### **ENERGY AND WATER STATISTICS - 2002**

#### Introduction

This issue of the "Economic and Social Indicators" consists of Energy and Water Statistics for the years 2001 and 2002. The scope which was restricted to energy statistics has been extended to cover statistics on water production, storage and sales. These statistics have been compiled in close collaboration with the Ministry of Public Utilities, Central Electricity Board, Central Water Authority and Water Resources Unit. The tables refer to the Republic of Mauritius unless otherwise stated.

For meaningful analysis, the quantities of the different types of fuel have been expressed in common energy unit, namely, tonnes of oil equivalent (**toe**). To be consistent with international practices, the energy content of electricity has been revised from its thermal primary equivalent to its thermal final equivalent. This change in conversion factor has a downward effect on our final energy consumption. Figures for 1992 onwards have been amended accordingly. The conversion factors used are given on page 6.

Energy commodity balance for the years 2001 and 2000 are given in Tables 1 and 2, imports and reexports of energy sources, in Tables 4 and 5 and final energy consumption, in Table 11.

Percentages of water storage levels are given in Table 12, monthly water production, in Table 13 and water sales, in Table 14.

#### 2. Energy

### 2.1 The energy commodity balance

The energy commodity balance shows the supply and final uses of electricity and the different types of fuel. Total primary energy requirement 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.

### 2.2 Total primary energy requirement

For the year 2002, the total primary energy requirement of the country amounted to 1,168.8 ktoe showing a decrease of 1.9% when compared with the year 2001 (1,191.5 ktoe) (Table 3). Decreases were mainly registered for the following energy sources: aviation kerosene from 129.6 ktoe to 113.3 ktoe (-12.6%), bagasse from 267.4 ktoe to 243.9 ktoe (-8.8%) and fuel oil from 236.1 ktoe to 231.4 ktoe, (-2.0%).

The total primary energy requirement was derived from imported fuels (76.9%) and locally available sources (23.1%). In 2002, 704.8 ktoe of petroleum products were imported, made up mostly of fuel oil (32.8%), diesel (28.2%), aviation fuel (16.1%) and gasolene (13.4%).

Bagasse (243.9 ktoe) contributed to 90.3% of the indigenous production and the remaining 9.7% was derived from hydroelectricity and fuel wood (26.2 ktoe).

### 2.2.1 Local production

In 2002, total energy production from local sources dropped by 7.0% to 270.1 ktoe from 290.4 ktoe in 2001. This was mainly due to a reduction in production of bagasse following cyclone Dina which affected the cane cultivation.

Production of bagasse decreased by 8.8%, from 267.4 ktoe in 2001 to 243.9 ktoe in 2002. Hydroelectricity, on the other hand, increased by 21.2% from 15.6 ktoe to 18.9 ktoe. The production of fuel wood, as a source of energy, remained almost constant at 7.3 ktoe (Table 3).

### 2.2.2 Imports of energy sources

Data on imports of energy sources show that some 1,125.2 ktoe of petroleum products and coal were imported in 2002 compared to 1,184.8 ktoe in 2001, representing a drop of 5.0%. Imports of petroleum products decreased by 3.9 % from 969.4 ktoe to 931.7 ktoe and coal, by 10.2% from 215.4 ktoe to 193.5 ktoe. On the other hand the import bill was 1.7% higher in 2002, Rs 6,337.4 million against Rs 6,234.5 million in 2001, as a result of higher prices of petroleum products (Table 4).

### 2.2.3 Re-exports and bunkering

Of the 931.7 ktoe of imported petroleum products, 262.1 ktoe were re-exported to bunkers and foreign aircraft. Re-exports consisted of 139.9 ktoe of diesel oil, 25.6 ktoe of fuel oil and 96.5 ktoe of aviation fuel. (Table 5)

# 2.3 Electricity generation

In 2002, 1,948.9 GWh (167.6 ktoe) of electricity was generated, as compared to 1,910.8 GWh (164.3 ktoe) in 2001, representing an increase of 2.0%. The Central Electricity Board (CEB) generated 50.8% and the Independent Power Producers (IPP's) of the sugar industry, 49.2%. Thermal energy represented 95.6% and hydro, the remaining 4.4%. The effective capacity of the plants decreased from 579.2 MW in 2001 to 575.1 MW in 2002. The peak demand in 2002 reached 308.6 MW (Tables 6 - 8).

# 2.3.1 Fuel input for electricity generation

Table 9 shows the different types of fuel used for electricity generation. Fuel input increased from 537.3 ktoe in 2001 to 551.8 ktoe in 2002, representing an increase of 2.7%.

In 2002, the major components of the fuel input were bagasse (34.9%), coal (32.2%) and fuel oil (31.2%).

## 2.3.2 Number of electricity consumers and average unit price by category

The total number of electricity consumers increased from 333,028 in 2001 to 340,443 in 2002. The highest number of consumers (303,620) fell in domestic category, followed by commercial (29,030) and industrial (7,482). The average sales price of electricity increased from Rs 2.69 per KWh in 2001 to Rs 3.05 per KWh in 2002 (Table 10).

### 2.4 Final energy consumption

In 2002, some 765.1 ktoe of energy was consumed as final energy compared to 784.4 ktoe in 2001, representing a decrease of 2.5%. The important changes in the different sectors were as follows: "Manufacturing" (-5.0%), " Commercial and Distributive Trade" (+2.3%), "Transport" (-2.2%), and "Household" (+1.0%).

In 2002, "Transport" and "Manufacturing" were the two largest energy-consuming sectors accounting for 47.6% and 32.6% of total consumption respectively. Consumption by "Household" sector represented 13.4%, followed by "Commercial and Distributive Trade", 5.5% and "Agriculture", 0.6%. 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 in 2002 amounted to 249.2 ktoe, representing a decrease of 5.0% over the figure of 262.4 ktoe registered in 2001. Bagasse contributed 70.8 ktoe, electricity, 61.2 ktoe, fuel and diesel oil, 96.8 ktoe.

# 2.4.2 Transport

In 2002, 364.1 ktoe of energy were used for transportation. Consumption of gasolene and aviation fuel decreased by 0.3% from 94.8 ktoe to 94.5 ktoe and by 12.6% from 129.6 to 113.3 respectively. On the other hand, consumption of diesel oil went up by 5.4% from 147.0 ktoe to 155.0 ktoe. A significant increase of

44.4% in the use of LPG in the transport sector, from 0.9 ktoe in 2001 to 1.3 ktoe in 2002, was also noted.

#### 2.4.3 Commercial and Distributive Trade

Total energy consumption by "Commercial and Distributive Trade" sector stood at 41.7 ktoe in 2002 compared to 40.8 ktoe in 2001. Electricity was the main source of energy and its consumption increased from 35.7 ktoe in 2001 to 36.5 ktoe in 2002.

# 2.4.4 Household

In 2002, energy consumed by households increased by 1.0% to 102.8 ktoe. The two main sources of energy used by households were electricity and LPG. Consumption of these two sources increased from 44.9 ktoe to 45.8 ktoe (2.0%) and from 40.9 ktoe to 42.1 ktoe (2.9%) respectively.

# 2.4.5 Agriculture

Electricity and diesel oil are the only two sources of energy used in agriculture. In 2002, 2.4 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 Water storage level

In 2002, the minimum and maximum percentage water storage level of the different reservoirs were as follows:

Mare aux Vacoas (70.2% and 98.0%)

La Nicoliere (18.8% and 100.0%)

Piton du Milieu (54.8% and 100.0%)

La Ferme (5.5% and 100.0%)

Mare Longue (11.5% and 99.4%)

The mean water level for all the reservoirs combined together varied from 46.0% to 90.4% during the same period (Table 12). It is to be noted that the mean water level is computed as the average level during a month.

# 3.2 Water production

The total water production by the different water plants amounted to 177.1 million cubic metres (Mm³) in 2002, a 1.4% increase compared to 174.7 Mm³ in 2001. In 2002, average water production from surface and ground water represented 46.1% and 53.9% respectively (Table 13).

#### 3.3 Water sales and revenue collectible

Total volume of water sold decreased from 101.9 Mm<sup>3</sup> in 2001 to 100.8 Mm<sup>3</sup> in 2002 (-1.1%). Potable water made up 85.4% of the volume sold and the remaining 14.6% consisted of non-treated water. Water for domestic consumption amounted to 67.6 Mm<sup>3</sup>, accounting for nearly 67 % of the water sales.

The amount of revenue collectible for the year 2002 amounted to about Rs 780 million, that is an increase of 4.2% over the amount of Rs 749 million for 2001 (Table 14).

#### 4. Main indicators

As shown in Table 15, the total primary energy requirement index, expressed with 1990 as reference

year (1990 = 100), decreased by 5.5% from 159.7 in 2001 to 150.9 in 2002. Per capita primary energy requirement slowed down by 6.1% from 0.99 toe to 0.93 toe.

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 fell to 1.56 in 2002, a 8.2% decrease compared to 2001.

In 2002, the consumption of electricity per capita per annum stood at 1,248 kWh while consumption of potable water per capita per day was 201 litres.

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Table 1 - Energy commodity balance, 2002

		ſ			0	1/2-	F			01	Ι	101111		ivalent (toe
Flow	Source	Coal	Gaso lene	Diesel	Aviation Fuel	Kero sene	Fuel Oil	LPG	Fuel Wood	Char coal	Hydro	Bagasse	Elec tricity	Total
Local prod	uction	-	-	-	-	-	-	-	7,288	-	18,889	243,901	-	270,078
Imports		193,459	86,721	349,865	219,572	14,912	200,238	60,408	-	-	-	-	-	1,125,17
Re-exports bunkering		-	-	(139,932)	(96,527)	-	(25,631)	-	-	-	-	-	-	(262,090
Stock char Statistical		461	7,787	(11,207)	(9,715)	(505)	56,807	(7,952)	-	-	-	-	-	35,676
Total Prin Energy Requiren	_	193,920	94,508	198,726	113,330	14,407	231,414	52,456	7,288	-	18,889	243,901	1	1,168,83
Public elec generation		-	-	(3,516)	-	(5,660)	(172,432)	-	-	-	(18,832)	-	85,223	(115,217
Autoprodu	cer plants	(177,869)	-	-	-	-	-	-	-	-	(57)	(173,066)	82,379	(268,613
Other tran	sformation	-	-	-	-	-	-	-	(714)	348	-	-	-	(366)
Own use		-	-	-	-	-	-	-	-	1	-	-	(3,794)	(3,794)
Distributio	n losses	-	-	-	-	-	-	-	-	-	-	-	(15,796)	(15,796)
Total Fina Consump		16,051	94,508	195,210	113,330	8,747	58,982	52,456	6,574	348	-	70,835	148,012	765,053
Manufactu	ring 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
Commercia distributiv sector		-	-	-	-	-	-	4,924	-	252	-	-	36,543	41,719
Household		-	-	-	-	8,745	-	42,145	6,023	96	-	-	45,799	102,808
Agriculture	9	-	-	2,454	-	-	-	-	-	-	-	-	2,363	4,817

Other													
Other	_	_	_	_	_	_	292	_	_	_	_	2,100	2,392
							2,2					2,100	2,072

Note: figures in brackets represent negative quantities

Table 2 - Energy commodity balance, 2001

												Tonn	e of oil equ	ivalent (toe)
Flow	Source	Coal	Gaso lene	Diesel	Aviation Fuel	Kero sene	Fuel Oil	LPG	Fuel Wood	Char coal	Hydro	Bagasse	Elec tricity	Total
Local Produ	uction	-	-	-	-	-	-	-	7,342	-	15,580	267,440	-	290,362
Imports		215,426	93,715	341,424	210,274	12,465	264,132	47,399	-	-	-	-	-	1,184,837
Re-Exports Bunkering		-	-	(158,288)	(78,988)	-	(42,200)	-	-	-	-	-	-	(279,476)
Stock chan Statistical		(29,949)	1,054	7,437	(1,648)	1,304	14,196	3,415	-	-	-	-	-	(4,192)
Total Prim Energy R	nary equirement	185,477	94,769	190,574	129,638	13,769	236,129	50,814	7,342	-	15,580	267,440	-	1,191,532
Electricity (	Generation	-	-	(3,169)	-	(3,910)	(177,924)	-	-	-	(15,498)	-	83,189	(117,312)
Autoproduc	cer plants	(169,493)	-	-	-	-	-	-	-	-	(83)	(182,800)	81,104	(271,272)
Other trans	sformation	-	-	-	-	-	-	-	(730)	355	-	-	-	(374)
Own use		-	-	-	-	-	-	-	-	-	-	-	(3,721)	(3,721)
Distribution	n losses	-	-	-	-	-	-	-	-	-	-	-	(14,425)	(14,425)
Total Fina Consump		15,984	94,769	187,404	129,638	9,859	58,205	50,814	6,612	355	-	84,640	146,146	784,426
Manufactur	ring Sector	15,984	-	37,908	-	-	58,205	3,942	570	-	-	84,640	61,163	262,413
Transport S	Sector	-	94,769	147,012	129,638	-	-	886	-	-	-	-	-	372,304
Commercia Distributiv Sector		-	-	-	-	-	-	4,806	-	244	-	-	35,728	40,779
Household		-	-	-	-	9,859	-	40,878	6,042	111	-	-	44,950	101,841
Agriculture	<b>)</b>	-	-	2,485	-	-	-	-	-	-	-	-	2,302	4,787
Other		-	-	-	-	-	-	302	-	-	-	-	2,002	2,304

Note: figures in brackets represent negative quantities

Table 3 - Primary energy requirement , 2001 - 2002

Energy		2001			2002	
source	Tonne/GWh	Ktoe	%	Tonne/GWh	Ktoe	%
Imported						
Gasolene	87,749	94.77	8.0	87,507	94.51	8.1
Diesel Oil	188,687	190.57	16.0	196,759	198.73	17.0
Dual Purpose Kerosene	137,892	143.41	12.0	122,824	127.74	10.9
Kerosene	13,240	13.77	1.2	13,852	14.41	1.2
Aviation Fuel	124,652	129.64	10.9	108,972	113.33	9.7
Fuel Oil	245,967	236.13	19.8	241,055	231.41	19.8
LPG	47,050	50.81	4.3	48,570	52.46	4.5
Sub total (petroleum products)		715.69	60.1		704.84	60.3
Coal	299,157	185.48	15.6	312,774	193.92	16.6
Sub total (Imported)		901.17	75.6		898.76	76.9
Local						
Electricity (hydro) GWh	71	15.58	1.3	85,862	18.89	1.6
Bagasse *	1,671,500	267.44	22.4	1,524,383	243.90	20.9
Fuel Wood*	19,320	7.34	0.6	19,180	7.29	0.6
Sub total (Local)		290.36	24.4		270.08	23.1
Total		1,191.53	100.0		1,168.84	100.0

<sup>\*</sup> estimates

Fig.1 - Primary energy requirement, 1993-2002

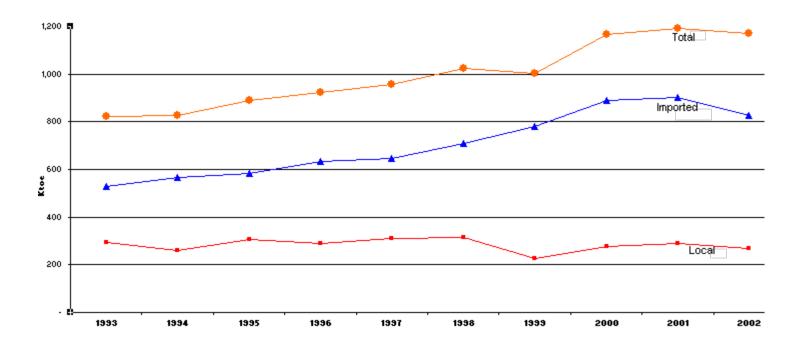


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Table 4 - Imports of energy sources , 2001-2002

		20	01			200	2	
Energy source	Tonne (000)	Ktoe	%	C.I.F value (Rs million)	Tonne (000)	Ktoe	%	C.I.F value (Rs million)
Gasolene	86.77	93.71	7.9	646.1	80.30	86.72	7.7	605.7
Diesel Oil	338.04	341.42	28.8	2,045.7	346.40	349.86	31.1	2,223.6
Dual Purpose Kerosene	214.17	222.74	18.8	1,420.8	225.47	234.49	20.8	1,563.8
Kerosene	11.99	12.47	1.1	84.9	14.34	14.91	1.3	102.8
Aviation Fuel	202.19	210.27	17.7	1,335.9	211.13	219.58	19.5	1,461.0
Fuel Oil	275.14	264.13	22.3	1,213.9	208.58	200.24	17.8	1,067.2
LPG	43.89	47.40	4.0	517.0	55.93	60.40	5.4	534.5
Sub total (petroleum products)		969.41	81.8	5,843.5	916.7	931.72	82.8	5,994.6
Coal	347.46	215.43	18.2	391.0	312.03	193.46	17.2	342.7
Total imports		1,184.84	100.0	6,234.46		1,125.18	100.0	6,337.4

Fig. 2 - Imports of energy sources, 1993 - 2002

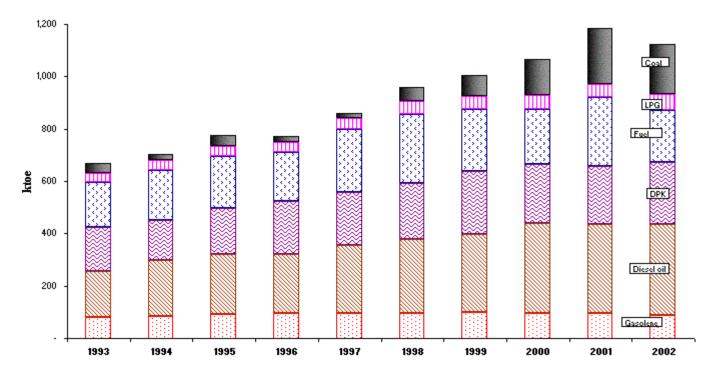


Table 5 - Re-exports of energy sources to foreign aircraft and bunkers, 2001-2002

Energy De experted		2001		2002			
Energy Re-exported	Tonne	Ktoe	%	Tonne	Ktoe	%	
Aviation fuel to foreign aircraft	75,950	78.99	28.3	92,820	96.53	36.8	
Diesel oil	156,721	158.29	56.6	138,540	139.93	53.4	
Fuel oil	43,958	42.20	15.1	26,700	25.63	9.8	
Total		279.5	100.0		262.1	100.0	

Table 6 - Evolution of plant capacities, peak demand and electricity generation, 2001-2002

Year		Effective capacity (MW)		Electricity generated (GWh)			
i teal	(MW)		(MW)	Hydro	Thermal	Total	
2001	660.8	579.2	297.4	70.82	1,840.00	1,910.82	
2002	656.9	575.1	308.6	85.86	1,863.00	1,948.86	

Fig. 3 - Peak demand, 1998- 2002

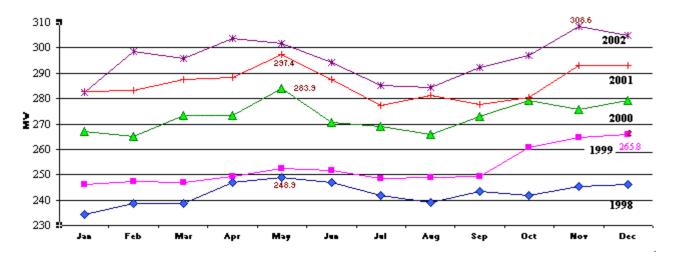


Table 7 - Electricity production by source of energy, 2001-2002

Course of amount	2	2001	2	2002
Source of energy	GWh	%	GWh	%
Primary energy	70.82	3.7	85.86	4.4
Hydro	70.82	3.7	85.86	4.4
Secondary energy	1,840.00	96.3	1,863.00	95.6
Gas turbine (kerosene)	12.05	0.6	17.99	0.9
Diesel & Fuel oil	885.05	46.3	887.41	45.5
Coal	465.29	24.4	505.47	25.9
Bagasse	477.61	25.0	452.13	23.2
Total	1,910.82	100.0	1,948.86	100.0

Table 8 - Generation of electricity by CEB and IPP, 2001 - 2002

Device and dece	2	2001	2	2002
Power producer	GWh	%	GWh	%
СЕВ	967.54	50.6	990.97	50.8
Island of Mauritius	946.91	49.6	968.41	49.7
Hydro	70.44	3.7	85.60	4.4
Thermal	876.47	45.9	882.81	45.3
Island of Rodrigues(Thermal)	20.63	1.1	22.56	1.2
IPP	943.29	49.4	957.89	49.2
Total hydro	0.38	0.0	0.26	0.0
of which: exported to CEB	0.00	0.0	0.00	0.0
Total thermal	942.91	49.3	957.63	49.1
of which: exported to CEB	710.16	37.2	746.66	38.3
Total	1,910.82	100.0	1,948.86	100.0
Island of Mauritius				1
CEB	946.91	57.1	968.41	56.5
IPP export to CEB	710.16	42.9	746.66	43.5
Total available for sales	1,657.08	100.0	1,715.07	100.0

Source: Central Electricity Board and Annual Sugar Industry Energy Survey

Fig.4 - Electricity produced by CEB & IPP for export to CEB 1993-2002

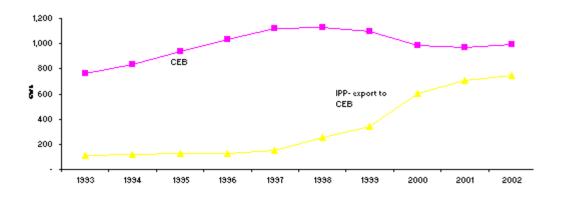


Table 9 - Fuel input for electricity production, 2001 - 2002

Fuel		2001			2002	
ruei	Tonne	Ktoe	%	Tonne	Ktoe	%
Fuel oil	185,337	177.92	33.11	179,616	172.43	31.20
Diesel oil	3,138	3.17	0.59	3,481	3.52	0.60
Kerosene	3,760	3.91	0.73	5,443	5.66	1.00
Coal	273,376	169.49	31.60	286,886	177.87	32.20
Bagasse	1,142,500	182.80	34.02	1,202,096	192.34	34.90
Total		537.30	100.00		551.81	100.00

Source: Central Electricity Board and Annual Sugar Industry Energy Survey

Table 10 - Sales of electricity by type of tariff, 2001 - 2002

		2001			2002	
Type of tariff	No. of consumers	Consumption (MWh)	Average sales price <sup>1</sup> per KWh (Rupees)	No. of consumers	Consumption (MWh)	Average sales price <sup>1</sup> per KWh (Rupees)
Domestic	297,051	522,800	2.82	303,620	532,549	3.10
Commercial	28,594	415,543	3.40	29,030	424,918	4.01
Industrial	7,084	505,018	1.98	7,482	527,948	2.12
of which: irrigation	(347)	(26,773)	1.43	(494)	(27,479)	1.62
Other	299	23,291	3.60	311	24,419	4.27
Total	333,028	1,466,652	2.71	340,443	1,509,834	3.03

Fig. 5 - Electricity consumption

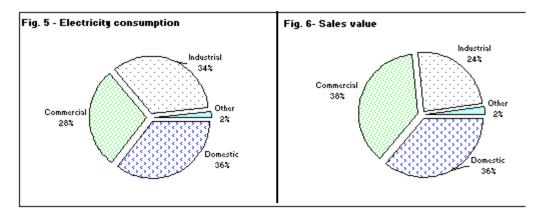


Table 11 - Final energy consumption by sector and type of fuel, 2001 - 2002

	Cartan	l	2001			2002	
	Sector	Tonne/GWh	Ktoe	%	Tonne/GWh	Ktoe	%
1.	Manufacturing		262.41	33.5		249.19	32.6
1.1	excluding bagasse		177.77	22.7		178.36	23.3
	Fuel oil	60,630	58.20	7.4	61,439	58.98	7.7
	Diesel oil	37,533	37.91	4.8	37,409	37.78	4.9
	LPG	3,650	3.94	0.5	3,502	3.78	0.5
	Coal	25,781	15.98	2.0	25,888	16.05	2.1
	Fuel wood <sup>1</sup>	1,500	0.57	0.1	1,450	0.55	0.1
	Electricity (GWh)	711.37	61.16	7.8	711.70	61.21	8.0
	1.2 bagasse	529,000	84.64	10.8	442,722	70.84	9.3
2.	Transport		372.30	47.5		364.12	47.6
	Gasolene	87,749	94.77	12.1	87,507	94.51	12.4
	LPG	820	0.89	0.1	1,216	1.31	0.2
	Diesel oil	145,555	147.01	18.7	153,437	154.97	20.3
	Aviation Fuel	124,652	129.64	16.5	108,972	113.33	14.8
3.	Household		101.84	13.0		102.81	13.4
	Kerosene	9,480	9.86	1.3	8,409	8.75	1.1
	LPG	37,850	40.88	5.2	39,023	42.15	5.5
	Fuel wood <sup>1</sup>	15,900	6.04	0.8	15,850	6.02	0.8
	Charcoal <sup>1</sup>	150	0.11	0.0	130	0.10	0.0
	Electricity (GWh)	522.80	44.95	5.7	532.55	45.80	6.0
4.	Commercial and Distributive Trade		40.78	5.2		41.72	5.5
	LPG	4,450	4.81	0.6	4,559	4.92	0.6

	Charcoal <sup>1</sup>	330	0.24	0.0	340	0.25	0.0
	Electricity (GWh)	415.54	35.73	4.6	424.92	36.54	4.8
5.	Agriculture		4.79	0.6		4.82	0.6
	Diesel oil <sup>1</sup>	2,460	2.48	0.3	2,430	2.45	0.3
	Electricity (GWh)	26.77	2.30	0.3	27.48	2.36	0.3
6.	Other (n.e.s)		2.30	0.3		2.39	0.3
	TOTAL		784.43	100.0		765.05	100.0

1 Estimates

Fig.7 - Final energy consumption, 1993-2002

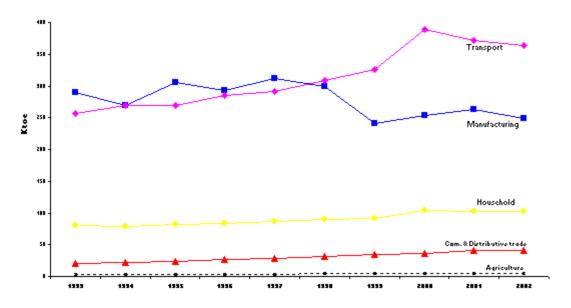


Table 12 - Percentage water level by month and reservoir - 2001, 2002

	Mare aux Vacoas La Nicoliere				Piton du Milieu			La Ferme			Mare Longue			All reservoirs										
											Cap	acity												
Month	2	25.89 Mm	3			5.26 Mm	1 <sup>3</sup>			2.99 Mm	3			11.52 Mn	n <sup>3</sup>			6.28 Mm	3		51.94	51.94 Mm³  *mal* Mean** % 48.9 48.5 56.2 57.9 77.0 56.4 81.7 63.7 82.8 71.5 78.4 67.1 74.6 65.0 71.7 68.8 67.4 64.9 67.9 53.1 45.4 43.9 40.6 32.7 48.8 51.2 56.3 83.8 77.2 90.4 81.4 89.5 81.7 84.4 78.6 82.3		
		Mean**		Max			Min	Max			Min		Normal*	Mean**	Min	Max		Mean**						
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%				
Jan'01	60.2	68.5	64.8		62.9	65.3	39.4	100.0	63.8		59.9	75.3	23.0	11.6	8.7	17.2	32.4	10.9	5.3	18.0	48.9			
Feb'01	63.3	72.4	70.4		72.4	96.9	90.9		70.4	75.1	73.6	76.3	28.7	19.3	17.1	21.5	45.6	24.8		31.5	56.2			
Mar'01	79.6	68.6	64.5		91.0	99.8	99.0	100.0	88.0	74.9	71.6	76.3	64.1	17.0	14.2	19.4	72.8	31.2	28.0	32.8	77.0			
Apr'01	82.8	73.6	63.8	84.7	95.1	99.9	99.4	100.0	88.8	88.4	70.9	100.0	74.7	24.8	12.9	46.4	75.1	38.3	26.8	56.4	81.7	63.7		
May'01	83.1	80.5	78.0	84.5	94.7	97.7	94.7	100.0	90.8	95.8	92.3	99.3	77.4	40.1	37.3	44.4	77.4	58.1	56.5	61.0	82.8	71.5		
Jun'01	80.3	77.1	75.2	78.8	91.8	88.7	81.7	99.0	86.1	94.9	92.0	98.7	68.9	33.1	28.6	37.3	72.8	56.7	54.1	60.8	78.4	67.1		
Jul'01	79.5	77.0	74.8	82.2	89.4	90.2	84.2	100.0	83.6	95.4	92.6	98.0	59.3	25.9	22.0	41.7	65.9	51.3	46.7	57.5	74.6	65.0		
Aug'01	79.4	80.8	75.9	83.4	91.4	97.5	90.1	100.0	82.9	97.3	93.0	100.0	48.2	28.0	21.7	30.1	62.3	56.3	47.0	59.1	71.7	68.8		
Sep'01	77.5	76.3	72.5	78.7	87.4	84.1	73.8	90.9	80.5	87.4	80.6	93.0	37.3	28.0	25.4	29.1	58.3	58.9	53.5	61.8	67.4	64.9		
Oct'01	71.3	67.9	64.7	72.2	66.9	52.5	39.5	72.4	72.5	70.9	64.9	79.9	25.2	19.9	16.8	24.7	48.2	44.9	35.2	53.0	57.9	53.1		
Nov'01	62.4	61.4	57.3	77.5	44.3	42.1	34.6	46.0	59.8	58.6	50.2	64.5	12.2	13.2	10.1	16.6	27.9	26.5	17.0	39.0	45.4	43.9		
Dec'01	57.1	50.7	47.3	55.9	41.0	25.8	22.4	32.3	56.8	42.7	38.5	48.8	9.9	6.1	3.4	9.5	19.8	6.2	1.4	14.6	40.6	32.7		
Jan'02	60.1	62.2	72.7	82.2	62.3	77.7	18.8	30.6	63.5	72.3	57.5	72.9	22.6	21.4	10.2	20.9	31.9	28.0	27.1	61.0	48.8	51.2		
Feb'02	64.4	81.8	79.7	84.1	74.1	97.1	93.3	100.0	72.0	98.3	69.6	100.0	30.5	80.1	58.9	94.6	48.2	80.3	76.3	99.4	56.3	83.8		
Mar'02	79.7	85.0	79.6	87.4	91.0	99.0	95.8	100.0	87.8	99.3	97.7	100.0	65.1	97.9	73.5	100.0	72.9	87.2	82.8	90.1	77.2	90.4		
Apr'02	82.8	87.0	84.5	88.7	92.6	89.8	78.1	97.7	88.8	97.7	95.3	100.0	74.7	90.7	83.0	97.7	75.0	94.1	89.6	96.7	81.4	89.5		
May'02	80.7	87.8	86.9	88.8	95.3	73.7	65.6	78.5	90.8	97.9	95.7	99.3	77.4	74.8	66.1	82.3	77.4	90.7	82.3	96.0	81.7	84.4		
Jun'02	80.3	90.2	89.0	93.4	93.8	79.7	66.5	91.1	86.1	98.9	98.3	99.7	68.9	60.0	54.1	65.5	72.8	85.1	81.7	92.5	78.6	82.3		
Jul'02	79.2	95.0	93.4	96.3	92.2	98.3	91.8	100.0	83.0	99.2	98.3	100.0	58.2	49.6	46.4	53.8	65.1	97.5	93.0	99.2	74.4	85.8		
Aug'02	79.4	96.9	95.8	98.0	93.3	99.1	95.8	100.0	83.0	98.7	97.3	100.0	48.1	44.4	42.4	46.2	62.6	99.0	98.6	99.4	72.1	85.8		
Sep'02	77.5	95.5	92.9	97.6	88.5	84.9	60.8	97.5	80.7	95.6	88.3	99.3	37.3	39.3	35.4	42.5	58.3	98.1	94.4	99.2	67.5	82.3		
Oct'02	71.3	87.5	82.7	92.4	68.1	39.0	31.0	58.9	72.6	80.4	73.9	88.0	25.3	28.5	21.4	35.0	45.9	77.7	62.1	93.5	57.8	67.9		
Nov'02	62.6	77.7	72.7	82.2	45.9	24.7	18.8	30.6	60.1	66.2	57.5	72.9	12.5	15.1	10.2	20.9	28.4	46.4	27.1	61.0	45.5	54.0		
Dec'02	57.2	71.9	70.2	73.2	39.0	31.4	19.6	39.5	56.8	58.7	54.8	66.9	9.8	7.7	5.5	10.0	19.9	16.1	11.5	25.2	40.3	46.0		

<sup>\*</sup> Average for the period 1990 - 1999  $\mid$  \*\* Average for the current month

Source: Water Resources Unit

Table 13 - Average Monthly Potable Water Production (Mm<sup>3</sup>), 2001-2002

	Mare Aux Vacoas (Upper) Mare Aux Vacoas (Lower)		as	Port -Louis			District	strict water supply - North District water supply - South District water supply - East					Tota	l produc	production								
Month	Surface	Borehole	Total	Surface	Borehole	Total	Surface	Borehole	Total	Surface	Borehole	Total	Surface	Borehole	Total	Surface	Borehole	Total	Surface	Borehole	Total	Surface	Borehole
											Mm <sup>3</sup>											Surrace	Bor enoie
2001																							
Jan	2.56	0.49	3.05	0.01	2.14	2.15	1.81	0.95	2.76	0.88	2.09	2.97	0.65	1.24	1.88	0.72	1.05	1.77	6.63	7.95	14.58	45.5%	54.5%
Feb	2.41	0.45	2.86	0.01	2.11	2.12	1.72	0.79	2.51	0.84	1.89	2.73	0.68	1.13	1.80	0.67	0.96	1.63	6.32	7.32	13.65	46.3%	53.7%
Mar	2.78	0.50	3.28	0.01	2.27	2.28	1.89	0.77	2.67	0.92	2.14	3.06	0.65	1.25	1.90	0.72	1.05	1.77	6.97	7.98	14.95	46.6%	53.4%
Apr	2.43	0.51	2.94	0.01	2.18	2.19	1.79	1.00	2.79	0.90	2.05	2.96	0.57	1.22	1.79	0.73	1.04	1.77	6.43	8.01	14.43	44.5%	55.5%
May	2.59	0.53	3.12	0.01	2.29	2.29	2.01	0.85	2.87	0.93	2.02	2.95	0.66	1.25	1.91	0.79	1.11	1.89	6.99	8.04	15.03	46.5%	53.5%
Jun	2.59	0.51	3.11	0.01	2.18	2.18	1.88	0.93	2.80	0.88	2.18	3.06	0.66	1.19	1.85	0.75	1.07	1.82	6.76	8.06	14.82	45.6%	54.4%
Jul	2.68	0.52	3.19	0.01	2.22	2.22	1.98	0.75	2.73	1.01	2.22	3.23	0.71	1.24	1.96	0.72	1.12	1.84	7.11	8.06	15.17	46.9%	53.1%
Aug	2.68	0.50	3.18	0.01	2.25	2.25	1.97	0.87	2.84	1.03	2.22	3.24	0.67	1.67	2.33	0.69	1.10	1.79	7.04	8.60	15.64	45.0%	55.0%
Sep	2.68	0.48	3.16	0.01	2.10	2.11	1.91	0.87	2.77	0.97	2.12	3.09	0.67	1.11	1.77	0.66	1.06	1.72	6.88	7.73	14.62	47.1%	52.9%
Oct	2.57	0.46	3.03	0.01	2.04	2.05	1.70	0.94	2.65	0.96	2.14	3.10	0.66	1.18	1.84	0.86	1.11	1.97	6.75	7.88	14.63	46.2%	53.8%
Nov	2.27	0.45	2.72	0.01	1.93	1.94	1.46	0.92	2.38	0.85	2.02	2.87	0.67	1.12	1.79	0.78	1.08	1.86	6.04	7.52	13.56	44.6%	55.4%
Dec	2.53	0.44	2.97	0.01	1.85	1.86	1.32	0.89	2.20	0.91	2.05	2.96	0.70	1.12	1.82	0.69	1.09	1.78	6.15	7.43	13.59	45.3%	54.7%
Total year	30.76	5.83	36.59	0.10	25.55	25.64	21.44	10.53	31.97	11.09	25.12	36.21	7.93	14.71	22.64	8.76	12.85	21.61	80.08	94.58	174.65	45.8%	54.2%
											20	002											
Jan	2.47	0.46	2.93	0.01	2.05	2.06	1.67	0.99	2.65	1.02	2.05	3.07	0.73	1.22	1.95	0.74	1.09	1.84	6.64	7.86	14.50	45.8%	54.2%
Feb	2.20	0.48	2.68	0.01	2.11	2.11	1.58	0.96	2.54	0.99	2.04	3.02	0.69	1.06	1.75	0.73	1.02	1.75	6.19	7.67	13.86	44.7%	55.3%
Mar	2.50	0.51	3.01	0.01	2.39	2.40	1.87	1.09	2.95	1.11	2.29	3.39	0.72	1.17	1.89	0.83	1.10	1.93	7.04	8.54	15.57	45.2%	54.8%
Apr	2.29	0.50	2.79	0.01	2.23	2.24	1.86	0.95	2.81	1.12	2.04	3.17	0.71	1.16	1.86	0.76	1.02	1.77	6.74	7.89	14.64	46.1%	53.9%
May	2.35	0.50	2.84	0.01	2.26	2.27	1.96	0.78	2.74	1.19	2.10	3.29	0.72	1.10	1.82	0.83	1.04	1.87	7.06	7.77	14.83	47.6%	52.4%
Jun	2.35	0.49	2.84	0.01	2.21	2.22	1.86	0.71	2.56	1.14	1.98	3.12	0.64	1.07	1.71	0.79	1.01	1.81	6.78	7.47	14.25	47.6%	52.4%
Jul	2.46	0.49	2.95	0.01	2.27	2.28	1.88	0.78	2.66	1.22	1.98	3.20	0.69	1.10	1.79	0.82	1.01	1.83	7.08	7.63	14.71	48.1%	51.9%
Aug	2.49	0.51	3.00	0.01	2.24	2.25	1.91	0.69	2.60	1.44	1.88	3.32	0.68	1.09	1.77	0.78	1.00	1.78	7.31	7.41	14.72	49.7%	50.3%
Sep	2.54	0.50	3.04	0.01	2.27	2.28	1.68	0.82	2.50	1.53	1.75	3.28	0.69	1.15	1.84	0.76	1.11	1.87	7.21	7.60	14.81	48.7%	51.3%
Oct	2.73	0.53	3.25	0.01	2.20	2.21	1.73	0.88	2.61	1.08	1.89	2.97	0.75	1.31	2.06	0.72	1.27	1.99	7.02	8.08	15.10	46.5%	53.5%
Nov	2.78	0.50	3.28	0.01	2.14	2.15	0.82	1.66	2.49	1.09	1.89	2.98	0.75	1.28	2.03	0.72	1.19	1.91	6.17	8.66	14.83	41.6%	58.4%
Dec	2.88	0.50	3.38	0.01	2.17	2.18	0.82	1.73	2.54	1.27	1.87	3.14	0.75	1.32	2.07	0.75	1.23	1.98	6.47	8.82	15.29	42.3%	57.7%
Total year	30.03	5.96	36.00	0.11	26.53	26.64	19.63	12.02	31.65	14.21	23.75	37.96	8.50	14.03	22.53	9.24	13.08	22.32	81.72	95.38	177.10	46.1%	53.9%

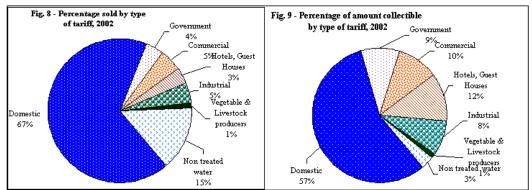
Source: Central Water Authority

Table 14 - Water sales\* by type of tariff of subscriber, 2001 - 2002

				2001				2002						
Type of tariff	Subscr	ibers	Volume sold	(m³)	Amou collect		Average consumption	Subscr	ibers	Volume sold	(m³)		Amount collectible co	
	No.	%	m³	%	Rs. (000)	%	(m³)	No.	%	m³	%	Rs.(000) %		(m³)
Domestic	237,524	93.8	67,053,611	65.8	433,857	57.9	282	243,689	93.8	67,617,780	67.1	441,618	56.5	277
Government	3,474	1.4	3,789,199	3.7	66,398	8.9	1,091	3,538	1.4	4,025,587	4.0	71,328	9.1	1,138
Acquired / concessionary prises	47	0.0	20,046	0.0	5,650	0.8	427	48	0.0	20,500	0.0	129	0.0	427
Commercial	9,237	3.6	5,033,586	4.9	74,797	10.0	545	9,233	3.6	5,185,951	5.1	78,993	10.1	562
Hotels, Guest Houses	187	0.1	3,624,124	3.6	86,348	11.5	19,380	191	0.1	3,492,490	3.5	90,494	11.6	18,285
Industrial	781	0.3	4,679,349	4.6	57,220	7.6	5,991	766	0.3	4,726,880	4.7	65,799	8.4	6,171
Sub total	251,250	99.2	84,199,915	82.7	724,271	96.6	335	257,465	99.1	85,069,188	84.4	748,360	95.8	330
Vegetable & Livestock producers	1,831	0.7	946,039	0.9	7,503	1.0	517	2,009	0.8	1,023,474	1.0	7,993	1.0	509
Total potable water	253,081	99.9	85,145,954	83.6	731,774	97.6	336	259,474	99.9	86,092,662	85.4	756,354	96.8	332
Total non- treated water (agriculture/ Industrial)		0.1	16,663,565	16.4	16,740	2.2	73,086	231	0.1	14,693,318	14.6	23,788	3.0	63,607
Grand Total	253,309	100.0	101,809,519	100.0	748,515	99.8	402	259,705	100.0	100,785,980	100.0	780,142	99.9	388

<sup>\*</sup> Only Island of Mauritius

Source: Central Water Authority



**Table 15 - Main Indicators, 1998 - 2002** 

Indicators	Unit	1998	1999	2000	2001	2002
Mid-year population, Republic of Mauritius	thousand	1,160	1,174	1,187	1,200	1,210
GDP in1990 rupees*	Rs.Million	59,662	61,332	66,607	70,204	71,959
GDP index (1990 = 100)*		150.55	154.77	168.08	177.15	181.58
Total primary energy requirement	ktoe	1,021.75	1,003.50	1,125.93	1,191.53	1,125.93
Imported	ktoe	707.18	778.92	849.02	901.17	849.02
Local	ktoe	314.57	224.58	276.91	290.36	276.91
Total primary energy requirement index (1990 = 100)		136.92	134.47	150.88	159.67	150.88
Annual increase	%	+6.86	-1.79	+12.20	+5.83	-5.51
Import dependency	%	69.21	77.62	75.41	75.63	75.41
Energy intensity	toe per Rs.100,000 GDP	1.98	1.90	1.69	1.70	1.56
Per capita primary energy requirement	toe	0.88	0.85	0.95	0.99	0.93
Total final energy consumption	ktoe	736.6	698.3	749.0	784.4	765.1
Per capita final energy consumption	toe	0.64	0.59	0.63	0.65	0.65
Total electricity available for sale	GWh	1,539	1,585	1,778	1,657	1,715
CEB	GWh	1,125	1,097	983	968	991
IPP export to CEB	GWh	257	344	601	710	747
Total electricity sold	GWh	1,190	1,244	1,374	1,467	1,510
Per capita consumption of electricity sold	kWh	1,026	1,059	1,158	1,222	1,248
Potable water produced**	Mm <sup>3</sup>	174	125	170	175	177
Potable water consumed**	Mm <sup>3</sup>	88	78	82	85	86
Potable water produced per capita per day**	litres	424	300	403	411	413
Potable water consumed per capita per day**	litres	214	188	196	200	201

<sup>\*</sup> Revised in light of new SNA '93 | \*\* Refer to Island of Mauritius only

# **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)

	<u>Tonne</u>	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
	<u>GWh</u>	<u>toe</u>
Hydro (primary)	1	220
Electricity	1	86

Note: Prior to 2001, electricity in the final energy balance was converted into its thermal primary equivalent (1 GWh = 220 toe). To be consistent with international practice, its thermal final equivalent, (1 GWh = 86 toe), is now being used. Data for the year 1992 onwards have been amended accordingly.

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)

kWh Kilowatt hour

GWh Gigawatt hour

Mm<sup>3</sup> Million cubic metres

### **ACRONYMS**

CEB Central Electricity Board

IPP Independent Power Producers of the Sugar Industry