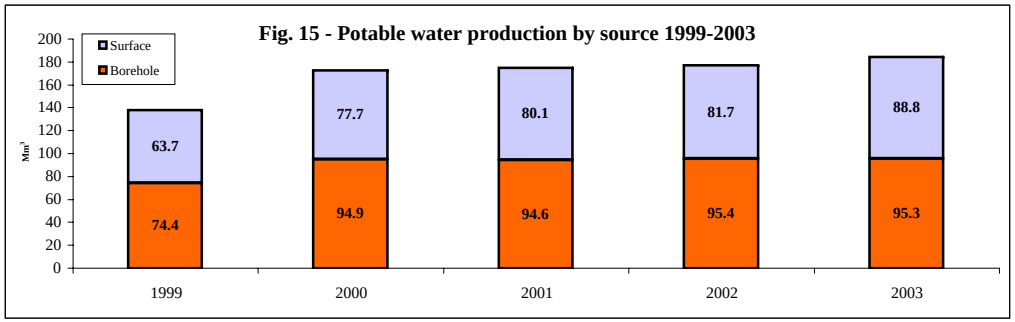
***** Normal is the long term mean for 1990-1999

Source: Water Resources Unit

Table 14 - Average monthly potable water production (Mm^3), 2002-2003 (*Island of Mauritius*)

Month	Mare Aux Vacoas (Upper)			Mare Aux Vacoas (Lower)			Port -Louis			District water supply - North			District water supply - South			District water supply - East			Total production				
	Surface	Borehole	Total	Surface	Borehole	Total	Surface	Borehole	Total	Surface	Borehole	Total	Surface	Borehole	Total	Surface	Borehole	Total	Surface	Borehole	Total	Surface	Borehole
	Million cubic metres (Mm^3)																						
2002	**30.0**	**6.0**	**36.0**	**0.1**	**26.5**	**26.6**	**19.6**	**12.0**	**31.7**	**14.2**	**23.8**	**38.0**	**8.5**	**14.0**	**22.5**	**9.2**	**13.1**	**22.3**	**81.7**	**95.4**	**177.1**	**46.1%**	**53.9%**
Jan	2.5	0.5	**2.9**	0.0	2.1	**2.1**	1.7	1.0	**2.7**	1.0	2.0	**3.1**	0.7	1.2	**1.9**	0.7	1.1	**1.8**	6.6	7.9	**14.5**	45.8%	54.2%
Feb	2.2	0.5	**2.7**	0.0	2.1	**2.1**	1.6	1.0	**2.5**	1.0	2.0	**3.0**	0.7	1.1	**1.8**	0.7	1.0	**1.8**	6.2	7.7	**13.9**	44.7%	55.3%
Mar	2.5	0.5	**3.0**	0.0	2.4	**2.4**	1.9	1.1	**3.0**	1.1	2.3	**3.4**	0.7	1.2	**1.9**	0.8	1.1	**1.9**	7.0	8.5	**15.6**	45.2%	54.8%
Apr	2.3	0.5	**2.8**	0.0	2.2	**2.2**	1.9	1.0	**2.8**	1.1	2.0	**3.2**	0.7	1.2	**1.9**	0.8	1.0	**1.8**	6.7	7.9	**14.6**	46.1%	53.9%
May	2.3	0.5	**2.8**	0.0	2.3	**2.3**	2.0	0.8	**2.7**	1.2	2.1	**3.3**	0.7	1.1	**1.8**	0.8	1.0	**1.9**	7.1	7.8	**14.8**	47.6%	52.4%
Jun	2.4	0.5	**2.8**	0.0	2.2	**2.2**	1.9	0.7	**2.6**	1.1	2.0	**3.1**	0.6	1.1	**1.7**	0.8	1.0	**1.8**	6.8	7.5	**14.3**	47.6%	52.4%
Jul	2.5	0.5	**2.9**	0.0	2.3	**2.3**	1.9	0.8	**2.7**	1.2	2.0	**3.2**	0.7	1.1	**1.8**	0.8	1.0	**1.8**	7.1	7.6	**14.7**	48.1%	51.9%
Aug	2.5	0.5	**3.0**	0.0	2.2	**2.2**	1.9	0.7	**2.6**	1.4	1.9	**3.3**	0.7	1.1	**1.8**	0.8	1.0	**1.8**	7.3	7.4	**14.7**	49.7%	50.3%
Sep	2.5	0.5	**3.0**	0.0	2.3	**2.3**	1.7	0.8	**2.5**	1.5	1.8	**3.3**	0.7	1.2	**1.8**	0.8	1.1	**1.9**	7.2	7.6	**14.8**	48.7%	51.3%
Oct	2.7	0.5	**3.3**	0.0	2.2	**2.2**	1.7	0.9	**2.6**	1.1	1.9	**3.0**	0.8	1.3	**2.1**	0.7	1.3	**2.0**	7.0	8.1	**15.1**	46.5%	53.5%
Nov	2.8	0.5	**3.3**	0.0	2.1	**2.1**	0.8	1.7	**2.5**	1.1	1.9	**3.0**	0.7	1.3	**2.0**	0.7	1.2	**1.9**	6.2	8.7	**14.8**	41.6%	58.4%
Dec	2.9	0.5	**3.4**	0.0	2.2	**2.2**	0.8	1.7	**2.5**	1.3	1.9	**3.1**	0.7	1.3	**2.1**	0.8	1.2	**2.0**	6.5	8.8	**15.3**	42.3%	57.7%
2003	**33.3**	**6.1**	**39.4**	**-**	**28.4**	**28.4**	**19.4**	**11.6**	**31.0**	**18.5**	**20.7**	**39.2**	**8.5**	**14.5**	**23.0**	**9.2**	**14.0**	**23.2**	**88.8**	**95.3**	**184.1**	**48.3%**	**51.7%**
Jan	2.9	0.5	**3.4**	-	2.2	**2.2**	1.7	0.9	**2.6**	1.6	1.8	**3.4**	0.8	1.3	**2.1**	0.7	1.2	**2.0**	7.6	8.0	**15.6**	48.8%	51.2%
Feb	2.6	0.5	**3.0**	-	2.1	**2.1**	1.5	0.9	**2.5**	1.5	1.5	**3.1**	0.7	1.2	**1.8**	0.7	1.1	**1.8**	6.9	7.3	**14.2**	48.9%	51.1%
Mar	2.9	0.5	**3.4**	-	2.5	**2.5**	1.7	1.1	**2.8**	1.5	1.8	**3.3**	0.7	1.2	**2.0**	0.8	1.2	**2.0**	7.6	8.3	**15.9**	48.0%	52.0%
Apr	2.8	0.5	**3.3**	-	2.4	**2.4**	1.6	1.1	**2.6**	1.5	1.7	**3.3**	0.7	1.2	**1.9**	0.8	1.2	**2.0**	7.4	8.1	**15.5**	47.7%	52.3%
May	2.8	0.6	**3.4**	-	2.6	**2.6**	1.2	1.1	**2.3**	1.7	1.7	**3.4**	0.7	1.2	**2.0**	0.8	1.2	**2.1**	7.2	8.4	**15.7**	46.2%	53.8%
Jun	2.8	0.5	**3.3**	-	2.5	**2.5**	1.6	1.0	**2.6**	1.5	1.7	**3.2**	0.7	1.2	**1.9**	0.8	1.2	**2.0**	7.4	8.0	**15.4**	47.8%	52.2%
Jul	2.9	0.5	**3.4**	-	2.5	**2.5**	1.7	0.9	**2.6**	1.5	1.8	**3.3**	0.7	1.2	**1.9**	0.8	1.2	**2.0**	7.6	8.1	**15.7**	48.6%	51.4%
Aug	2.8	0.5	**3.3**	-	2.5	**2.5**	1.9	0.9	**2.9**	1.6	1.8	**3.4**	0.7	1.2	**1.8**	0.8	1.2	**2.0**	7.8	8.0	**15.8**	49.2%	50.8%
Sep	2.7	0.5	**3.2**	-	2.4	**2.4**	1.7	1.0	**2.7**	1.5	1.8	**3.2**	0.7	1.2	**1.9**	0.8	1.1	**1.9**	7.3	8.0	**15.3**	48.0%	52.0%
Oct	2.7	0.5	**3.2**	-	2.4	**2.4**	1.6	0.9	**2.6**	1.5	1.7	**3.3**	0.7	1.2	**1.9**	0.8	1.1	**1.9**	7.3	7.8	**15.1**	48.3%	51.7%
Nov	2.7	0.5	**3.2**	-	2.2	**2.2**	1.6	0.9	**2.5**	1.5	1.7	**3.3**	0.7	1.2	**2.0**	0.7	1.1	**1.8**	7.3	7.7	**15.0**	48.8%	51.2%
Dec	2.8	0.5	**3.3**	-	2.2	**2.2**	1.6	0.9	**2.4**	1.6	1.7	**3.3**	0.6	1.3	**1.9**	0.7	1.2	**1.9**	7.3	7.7	**15.0**	48.8%	51.2%

Source: Central Water Authority



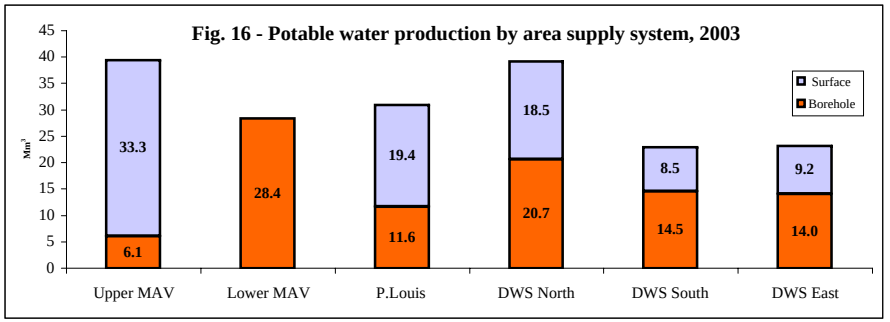


Table 15 - Water sales by type of tariff of subscriber, 2002 - 2003 (*Island of Mauritius*)

Type of tariff	2002							2003						
	Subscribers		Volume sold (m³)		Amount collectible		Average consumption (m³)	Subscribers		Volume sold (m³)		Amount collectible		Average consumption (m³)
	No.	%	Mm³	%	Rs million	%		No.	%	Mm³	%	Rs million	%	
Domestic	243,689	93.8	67.6	67.1	441.6	56.5	277	250,752	93.8	70.3	67.7	505.8	56.0	280
Government	3,538	1.4	4.0	4.0	71.3	9.1	1,138	3,614	1.4	4.2	4.1	77.1	8.5	1,170
Acquired / concessionary prises	48	0.0	0.0	0.0	0.1	0.0	427	48	0.0	0.0	0.0	0.2	0.0	472
Commercial	9,233	3.6	5.2	5.1	79.0	10.1	562	9,455	3.5	5.6	5.4	92.3	10.2	589
Hotels, Guest Houses	191	0.1	3.5	3.5	90.5	11.6	18,285	192	0.1	3.6	3.5	106.5	11.8	18,978
Industrial	766	0.3	4.7	4.7	65.8	8.4	6,171	762	0.3	5.0	4.8	74.7	8.3	6,546
Sub total	***257,465***	***99.1***	***85.1***	***84.4***	***748.4***	***95.8***	***330***	***264,823***	***99.1***	***88.7***	***85.5***	***856.6***	***94.8***	***335***
Vegetable & Livestock producers	2,009	0.8	1.0	1.0	8.0	1.0	509	2,174	0.8	1.1	1.1	8.6	1.0	508
Total potable water	**259,474**	**99.9**	**86.1**	**85.4**	**756.4**	**96.8**	**332**	**266,997**	**99.9**	**89.8**	**86.5**	**865.3**	**95.7**	**336**
Total non-treated water *(agriculture/Industrial)*	**231**	**0.1**	**14.7**	**14.6**	**23.8**	**3.0**	**63,607**	**253**	**0.1**	**14.0**	**13.5**	**38.4**	**4.3**	**55,310**
Grand Total	**259,705**	**100.0**	**100.8**	**100.0**	**780.1**	**99.9**	**388**	**267,250**	**100.0**	**103.8**	**100.0**	**903.7**	**100.0**	**389**

Source: Central Water Authority

Fig. 17 - Percentage of water sold by type of tariff, 2003

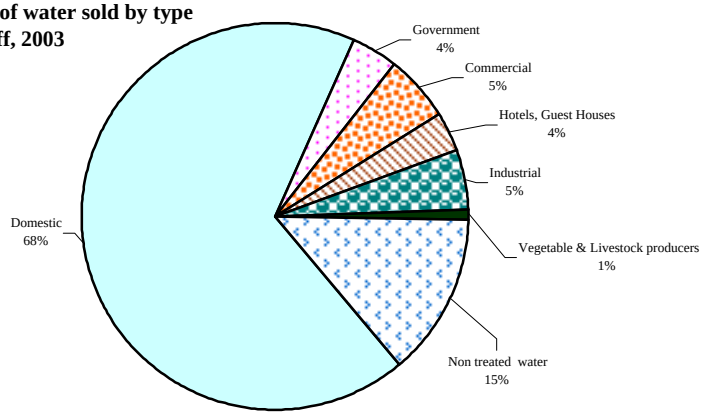


Fig. 18 - Percentage of amount collectible by type of tariff, 2003

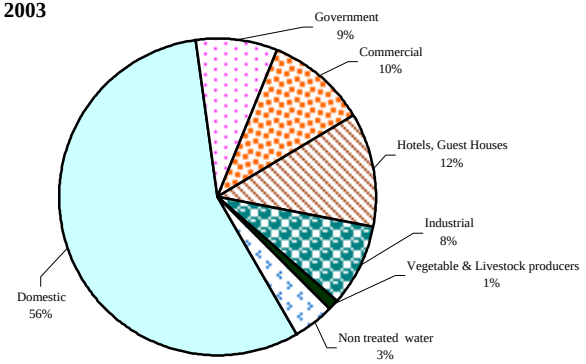


Table 16 - Main Indicators, 1999 - 2003

Indicators	Unit	1999	2000	2001	2002	2003
Mid-year population, Republic of Mauritius	thousand	1,174	1,187	1,200	1,210	1,223
GDP in1990 rupees[1]	Rs.Million	61,332	66,607	70,071	71,542	74,618
GDP index (1990 = 100)[1]		154.77	168.08	176.82	180.53	188.29
Total primary energy requirement	ktoe	1,003.50	1,125.93	1,191.53	1,168.84	1,238.57
Imported	*ktoe*	*778.92*	*849.02*	*901.17*	*898.76*	*956.28*
Local	*ktoe*	*224.58*	*276.91*	*290.36*	*270.08*	*282.30*
Total primary energy requirement index (1990 = 100)		134.47	150.88	159.67	156.63	165.97
Annual increase	%	-1.79	+12.20	+5.83	-1.90	5.97
Import dependency	%	77.62	75.41	75.63	76.89	77.21
Energy intensity	toe per Rs.100,000 GDP	1.90	1.69	1.70	1.63	1.66
Per capita primary energy requirement	toe	0.85	0.95	0.99	0.97	1.01
Total final energy consumption	ktoe	698.3	749.0	784.4	765.1	765.1
Per capita final energy consumption	toe	0.59	0.63	0.65	0.63	0.66
Total electricity generated	GWh	1,585	1,778	1,911	1,949	2,058
Total electricity sold	GWh	1,244	1,374	1,467	1,510	1,627
Per capita consumption of electricity sold	kWh	1,059	1,158	1,222	1,248	1,330
Mean annual rainfall, Island of Mauritius	Millimetres	1,171	2,010	1,891	2,082	2,148
Mean annual rainfall, Island of Rodrigues	Millimetres	781	974	883	997	1,320
Potable water produced[2]	Mm^3	125	170	175	177	184
Potable water consumed[2]	Mm^3	78	82	85	86	89
Potable water produced per capita per day[2]	litres	300	403	411	413	425
Potable water consumed per capita per day[2]	litres	188	196	200	201	207

1 Revised

2 Refer to Island of Mauritius only