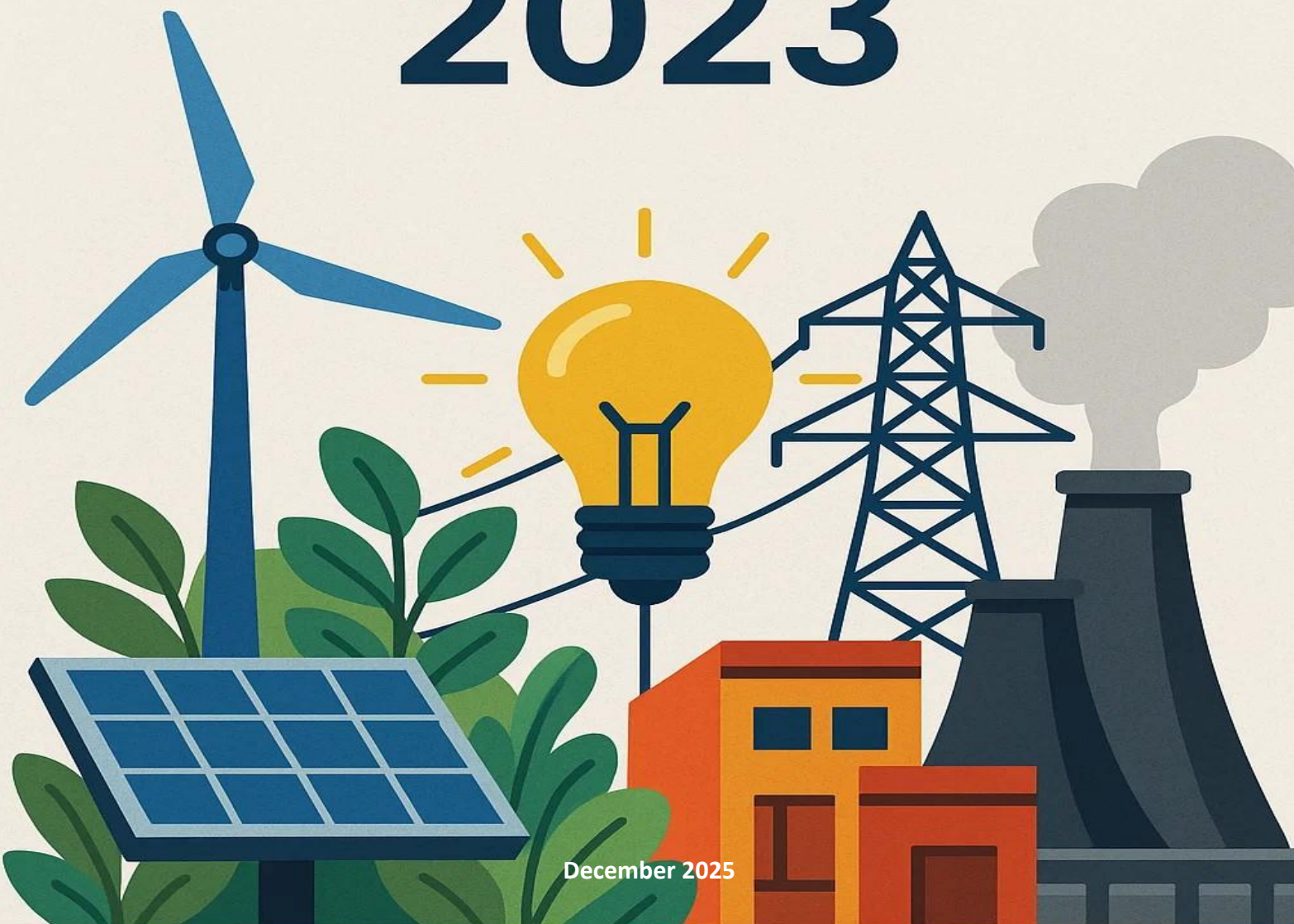




ENERGY OBSERVATORY MAURITIUS 2023



December 2025

FOREWORD

The Energy Observatory Report 2023 presents an in-depth analysis of the evolving energy efficiency landscape in Mauritius, reflecting the progress achieved over the past year under the leadership of the Ministry of Energy and Public Utilities. Building on the foundations laid in previous years, 2023 marked a period of renewed momentum in the implementation of energy efficiency measures across key sectors of the economy.

This report outlines the main achievements, ongoing challenges, and opportunities that have shaped national efforts in promoting energy conservation, improving performance, and fostering sustainable energy practices. As Mauritius continues its transition towards a low-carbon and resilient energy system, the insights and data provided in this edition aim to support evidence-based policymaking and encourage collective action among stakeholders from government and industry to civil society and the general public.

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CHAPTER 1 - ENERGY SUPPLY

1.1 Introduction

The energy supply of Mauritius is divided into:

- imports of primary energy (*Fossil fuels: Fuel Oil, Liquefied Petroleum Gas, Gasolene, Diesel, Kerosene, Aviation fuel and Coal*);
- production of primary energy (*Local resources: Bagasse, hydro, wind, landfill gas, fuelwood, charcoal and photovoltaic*);
- primary energy re-exports and bunkering; and
- variation of stocks.

1.2 Imports

The imports of primary energy sources in 2023 totalled 1,956.8 ktoe and 2182.7 ktonne respectively, as shown in Table 1.1.

Table 1. 1 - Imports of energy sources

Fossil Energy	Imports 2023	
	ktonne	ktoe
Coal	609.7	378.0
Gasolene	177.6	191.8
Diesel oil	331.9	335.2
Aviation fuel	240.1	249.7
Kerosene	6.7	7.0
Fuel oil	723.8	694.9
Liquefied Petroleum Gas (LPG)	92.6	100.0
Charcoal	0.2	0.2
Fuelwood	0.0	0.0
TOTAL	2182.7	1956.8

DataSource: Statistics Mauritius

The distribution of fossil fuel imports in 2023 is shown in Figure 1.1.

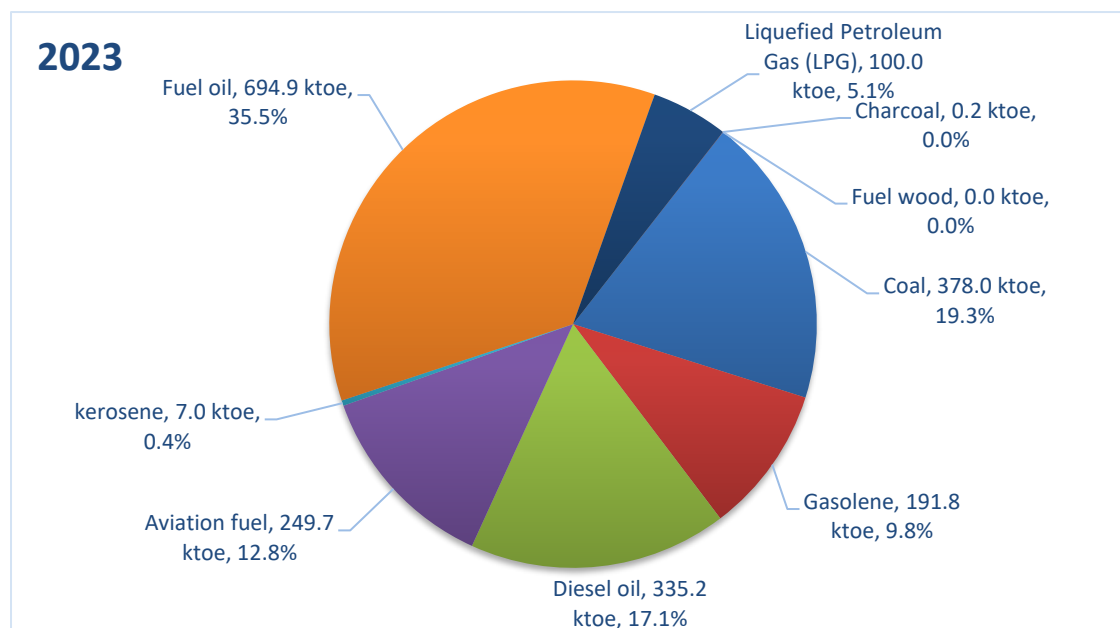
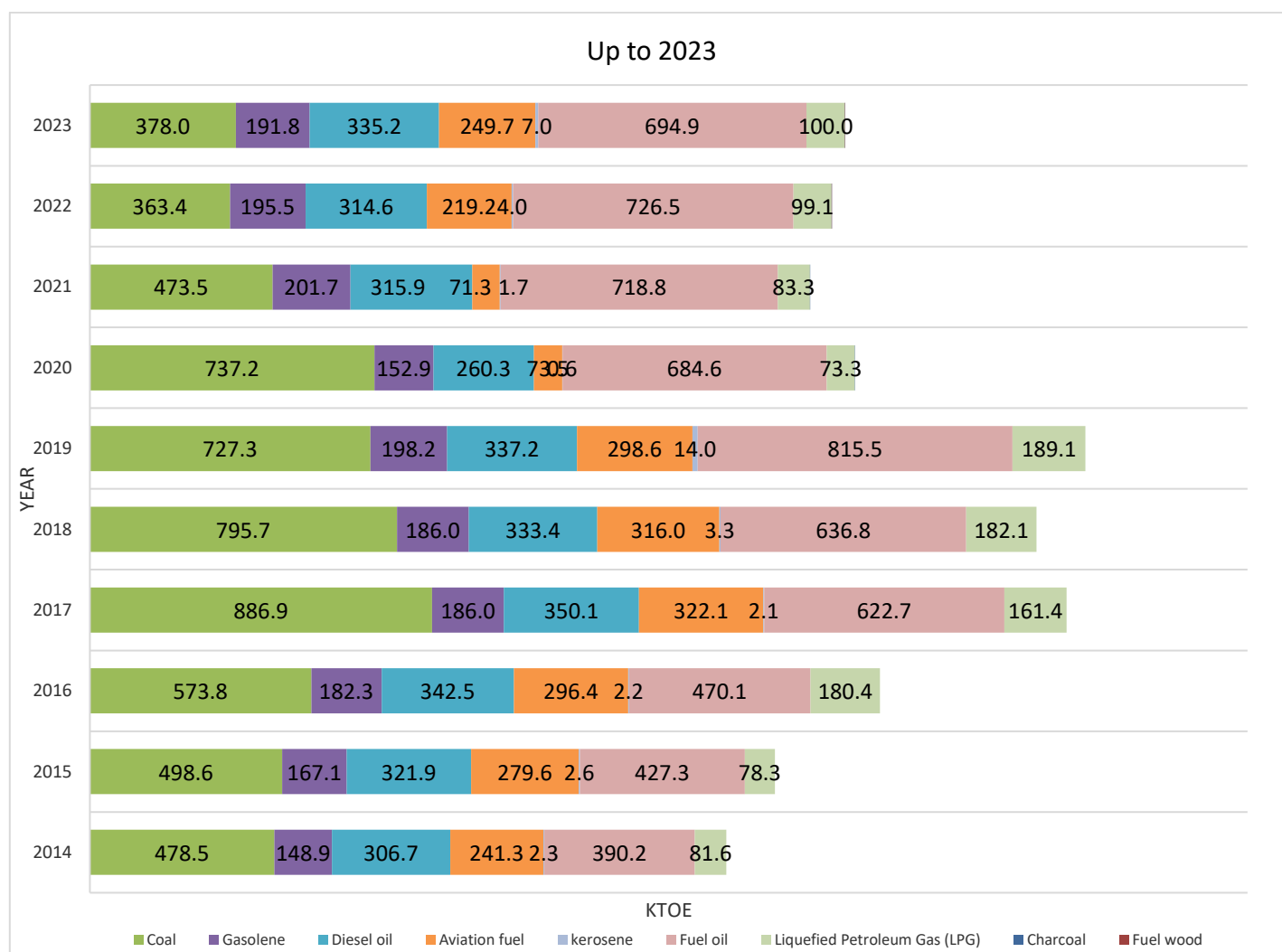


Figure 1. 1 Fossil Fuel 2023 Imports

Petroleum products in Mauritius are primarily consumed by the electricity generation, transport, and manufacturing sectors, with additional usage in the household, commercial, and agricultural sectors.. Coal continues to be used mainly for electricity production in thermal power plants operating on coal and bagasse, with a minor share allocated to industrial processes in the manufacturing sector. Liquefied Petroleum Gas (LPG) remains a key energy source for cooking and water heating, with limited use as a fuel in the transport sector. Figure 1.2 illustrates the trend in fossil fuel imports over the past decade, reflecting consumption patterns and the country's evolving energy mix.



Data Source: Statistics Mauritius

Figure 1. 2 - Trend of fossil fuel imports, 2014 – 2023

The stacked bar chart illustrates the evolution of fossil fuel consumption in Mauritius over a ten-year period, categorised by type of fuel. The key observations are as follows:

- **Coal:** Consumption has declined steadily from a high of **886.9 ktoe in 2017** to **378.0 ktoe in 2023**. This significant reduction reflects a national shift away from coal-fired generation, likely due to aging infrastructure and policies promoting cleaner alternatives.
- **Diesel Oil:** Diesel usage remained relatively stable, ranging between **306.7 ktoe (2014)** and **350.1 ktoe (2017)**, with **335.2 ktoe** recorded in 2023.
- **Gasoline:** Gasoline consumption rose modestly over the period, from **148.9 ktoe in 2014** to a peak of **201.7 ktoe in 2021**, before slightly falling to **191.8 ktoe in 2023**, indicating stable demand in the private transport sector.
- **Aviation Fuel:** This fuel type shows a pronounced drop during the COVID-19 pandemic, from **298.6 ktoe in 2019** to just **75.3 ktoe in 2020**. Recovery is observed in 2022 (219.2 ktoe) and 2023 (249.7 ktoe), although not yet reaching pre-pandemic levels.

1.3 Petroleum products

The State Trading Corporation (STC) is responsible for the importation of all the country's requirements of petroleum products. These include the demands for the running of public transport, industrial and commercial activities, private motor vehicles, the needs of the Central Electricity Board in fuel oils for its power plants, the needs for aircraft refuelling at the SSR International Airport and the needs of bunker fuels for international shipping.

Upon arrival at the Port Louis Harbour, the petroleum products are pumped out of the tankers and delivered through pipelines into fuel tanks, owned by local oil companies, in the port Area. The capacity of the fuel tanks are as follows:

- (i) Gasolene – 12,603 tonnes;
- (ii) Diesel – 15,170 tonnes; and
- (iii) LPG – 18,840 tonnes.

Joint Utility Hydrant Installation (JUHI), a consortium of four local oil companies, owns and operates a Jet Fuel tank of capacity 23,900 tonnes near SSR Airport.

The oil companies market, distribute and retail the products through their respective networks of fuel pump stations across the country. Some also operate barges to carry out their bunker supply operations at sea.

Table 1.2 shows the imports of petroleum products over the period 2014 to 2023. It may be noted that annual demand in petroleum products to meet domestic demand and bunkering increased by 1.01 % from 1,555.7 ktonnes in 2022 to 1,572.7 ktonnes in 2023.

Table 1. 2 - Import of petroleum products, 2014 – 2023

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Gasolene	137.9	154.7	168.8	172.2	172.2	183.5	141.6	186.8	181.0	177.6
Diesel oil	303.6	318.7	339.1	346.7	330.1	333.9	257.7	312.8	311.5	331.9
Aviation fuel	232.0	268.8	285.0	309.7	303.8	287.1	70.7	68.6	210.7	240.1
Kerosene	2.2	2.5	2.1	2.0	3.1	13.5	0.6	1.6	3.9	6.7
Fuel oil	406.4	445.1	489.7	648.7	663.4	849.5	713.1	748.7	756.7	723.8
Liquefied Petroleum Gas (LPG)	75.6	72.5	167.0	149.4	168.6	175.1	67.9	77.1	91.8	92.6
TOTAL (ktonnes)	1,157.7	1,262.3	1,451.7	1,628.7	1,641.2	1,842.6	1,251.6	1,395.6	1,555.7	1,572.7

Data Source: Statistics Mauritius

Kerosene is used at the Nicolay power station for electricity generation. It was also used in the household sector for cooking purposes. In 2023, 6.7 ktonnes of kerosene was imported while in 2022, this stood at 3.9 ktonnes representing an increase of 71.8%.

1.4 Primary energy re-export and bunkering

Primary energy re-export and bunkering in 2023 is shown in Table 1.3 respectively.

Table 1. 3 - Primary energy re-export and bunkering 2023

Energy Source	ktonne	ktoe
Diesel oil	106.7	107.8
Aviation fuel (foreign aircraft)	126.7	131.8
Fuel oil	403.2	387.0

Data Source: Statistics Mauritius

1.5 Stock variation

The variations in stock in 2023 are provided in the Table 1.4.

Table 1. 4- Variation in Stock Year 2023

	2023							
	Import		Export		Primary energy requirement		Stock variations (import - export - primary energy requirement)	
	ktonne	ktoe	ktonne	ktoe	ktonne	ktoe	ktonne	ktoe
Coal	609.7	378.0			651.3	403.8	-41.5	-25.7
Gasolene	177.6	191.8			201.6	217.8	-24.0	-25.9
Diesel oil	331.9	335.2	106.7	107.8	223.1	225.3	2.2	2.2
Aviation Fuel	240.1	249.7	126.7	131.8	92.0	95.7	21.3	22.2
Kerosene	6.7	7.0			6.1	6.4	0.6	0.6
Fuel oil	723.8	694.9	403.2	387.0	353.0	338.9	-32.3	-31.0
LPG	92.6	100.0	0.0	0.0	91.6	98.9	1.0	1.0
Charcoal	0.2	0.2			0.2	0.0	0.0	0.2

Data Source: Statistics Mauritius

1.6 Dependency on Imported Energy Carriers

The trend of the dependency rate from 2014 to 2023 is shown in Table 1.5. In 2023, the dependency rate on imported energy carriers was 90.2%.

Table 1. 5 - Import energy dependency rate, 2014 – 2023

2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
85.8%	83.6%	85.4%	86.6%	87.1%	87.2%	86.7%	87.7%	89.9%	90.2%

Data Source: Statistics Mauritius

1.7 Primary energy requirement

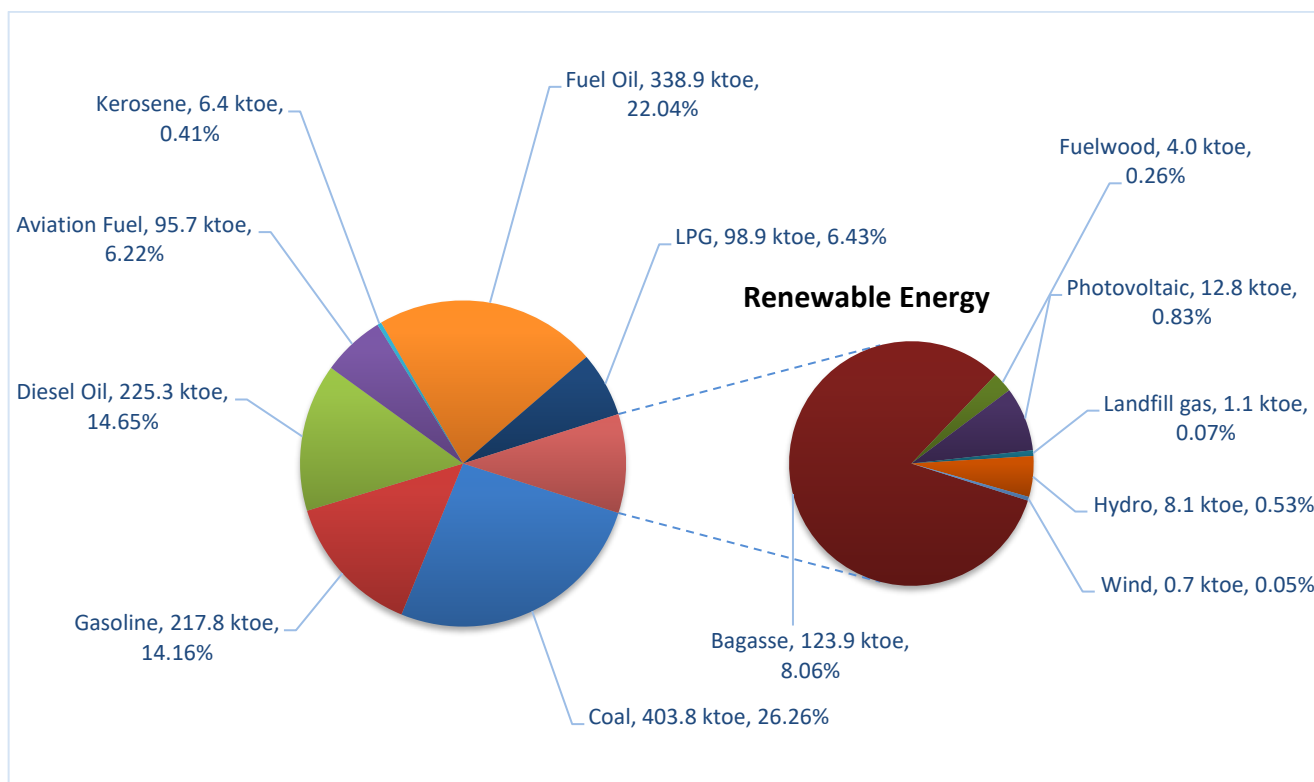
The primary energy requirements are met from imported sources and from local renewable sources as shown in Table 1.6.

Table 1. 6– Primary Energy Requirements 2022 – 2023

	Energy source	Primary energy requirement (ktoe)		% change
		2022	2023	
Imported fuels	Coal	359.3	403.8	12.38%
	Gasolene	206.5	217.8	5.47%
	Diesel Oil	214.3	225.3	5.11%
	Aviation Fuel	125.6	95.7	-23.78%
	Kerosene	0.8	6.4	690.12%
	Fuel Oil	332.6	338.9	1.88%
	LPG	96.4	98.9	2.65%
	Sub Total	1335.5	1386.7	3.84%
Local resources	Bagasse	117.9	123.9	5.06%
	Fuelwood	4.2	4.0	-4.00%
	Photovoltaic	13.3	12.8	-3.70%
	Landfill gas	1.5	1.1	-22.64%
	Hydro	11.0	8.1	-26.39%
	Wind	1.3	0.7	-44.19%
	Sub Total	149.2	150.7	0.99%
TOTAL		1484.7	1537.4	3.55%

In 2023, the total primary energy requirement for the Republic of Mauritius amounted to 1,537.4 ktoe representing an increase of 3.55% compared to 2022.

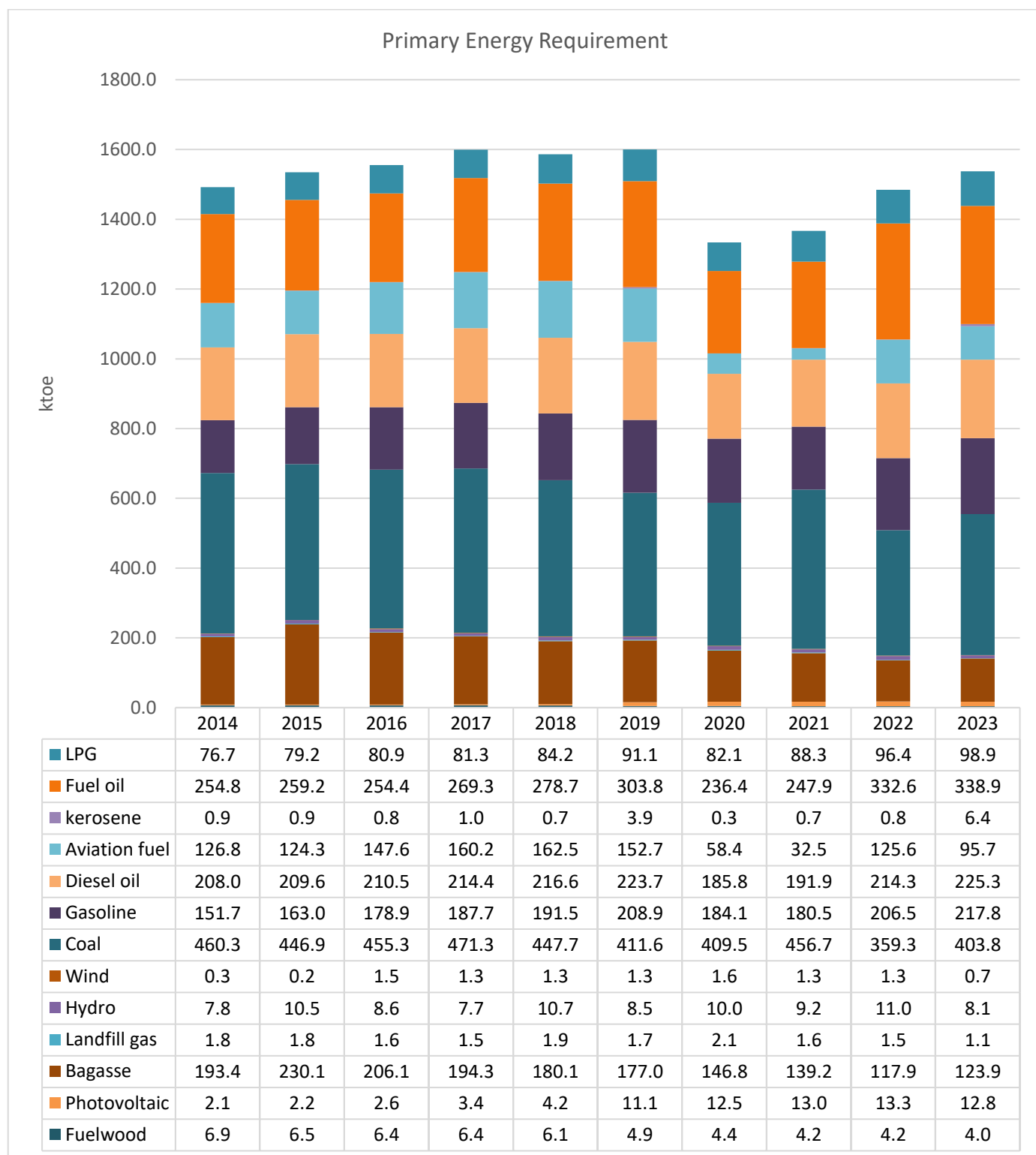
Figure 1.3 shows the share of fuel sources in the primary energy requirement for the year 2023. It is to be noted that 26.6% of the primary energy requirement for the year 2023 has been met through coal.



Data Source: Statistics Mauritius

Figure 1. 3 - Primary Energy Requirement 2023

The evolution of primary energy requirement over the period 2014 to 2023 is shown in Figure 1.4.



Data Source: Statistics Mauritius

Figure 1. 4 - Primary Energy Requirement, 2014 – 2023

1.8 Production of Primary Energy – Local Renewable Sources

Renewable energy sources encompass wind, solar, geothermal, wave, tidal, hydro, and energy derived from biomass, including landfill gas, sewage gas, and biogas. In Mauritius, the primary renewable energy sources currently harnessed include sugarcane bagasse, hydroelectricity, solar photovoltaic (PV), wind, landfill gas, and fuelwood.

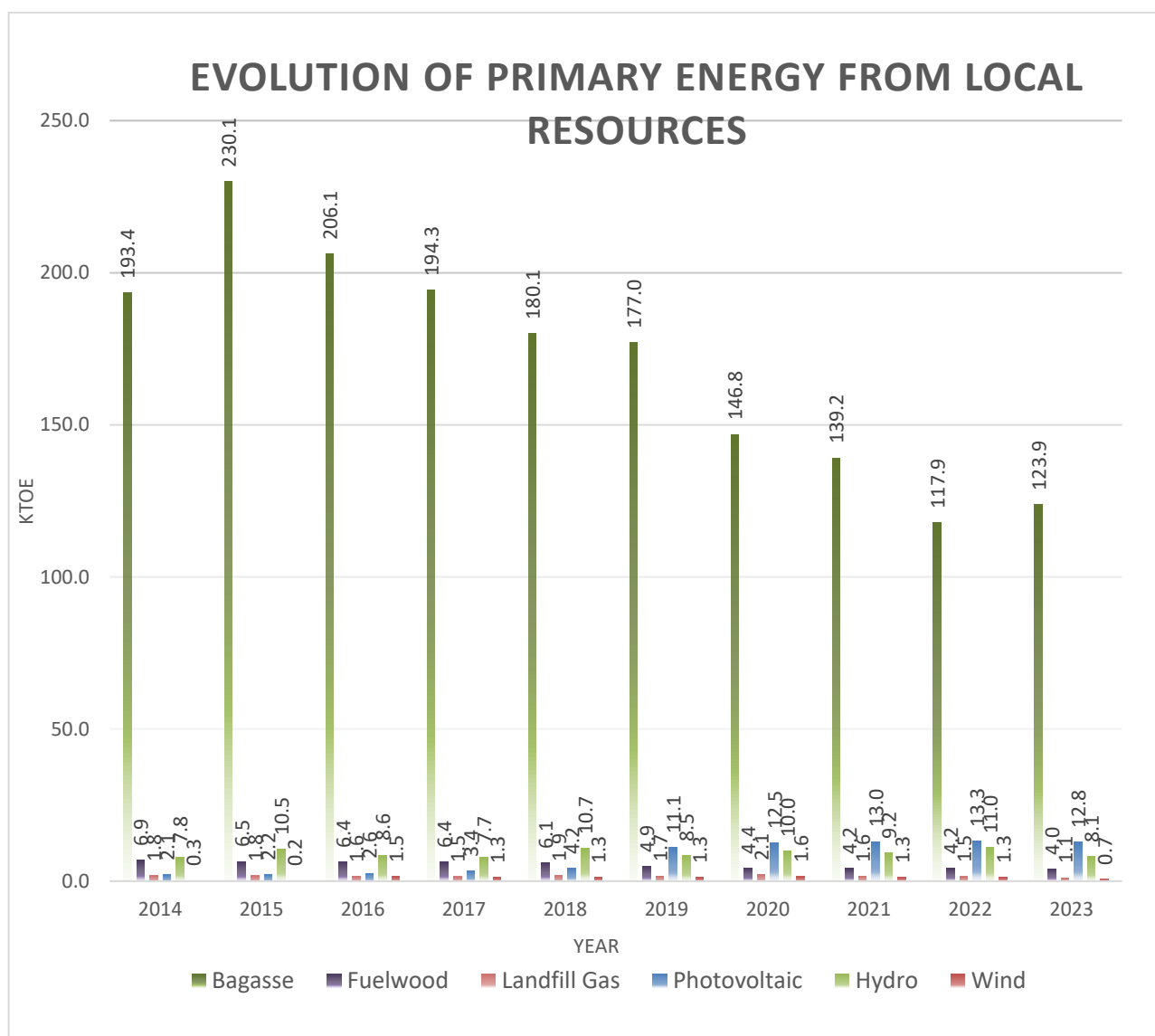
In 2023, the country tapped into a total of 150.7 kilotonnes of oil equivalent (ktoe) from local renewable energy resources, as detailed in Table 1.7. This represents a 1.0% increase in primary energy production from local sources compared to 2022.

Table 1. 7 - Primary energy supply in 2023 – Local resources

Local Resources	ktonne	GWh	ktoe
Bagasse	774.1		123.9
Fuelwood	10.6		4.0
Photovoltaic		148.8	12.8
Landfill gas		13.3	1.1
Hydro		94.4	8.1
Wind		8.6	0.7
Total	784.8	265.2	150.7

Data Source: Statistics Mauritius

Figure 1.5 shows the trend of primary energy obtained from local resources for the past 10 years:



Data Source: Statistics Mauritius

Figure 1. 5 - Trend of primary energy from local resources, 2014 – 2023

1.8.1 Hydroelectricity

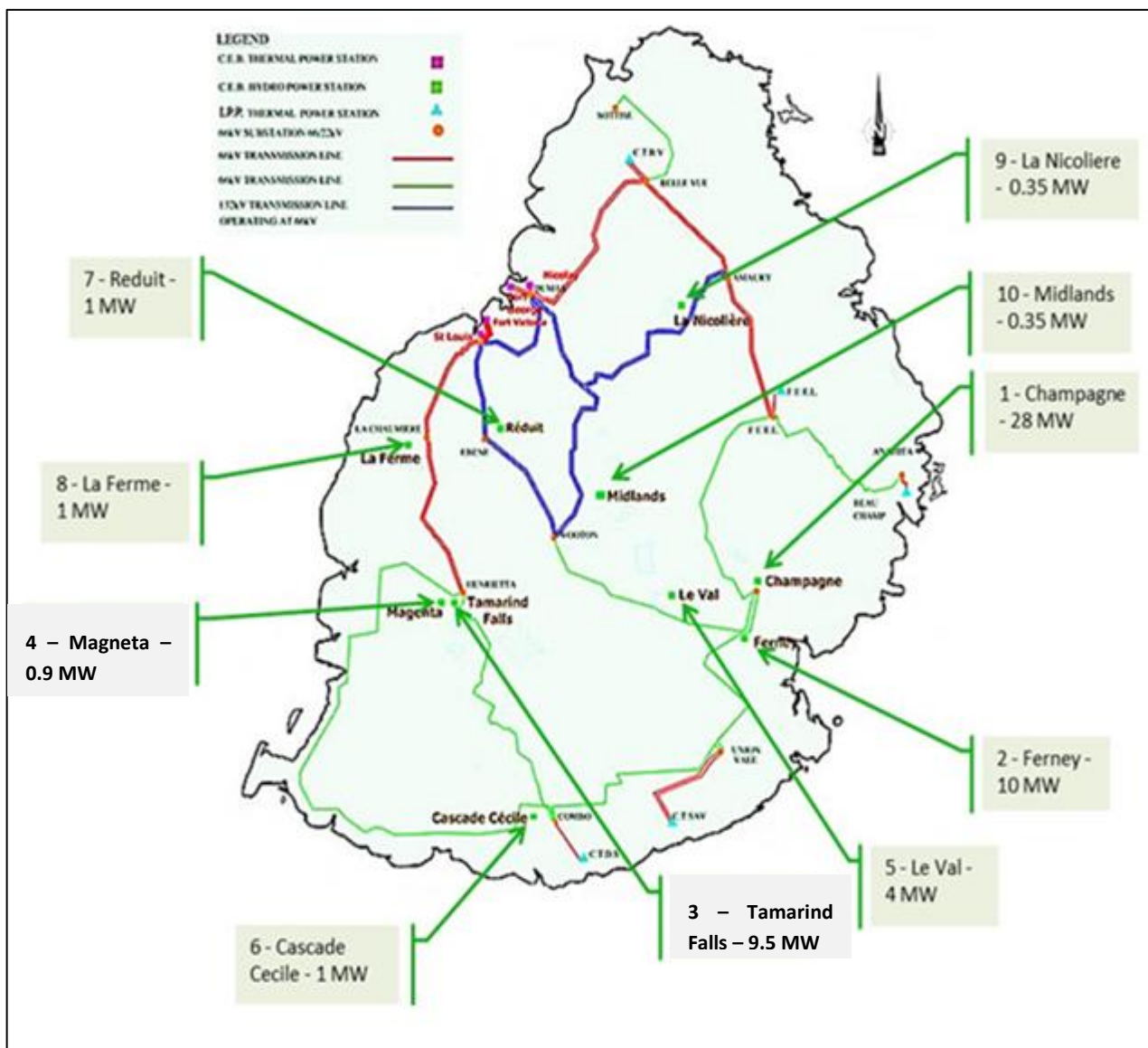
Hydropower has a long-standing history in Mauritius, dating back to 1899 when electricity was first generated on the island. At the time of independence in 1968, hydropower was the dominant renewable energy source, contributing between 50% and 60% of the national electricity mix.

The generation of hydropower is influenced by several factors, including rainfall patterns, water storage levels, and competing water demands — particularly for agriculture and potable use. However, the increasing impacts of climate change, notably prolonged dry spells and reduced rainfall, have posed significant challenges to the availability of water resources and, consequently, to the reliability of hydropower generation.

Hydropower harnesses the gravitational force of falling or flowing water to generate electricity. Hydropower plants are broadly classified into conventional and non-conventional systems.

Conventional plants are further subdivided into impoundment and diversion types, with impoundment facilities being the most prevalent. These plants vary in scale, ranging from small-scale installations to large utility-scale systems. In Mauritius, small hydropower plants are typically classified as mini (100–1000 kW), micro (<100 kW), and pico (<5 kW) systems, while utility-scale projects generally exceed 30 MW in capacity.

Currently, there are 10 hydroelectric power stations, ranging in size from 0.35 MW to 28 MW, in operation in Mauritius, as per Figure 1.6.



Data Source: CEB

Figure 1. 6- Hydropower stations in Mauritius



CHAMPAGNE HYDRO POWER STATION



FERNEY HYDRO POWER STATION



TAMARIND FALL HYDRO POWER STATION



MAGENTA HYDRO POWER STATION



LE VAL HYDRO POWER STATION



CASCADE CECILE HYDRO POWER STATION



A.I. ATCHIA POWER STATION



LA FERME HYDRO POWER STATION



LA NICOLIERE FC HYDRO POWER STATION



MIDLANDS HYDRO POWER STATION

Figure 1. 7- Hydropower stations in Mauritius (CEB)

Hydroelectric power generation accounted for 2.9% of total electricity produced in 2023. Fluctuations in hydroelectric power generation tend to follow annual rainfall levels as shown in Figure 1.8 . The electricity generated from all the hydropower plants was 94.4 GWh in 2023. In a rainy season, the annual production can be as high as 125 GWh, while in a dry season, it can drop to 57 GWh. Therefore, an annual hydroelectric power generation of 90 GWh can be considered as a rough average in a normal rainfall year.



Data Source: Statistics Mauritius

Figure 1. 8- Trend of hydro-electric generation, 2014 to 2023

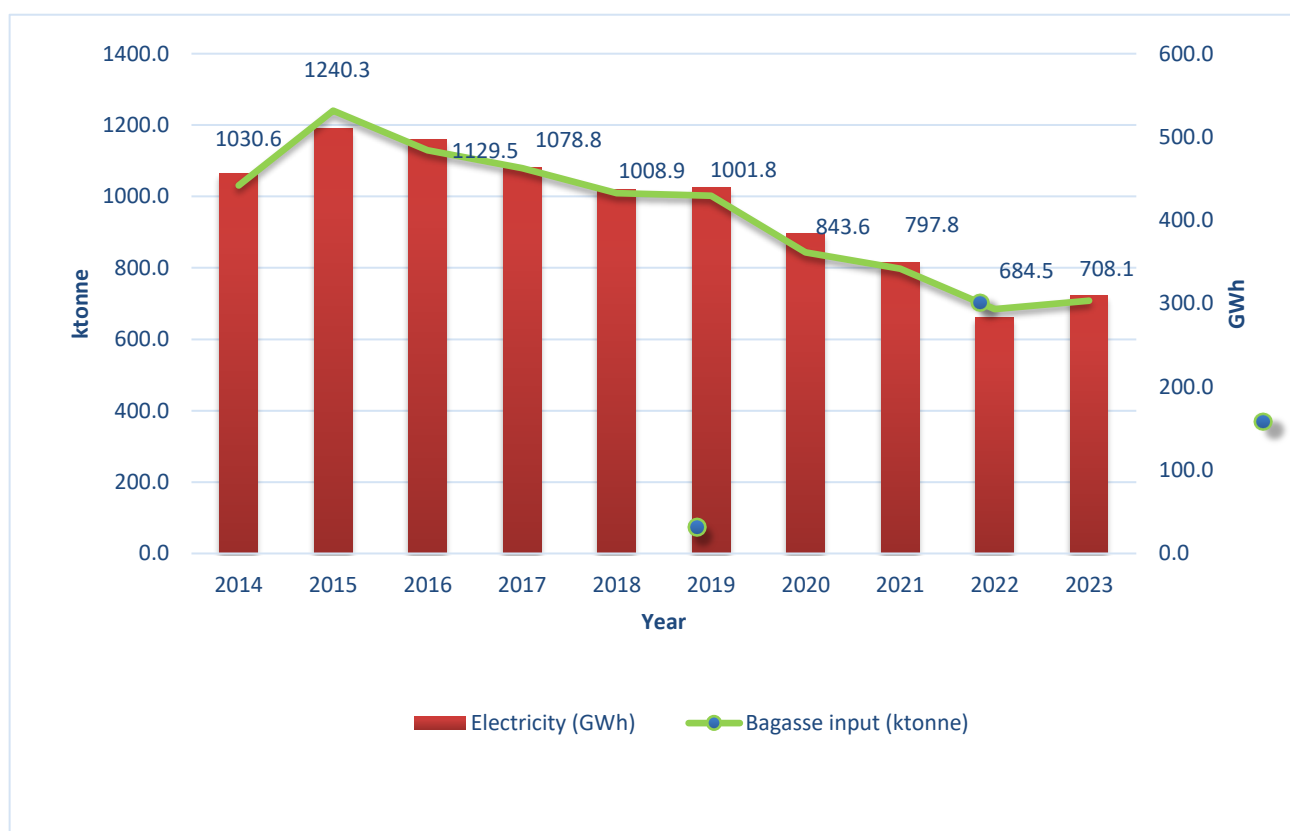
1.8.2 Bagasse

Bagasse, a fibrous by-product of sugarcane, remains the primary source of biomass energy in Mauritius. In 2023, approximately 40,424 hectares of sugarcane cultivation yielded around 0.80 million tonnes of bagasse following harvesting and crushing operations. This biomass is almost entirely utilised within the sugar industry to meet internal energy demands, both for heat and electricity generation. The excess electricity produced is exported to the national grid, contributing to the country's renewable energy mix.

Currently, three major bagasse/coal cogeneration power plants operate at the sugar factories of Alteo Energy Ltd, Terragen Ltd, and Omnicane Thermal Energy Operations (La Baraque and Saint Aubin) Ltd. During the off-crop season, when bagasse is not available, these facilities shift to coal combustion, which typically accounts for around 70% of their electricity output during that period.

In total, the sugar industry's Independent Power Producers (IPPs) exported approximately 309.2 GWh of electricity generated from bagasse to the national grid in 2023, underscoring the sector's ongoing role in supporting renewable electricity generation in Mauritius.

Figure 1.10 gives the bagasse input for electricity generation and the amount generated over the period 2014 to 2023. In 2023, 708.1 ktonnes of bagasse was used for electricity generation compared to 684.5 ktonnes in 2022. This is an increase of 3.4 % in the production of bagasse.



Data Source: Statistics Mauritius

Figure 1. 9 - Trend of electricity generation from bagasse, 2014 to 2023

Table 1.8 shows the ratio of electricity produced per tonne of bagasse over the period 2014 to 2023. The ratio varies in the range of 0.411 MWh/tonne to 0.455 MWh/tonne. In 2023, the ratio of electricity produced per tonne of bagasse was 0.437. In 2023, 9.5 % of total electricity production in Mauritius was from bagasse, representing an decrease of 12.8 % compared to 2022.

Table 1. 8 - Ratio of electricity produced per tonne of bagasse, 2014 - 2023

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Area under Sugar Cane Cultivation (Hectares)	57,081	56,872	55,560	54,182	51,454	48,819	45,805	45,939	42,154	40,424
Ratio electricity produced to bagasse input (MWh/tonne)	0.443	0.411	0.440	0.429	0.433	0.439	0.455	0.438	0.413	0.437

Data Source: MCIA , Statistics Mauritius

1.8.3 Photovoltaics (PV)

Mauritius, being a tropical island, enjoys a sunny climate all year round. The Mauritius Meteorological Services has key stations located at Medine, Pamplemousses (Ferret), FUEL, Plaisance and Vacoas to collect data.

Despite the Government's continued efforts to promote solar energy through various support schemes and incentives, electricity generation from PV systems recorded a slight decline in 2023. Total PV output decreased by 3.84%, from 153.8 GWh in 2022 to 147.9 GWh in 2023. This underscores the importance of continued investment and system optimization to maintain upward momentum in renewable energy adoption.

Tables 1.9 and 1.10 provide information about PV installations under the Small/Medium Scale Distributed Generation (SSDG/MSDG) and other schemes up to the year 2023 for the Islands of Mauritius and Rodrigues respectively.

Table 1. 9- SSDG and MSDG summary, Island of Mauritius, 2023

Category	Scheme	No. of approved applications	Total Capacity of approved applications (kW) (cumulated)	Total Capacity of PV systems connected to the CEB grid (kW) (cumulated)	Total kWh Produced during the year 2023	Total kWh Exported to the CEB grid during the year 2023
SSDG	FIT Scheme	311	2671	2006	1,974,147	1,287,827
SSDG	PECR Scheme	152	1780	1582	1,374,000	533,778
SSDG	NM1	1541	4780	3067	3,860,137	2,366,218
SSDG	NM2	612	2293	1405	1,781,119	1,236,574
SSDG	NM3	696	2600	1582	2,056,768	1,401,161
SSDG	DHGM	1913	8402	3814	3,605,370	2,955,262
SSDG	DHEV (GM)	94	750	245	201,225	201,225
SSDG	COOP NM	10	39	29	28,585	14,173
SSDG	Home Solar Project	912	912	842	641,342	641,342
SSDG	Home Solar Project 2A	2000	3000	1718	899,926	899,926
SSDG	Net Billing Scheme	687	1374	200	21,276	21,276
SSDG	RE Scheme for Religious bodies (RB)	92	352	152	15,349	15,349
SSDG	RE Scheme for NGOs & CI	9	32	24	2,456	2,456
SSDG	Green Energy Scheme for SMEs	984	1968	1942	2,023,834	2,023,834
SSDG	MOBEC/MSME	123	246	242	256,620	256,620
SSDG	CEB Buildings	7	119	119	110,253	19,601
SSDG	No Tariff Category-SSDG	6	144	144	66,159	10,064
MSDG	MSDG No Tariff	1	1	464	469,587	6,872
MSDG	MSDG Net Metering Scheme	83	10239	6595	7,256,451	92,643
MSDG	MSDG Gross Metering Scheme	182	47580	3434	3,858,991	490,149
MSDG	MSDG Public Sector Entities Scheme	26	3931	239	222,210	44,520
MSDG	MSDG Innovative RE projects	2	300	300	145,235	143,638
MSDG	MSDG EV Service Provider Scheme	3	2040	47	15,495	15,153
	CEB PV	2	25	25	36,256	0
	Total	10,448	95,578	30,217	30,922,791	14,679,661

Data source: CEB

Table 1. 10 - SSDG summary, Island of Rodrigues, 2023

Scheme	No. of approved applications (cumulated)	Total Capacity of approved applications (kW) (cumulated)	Total Capacity of PV systems connected to the CEB grid (kW) (cumulated)	Total kWh Produced during the year 2023	Total kWh Exported to the CEB grid during the year 2023
SSDG FIT scheme	39	230	172	206,847	153,621
SSDG PECR scheme	10	63	58	67,209	29,783
SSDG Net metering Scheme	30	97	28	44,968	21,185
Cooperative Net Metering: Scheme	1	5	3	1,590	1,184
Home Solar Project (HSP) & HSP 2A	191	241	241	148,544	21
Green Energy Scheme for SM Es	46	92	92	82,617	3,393
CEB PV	3	90	90	65,261	1
CEB Utility	1	1,000	1,000	110,242	108,641
MSDG Riv. Coco	1	100	100	153,897	153,471
Total	322	1,918	1,784	881,175	471,300

1.8.4 Electricity from Wind energy

Mauritius' wind regime is largely influenced by the prevailing southeast trade winds, which dominate the island's weather patterns throughout the year. These winds originate from the subtropical high-pressure belt in the southern hemisphere and consistently blow towards Mauritius from the southeast. As a result, the southeastern coastal regions of the island experience higher wind intensities compared to the western regions, which are sheltered by the central plateau and surrounding mountain ranges.

As of 2023, Mauritius has one operational wind farm located at Plaines des Roches, developed by Eole Plaines des Roches Ltd, with a total installed capacity of 9.35 MW. During the year, the facility generated approximately 7.33 GWh of electricity, which was fed into the national grid through the Central Electricity Board's (CEB) Amaury substation.

On Rodrigues Island, wind energy also contributes to the local electricity supply. A total of 1.305 GWh of electricity was produced from wind energy in 2023.

1.8.5 Electricity from Landfill gas

The amount of waste generated in Mauritius is currently around 460,000 tonnes per annum and this amount is expected to increase in the coming years. The wastes are disposed in the sole landfill of the island at Mare Chicose. Since 2011, electricity is generated from landfill gas which is constituted mostly of methane, produced by the fermentation of organic waste in landfills in the absence of oxygen. The effective capacity is 3 MW and in 2023, an amount of 13.3 GWh of electricity was generated.

1.8.6 Electricity from biogas

Data on biogas production through mesophilic anaerobic digestion and electricity production used to partially meet the electricity requirements of the St Martin Wastewater Treatment Plant over the period 2014 to 2023 are provided in Table 1.19 and 1.20. No electricity was generated as from year 2018 - 2023, given that the Gas Generator Set was not operational since February 2017.

Table 1. 11 - Volume of biogas produced over the last 10 years

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Volume (Nm³)	1,704,956	1,289,681	797,536	826,867	919,914	903,520	901,109	948,969	313,459	604,043

Data source: Wastewater Management Authority

Table 1. 12 - Electricity produced from biogas over the last 10 years

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Electricity generated (kWh)	950,773	644,031	783,883	27,461	0	0	0	0	0	0

Data source: Wastewater Management Authority

1.8.7 Solar Thermal – Solar Water Heaters (SWH) in Mauritius

According to data from the Housing Census 2022, a total of 118,913 households in Mauritius and 2,112 households in Rodrigues were reported to be using solar water heaters (SWH), representing 32.9% of all households in the Republic of Mauritius.

Grants were provided to subsidize the purchase of 73,480 solar water heaters up to 2016 under the four phases of the Solar Water Heater Grant Scheme (SWHGS). No updated figures were available for the year 2023.

Assuming a 10% increase in the use of solar water heaters in 2023 compared to 2022, the total number of solar water heater-equipped households is estimated to have reached approximately 133,314 in 2023.

Assuming that these solar water heaters have displaced electric water heaters and gas water heaters in the ratio of 1:5, the avoided electric energy is estimated at 14.26 GWh, and the avoided LPG mass is estimated at 17,418.5 tonnes.

Using the grid emission factor (GEF) of 810.1 gCO₂/kWh for the year 2023, and assuming 1.51 kg of CO₂ per litre of LPG (equivalent to 1,510 kg per tonne), the avoided CO₂ emissions are estimated as follows:

- Avoided emissions from electricity: 11,548.8 tonnes CO₂
- Avoided emissions from LPG: 26,301.9 tonnes CO₂

Total avoided CO₂ emissions in 2023 are therefore estimated at approximately 37,850.7 tonnes.

It is also to be noted that large-scale solar water heaters are deployed in other sectors of the economy, such as in the tourism sector (for heating swimming pools) and in the manufacturing sector (for preheating feedwater in industrial boilers), thereby contributing further to fossil fuel displacement and emission reductions.

Chapter 2 - ELECTRICITY PRODUCTION CAPACITY

The capacity of power plants connected to the grid in 2023 is shown in Table 2.1.

Table 2. 1 - Capacity of power plants in 2023

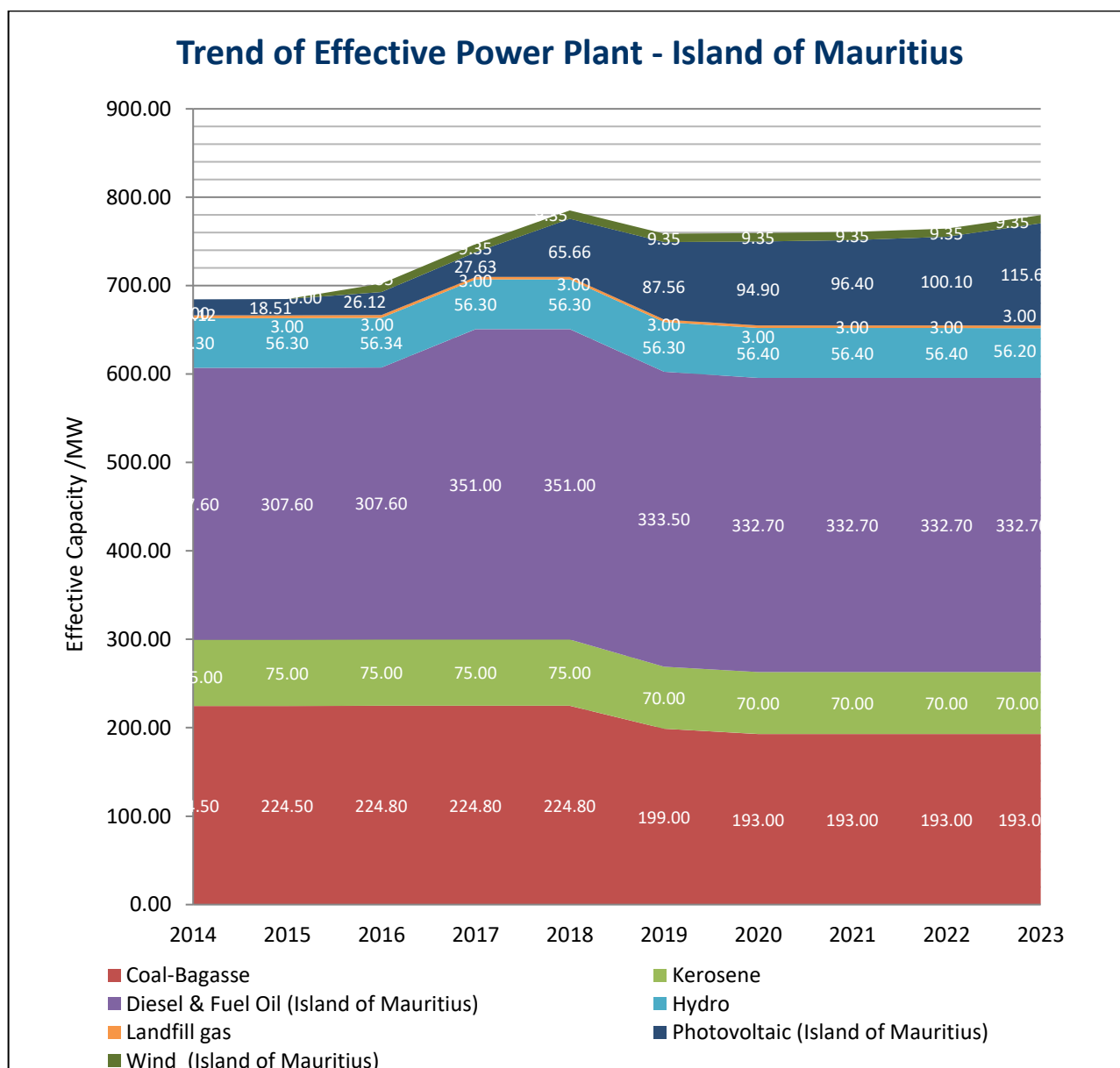
Type of power plant		2023			
		Installed plant capacity (MW)	Total Installed plant capacity (MW)	Effective plant capacity (MW)	Total effective plant capacity (MW)
COAL- BAGASSE	Alteo Energy Ltd (formerly F.U.E.L.)	36.70	230.40	27.00	193.00
	Terragen Ltd (formerly Compagnie Thermique de Belle Vue)	71.20		62.00	
	Omnican Thermal Energy Operations (St Aubin) Ltd (formerly Compagnie Thermique du Sud)	32.50		30.00	
	Omnican Thermal Energy Operations (La Baraque) Ltd (formerly Compagnie Thermique de Savannah)	90.00		74.00	
HYDRO	Champagne	28.00	58.50	28.00	56.20
	Ferney	10.00		10.00	
	Tamarind Falls	11.30		9.50	
	Le Val	4.00		4.00	
	Reduit	1.20		1.00	
	Cascade Cecile	1.00		1.00	
	Magenta	1.10		1.00	
	Midlands Dam	0.35		0.35	
	La Nicoliere	0.35		0.35	
	La Ferme	1.20		1.00	
LANDFILL GAS	Sotravic Ltd	3.45	3.45	3.00	3.00
KEROSENE	Nicolay	78.40	78.40	70.00	70.00
DIESEL & FUEL OIL	St Louis	110.00	359.60	102.70	332.70
	Fort Victoria	109.60		103.00	
	Fort George	140.00		127.00	
PHOTOVOLTAIC	Island of Mauritius (IPP)	110.14	126.56	99.54	115.6
	Fort George	0.005		0.005	
	Fort Victoria	0.020		0.020	

	8MW PV Henrietta	9.095		9.095	
	CEB GREEN	2.060		1.700	
	SSDG/MSDG CEB Generation	5.240		5.240	
PHOTOVOLTAIC	Island of Rodrigues (IPP)	0	1.73	0	1.73
	CEB-PV Plant	0.09		0.09	
	Grenade PV Farm	1.00		1.00	
	MSDG(PV Riv Coco)	0.10		0.10	
	SSDG	0.54		0.54	
WIND	Island of Mauritius (IPP)	9.35	9.35	9.35	9.35
WIND	Island of Rodrigues	1.22	1.22	1.22	1.22
DIESEL & FUEL OIL	Island of Rodrigues	12.30	12.30	11.40	11.40
Total power available on grid (Island of Mauritius) (MW)		866.260	866.260	779.850	779.850
Total power available on grid (Island of Rodrigues) (MW)		15.245	15.245	14.345	14.345
Total (MW)		881.505	881.5050	794.195	794.195

Data Source: Statistics Mauritius

Table 2.1 provides the installed and effective capacities of grid-connected power plants across Mauritius and Rodrigues for the year 2023. The total installed plant capacity stood at approximately 881.5 MW, of which 794.2 MW represented the effective capacity. Fossil fuel-based power plants, including diesel, fuel oil, and kerosene units, remained dominant contributors. Notably, the Island of Mauritius accounted for 866.3 MW of installed capacity and 779.6 MW of effective capacity, while Rodrigues contributed 15.2 MW installed and 14.3 MW effective capacity. Renewable energy sources such as hydro, wind, and photovoltaic collectively contributed 197.36 MW of installed capacity, showing steady progress in diversifying the generation mix.

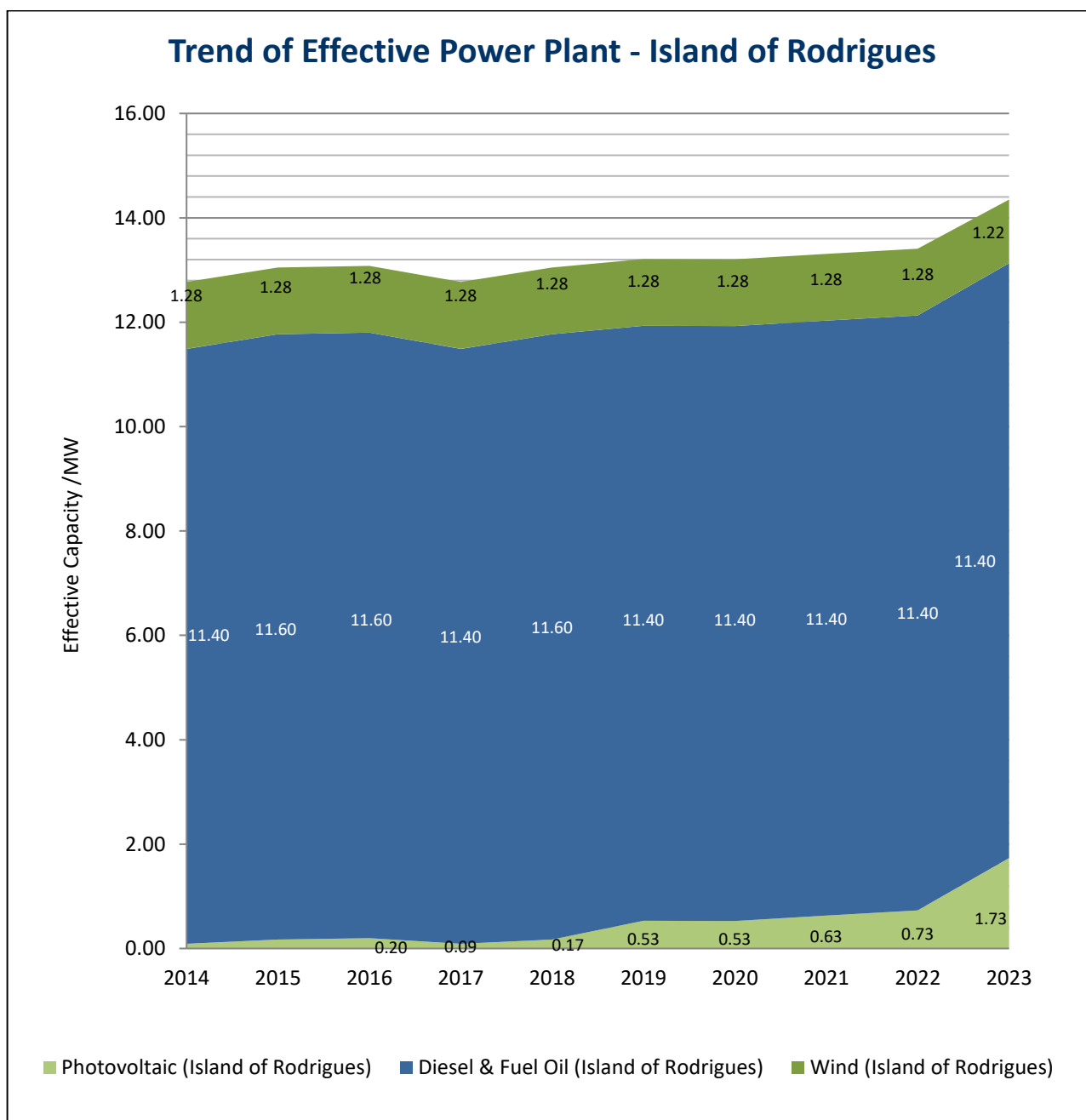
The trend of effective power plant capacity from 2014 to 2023 (Island of Mauritius) is shown in Figure 2.1.



Data Source: Statistics Mauritius

Figure 2.1- Trend of effective power plant capacity, 2014 – 2023 (Island of Mauritius)

Figure 2.1 illustrates the evolution of effective generation capacity in the Island of Mauritius from 2014 to 2023. The data reflects consistent capacity contributions from coal-bagasse, hydro, and diesel/fuel oil power plants. As of 2023, diesel and fuel oil continued to dominate with 44.5% of the effective capacity, followed by coal-bagasse at 24.9%. Renewable sources, particularly solar PV, exhibited a gradual increase in capacity over the period, rising to 115.6 MW in 2023.



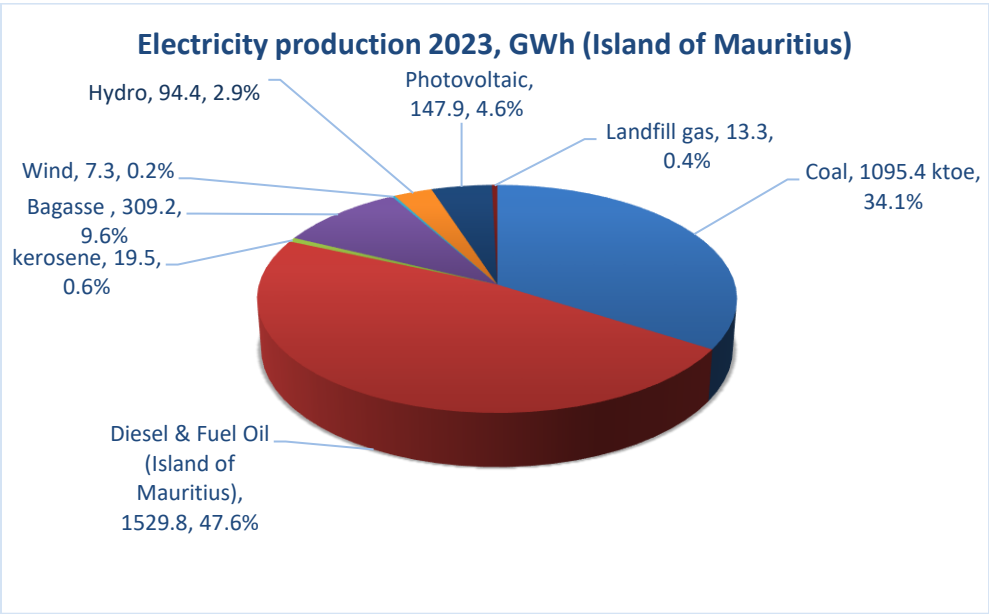
Data Source: Statistics Mauritius

Figure 2. 2- Trend of effective power plant capacity, 2014 – 2023 (Island of Rodrigues)

Rodrigues' capacity has remained relatively constant, largely reliant on diesel. However, gains in PV (1.73 MW) and wind (1.22 MW) indicate gradual adoption of renewables.

Chapter 3 - ELECTRICITY PRODUCTION

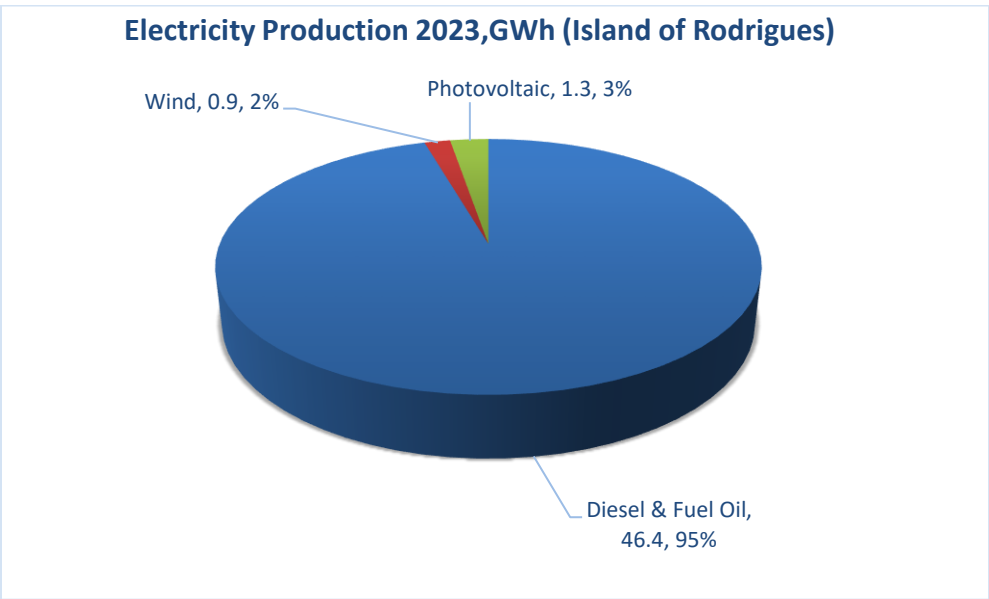
Figure 3.1 and 3.2 shows the share of electricity production by fuel type in 2023.



Data Source: Statistics Mauritius

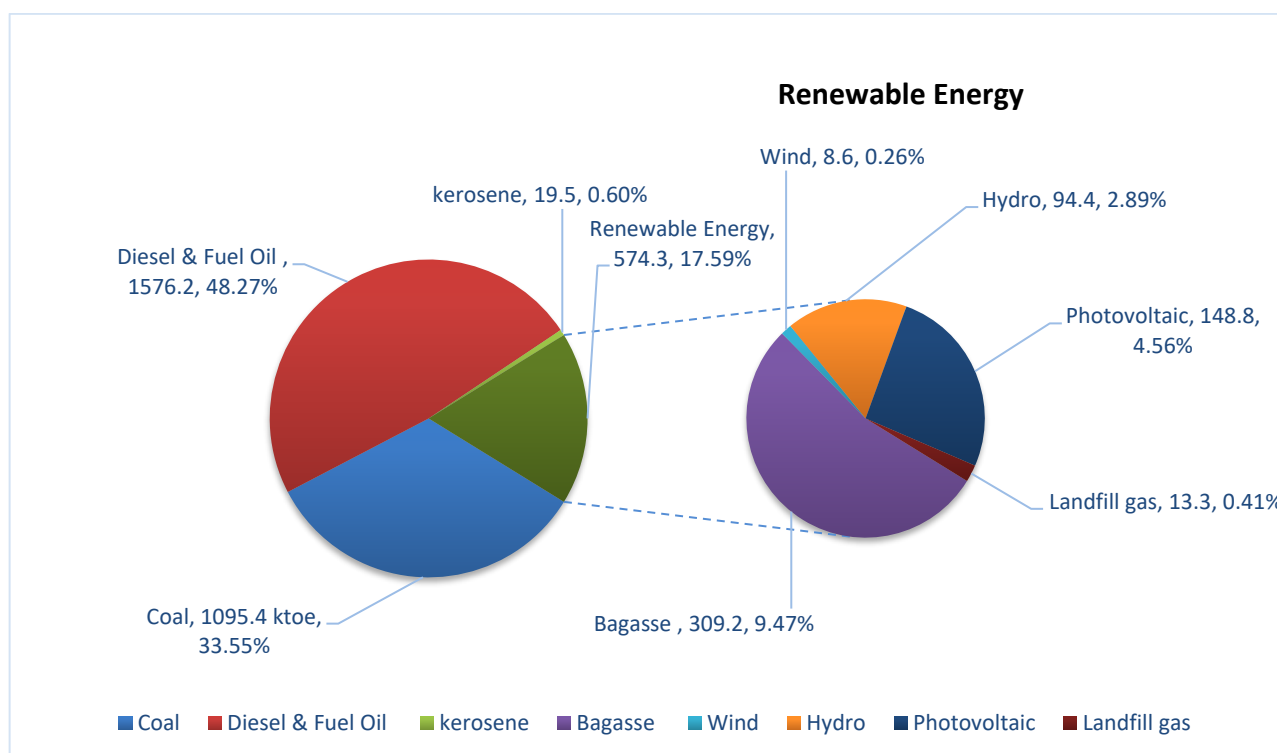
Figure 3. 1- Share of electricity production by fuel type, 2023 (Island of Mauritius)

Electricity generation in Mauritius remained dominated by fossil fuels, particularly diesel and fuel oil, accounting for 47.6% of the total. Coal contributed 34.1%, while bagasse, hydro, and photovoltaics made up most share from renewables



Data Source: Statistics Mauritius

Figure 3.2 - Share of electricity production by fuel type, 2023 (Island of Rodrigues)



Data Source: Statistics Mauritius

Figure 3.3 - Share of electricity production by fuel type, 2023 (Republic of Mauritius)

For the Republic of Mauritius, fossil fuel-based generation reached 82.4% in 2023. Renewables contributed 17.6%, showing a slight decline compared to previous years.

3.1 Share of Renewable Energy in Electricity Mix

The actual renewable energy in the electricity mix in 2023 for Island of Mauritius and Island of Rodrigues are given in Table 3.1 and Table 3.2 respectively.

Table 3.1- Share of renewable energy in electricity mix for Island of Mauritius

Renewable energy source	Effective Capacity (MW)	Total RE (GWh)	% Share in Electricity Mix
(i) On-shore wind	9.35	7.333	0.23
(ii) Solar Energy - SSDG	19.11	18.919	0.59
(iii) Solar Energy - MSDG	11.08	11.968	0.37
(iv) Solar Energy – Utility + CEB PV	10.82	5.842	0.18
(iv) Solar Energy – IPP	74.59	111.18	3.46
(v) Biomass - Bagasse	131.5	309.2	9.61
(vi) Biomass -Cane trash		6.713	0.21
(vii) Landfill Gas	3	13.318	0.41
(viii) Hydro	56.2	94.442	2.94
Total	315.65	578.915	18.00

Data Source: CEB

*During the crop season, the bagasse IPPs supply steam and electricity directly to the annexed sugar mills. Thus, the guaranteed power is less than the installed capacity.

Table 3.2- Share of renewable energy in electricity mix for Island of Rodrigues

Renewable energy source	Installed Capacity (MW)	Total RE (GWh)	% Share in Electricity Mix
(i) On-shore wind	1.22	1.305	2.69%
(ii) Solar Energy - SSDG	0.594	0.552	1.14%
(iii) Solar Energy - MSDG	0.1	0.154	0.32%
(iv) Solar Energy - Utility	1	0.110	0.23%
(V) Solar Energy – CEB PV	0.09	0.065	0.13%
Total	3.004	2.186	4.50%

Data Source: CEB

*Includes PV plant at CEB Admin bldg., Port Mathurin and Pointe Monnier Power Stations.

The overall conversion efficiencies of the power plants in 2023 are given in Table 3.3.

Table 3.3- Conversion efficiency of power plants (2023)

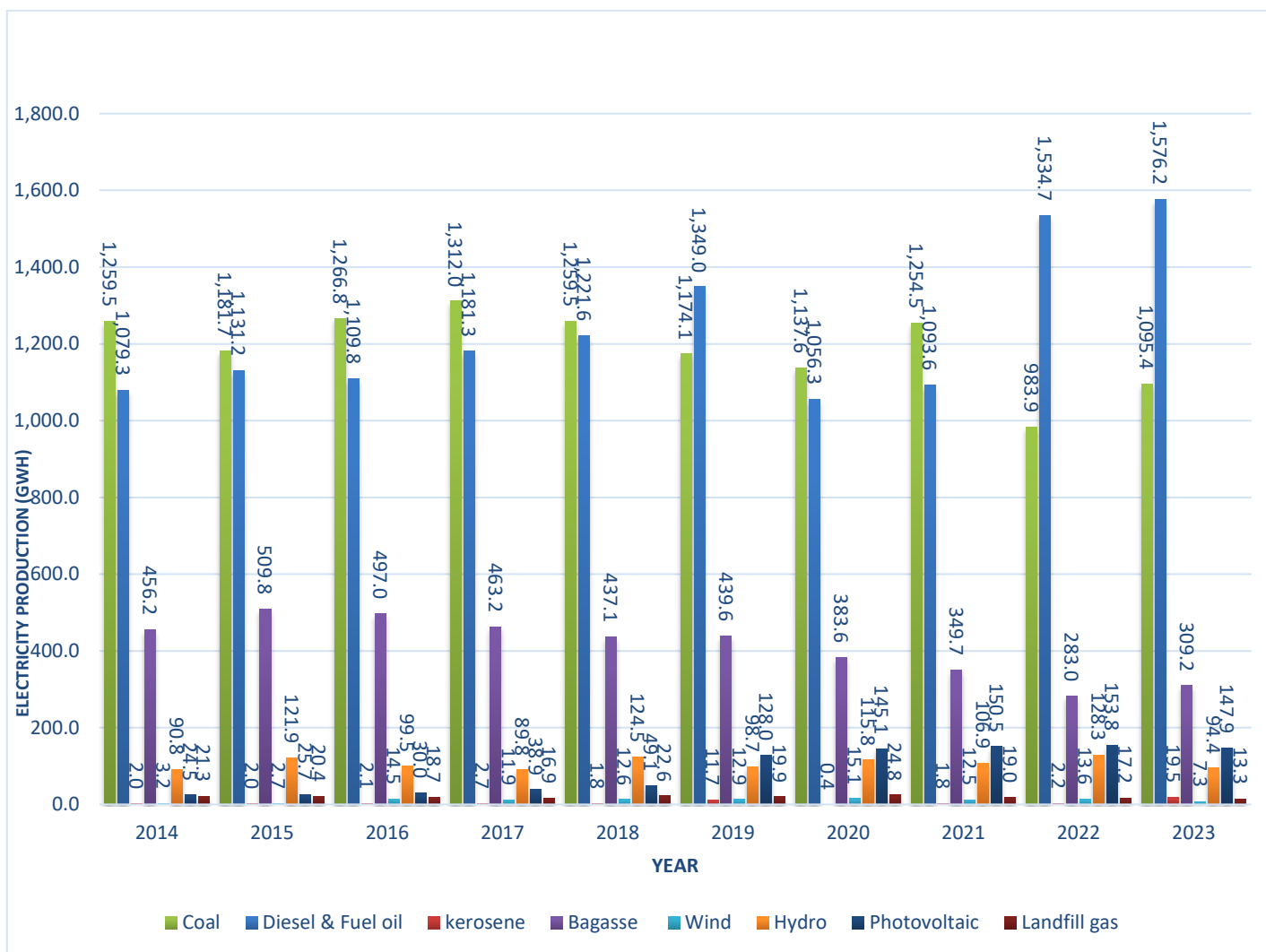
2023	Fuel input	Electricity production		Overall conversion efficiency
	ktoe	GWh	ktoe	%
Coal	383.5	1095.4	94.2	24.6%
Diesel & Fuel Oil (Island of Mauritius)	292.6	1529.8	131.6	45.0%
Diesel & Fuel Oil (Island of Rodrigues)	10.1	46.4	4.0	39.6%
Kerosene	6.4	19.5	1.7	26.3%
Bagasse	113.3	309.2	26.6	23.5%
TOTAL	805.8	3000.3	258.0	32.0

Data Source: Statistics Mauritius

Overall conversion efficiency for 2023 stood at 32%. Diesel and fuel oil plants in Mauritius achieved the highest efficiency (45%), while coal and bagasse remained below 25%. Rodrigues' diesel-based plants recorded 39.6% efficiency.

Figure 3.4 shows the trend of electricity production per source of energy over the period 2013 to 2022.

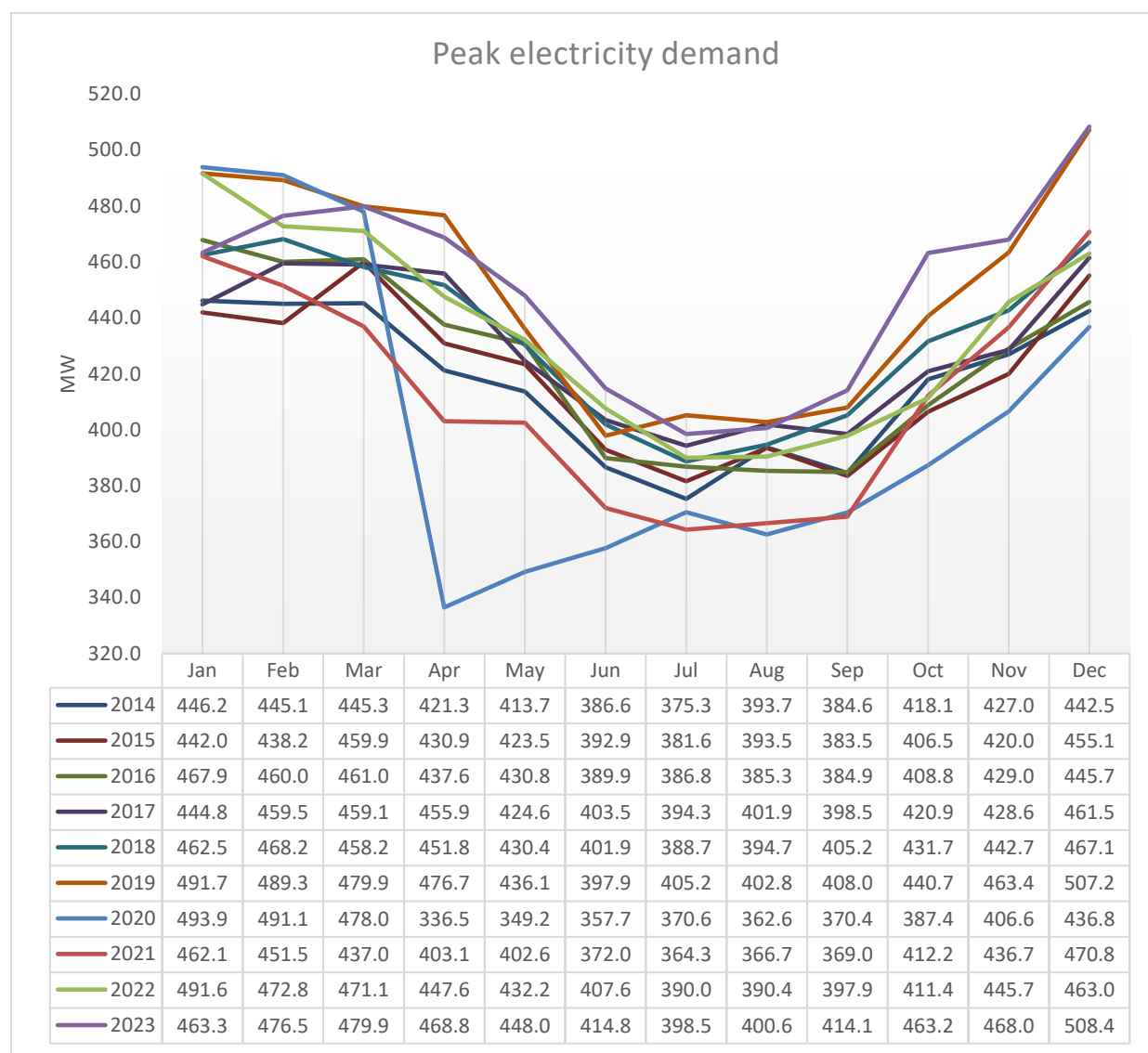
The figure illustrates the evolution of electricity generation in Mauritius over the past decade. Total electricity production increased from 2,936.9 GWh in 2014 to 3,265.5 GWh in 2023, representing a 11.2% growth. The share of fossil fuels in electricity generation remained dominant throughout the period, with significant increases in diesel and coal-based production to meet rising demand



Data Source: Statistics Mauritius

Figure 3.4- Trend of electricity production, 2014 – 2023

Peak electricity demand in Mauritius followed a moderate upward trajectory over the decade, rising from 446.2 MW in 2014 to 508.4 MW in 2023. The increase reflects growing consumption in residential and commercial sectors, particularly due to lifestyle changes and the adoption of energy-intensive appliances. Figure 3.5 shows the monthly peak electricity demand for the years 2014 – 2023 (Island of Mauritius).

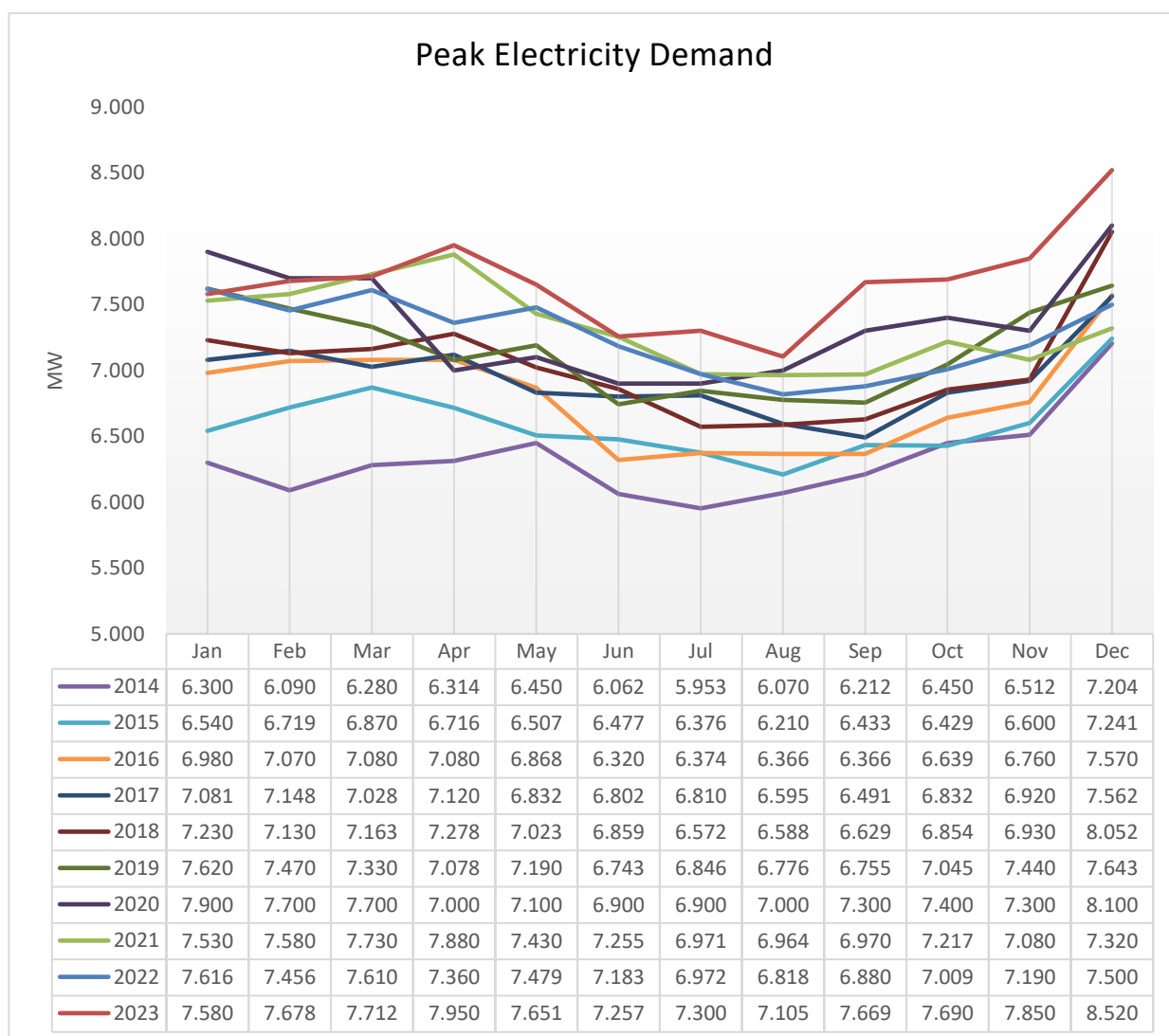


Data Source: Statistics Mauritius

Figure 3.5– Peak Electricity Demand (Island of Mauritius), 2014 – 2023

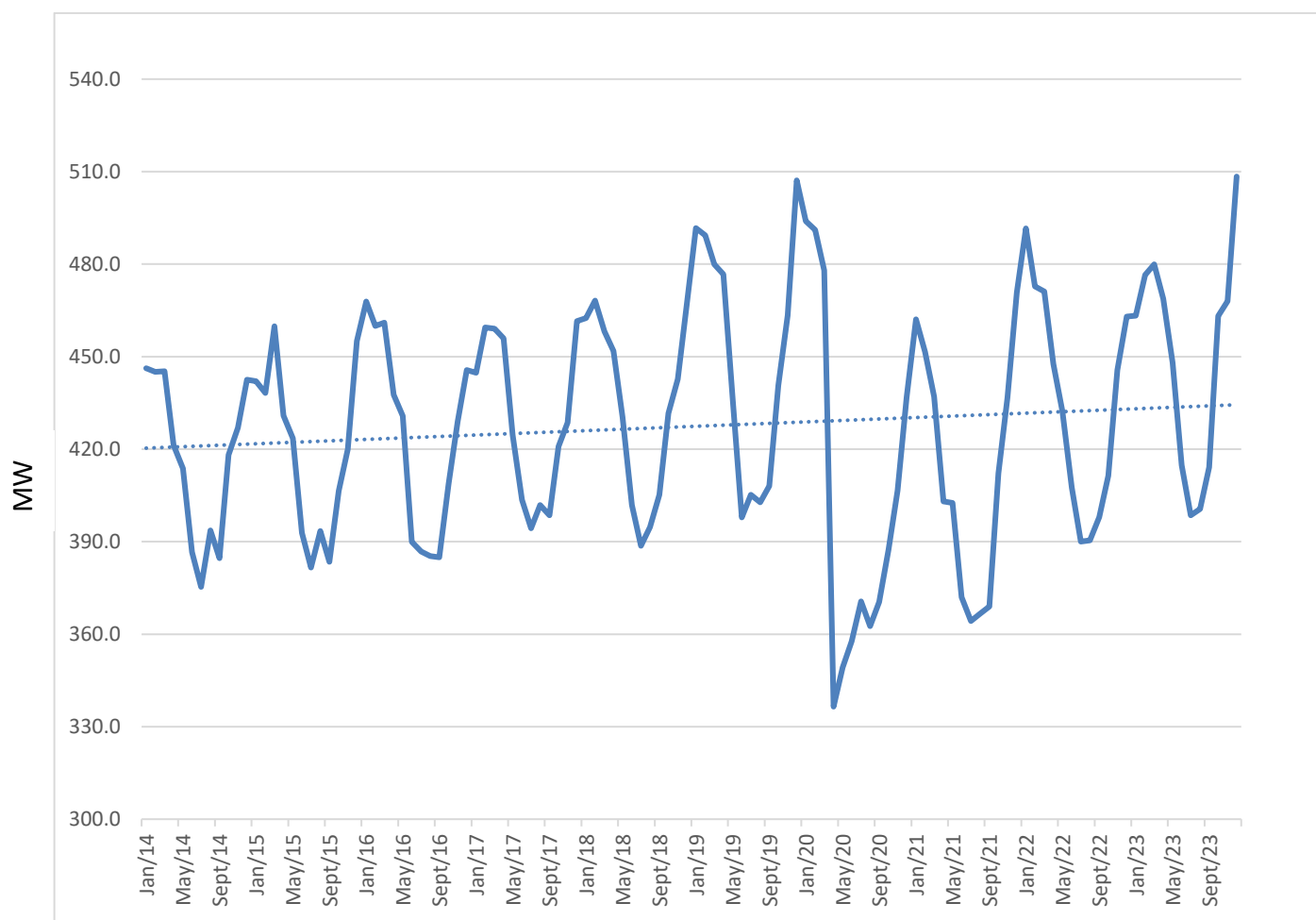
Figure 3.6 shows the monthly peak electricity demand for the years 2014 to 2023 (Island of Rodrigues).

Rodrigues experienced a gradual increase in peak demand, rising from 7.2 MW in 2014 to 8.5 MW in 2023. The growth was primarily driven by the expansion of electrification, population growth, and increased penetration of electrical appliances.



Data Source: Statistics Mauritius

Figure 3. 6 - Peak electricity demand (Island of Rodrigues), 2014 – 2023

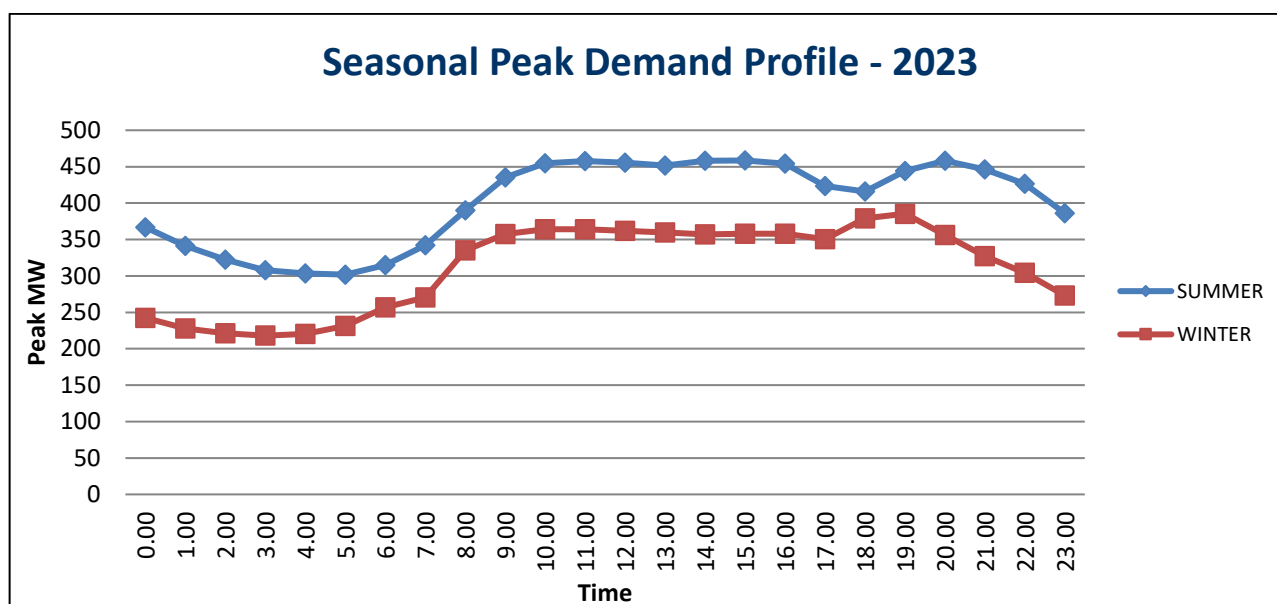


Data Source: Statistics Mauritius

Figure 3.7 - Peak electricity demand - Electricity demand (MW) trend, 2014 to 2023 (Island of Mauritius)

This figure above provides a clear depiction of both peak and base demand patterns over time. While the daily base load has increased gradually, the peak demand growth has been more pronounced in warmer months, suggesting a growing influence of cooling loads. The data highlights the importance of adopting energy conservation measures at home and office and also adopting energy efficiency appliances for cooling demands.

Figure 3.8 shows the hourly seasonal peak demand profile (Island of Mauritius) for the year 2023 respectively.



Data Source: CEB

Figure 3.8- Seasonal peak demand profile, 2023

The 2023 seasonal demand profile reveals pronounced peaks during the summer months, notably January and December, attributable to higher air-conditioning usage in homes and offices. Weekday peaks were typically higher than weekend levels, with the evening period (6–9 PM) showing the highest load levels.

Table 3.4 provides a summary of the electricity production over the period 2014 to 2023 (Island of Mauritius).

Table 3.4- Summary of electricity production, 2014 – 2023

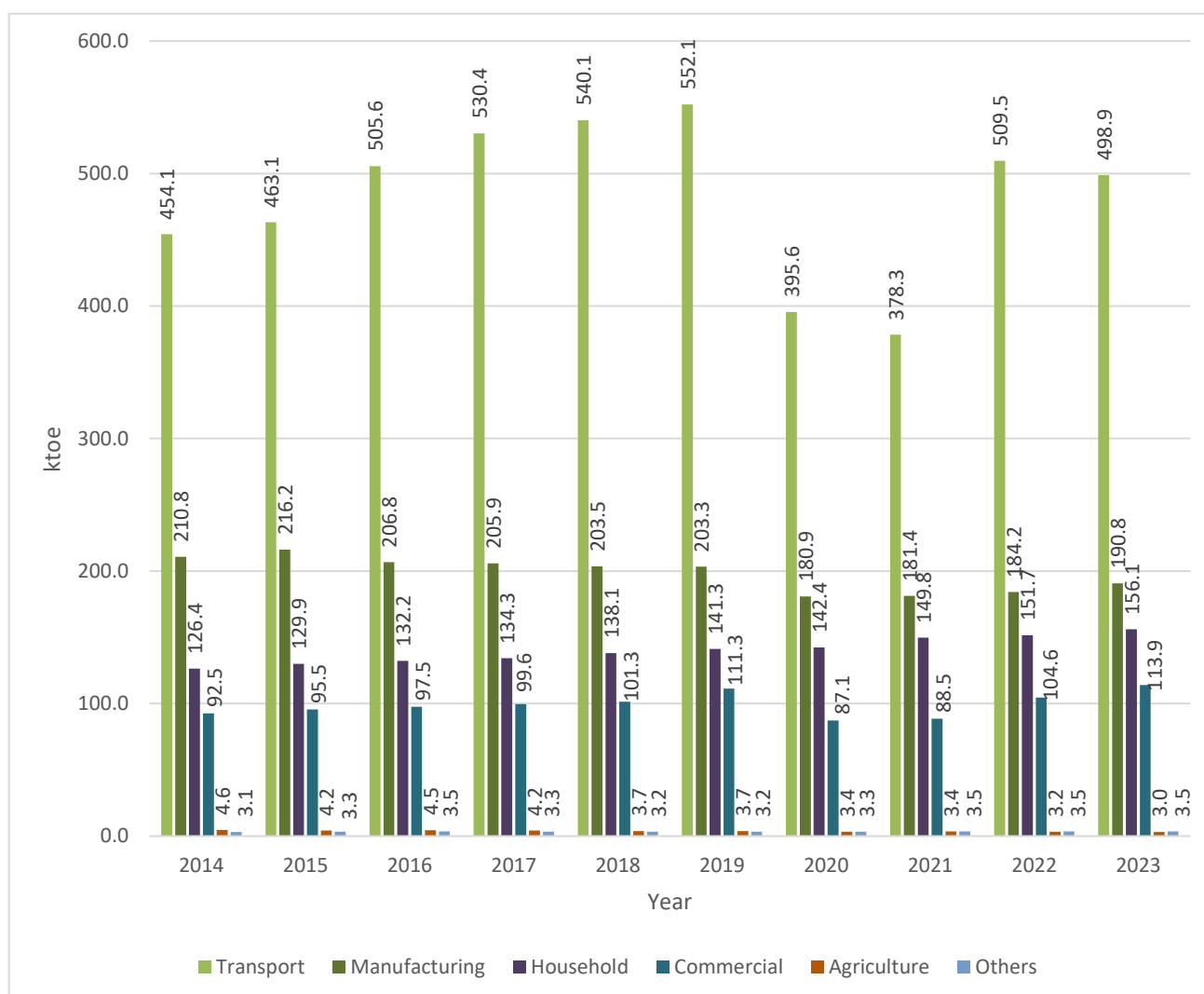
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Fossil (GWh)	2,340.8	2,314.9	2,378.7	2,496.0	2,482.9	2,534.8	2,194.4	2,349.9	2,520.8	2,691.0
Renewables (GWh)	596.2	680.6	663.5	623.7	648.7	701.8	688.0	642.2	598.4	572.2
Increase in Electricity Production (GWh)	51.6	58.7	46.6	77.5	11.9	105.0	-354.3	109.7	127.1	146.7
Percentage increase overall	1.8 %	2.0 %	1.5 %	2.5 %	0.4 %	3.2 %	-10.9%	3.8 %	4.2 %	4.7 %
Percentage of renewables	20.3%	22.7%	21.8%	20.0 %	20.7%	21.7%	23.9%	21.5%	19.2%	17.6%
Peak demand (MW) (Island of Mauritius)	446.2	459.9	467.9	461.5	468.2	507.2	493.9	470.8	491.6	508.4
Peak demand evolution	1.2 %	3.1 %	1.7 %	-1.4%	1.5 %	8.3 %	-2.6%	-4.6 %	4.4 %	3.4%

Data Source: Statistics Mauritius

Chapter 4 - FINAL ENERGY CONSUMPTION

4.1 General

Final energy consumption in Mauritius increased from 958.3 ktoe in 2022 to 967.0 ktoe in 2023. The transport sector remained the dominant consumer, followed by manufacturing, households at and commercial activities.



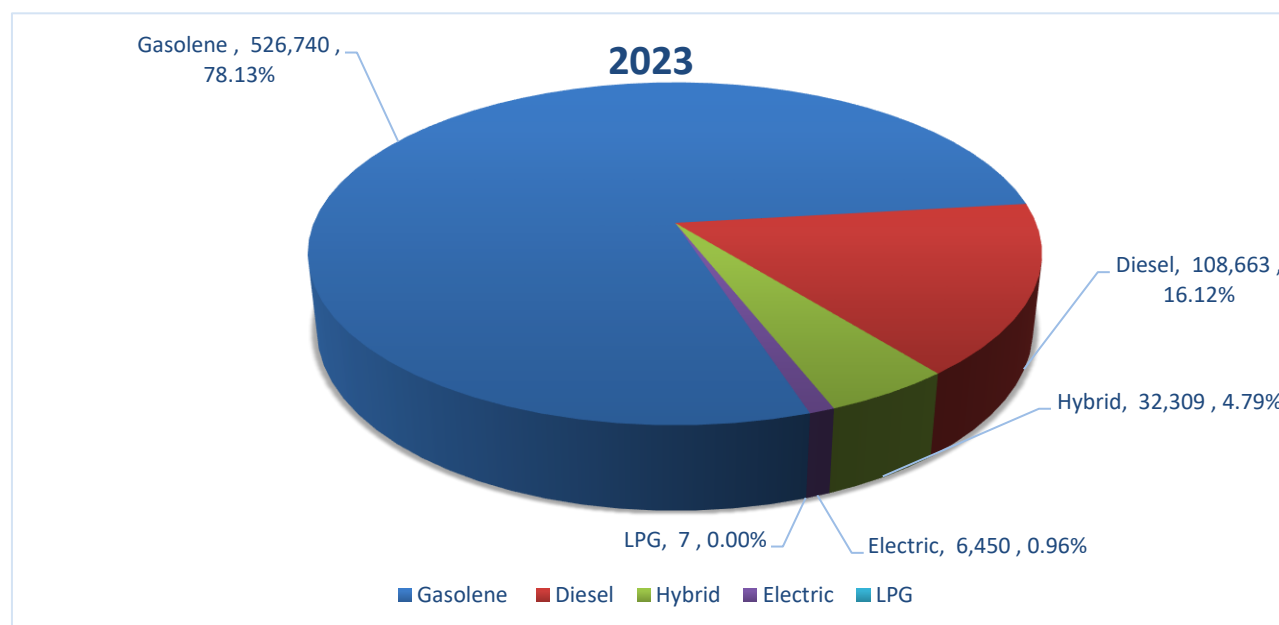
Data Source: Statistics Mauritius

Figure 4. 1 - Final energy consumption by sector, 2014 – 2023

4.2 Final Energy consumption - Transport sector

4.2.1 Vehicle fleet

The vehicle fleet remained heavily dominated by gasoline (78.1%) and diesel (16.1%) vehicles. Hybrids accounted for 4.8% and EVs for 0.96%, showing a slow but steady transition to alternative fuel vehicles..



Data Source: National Transport Authority

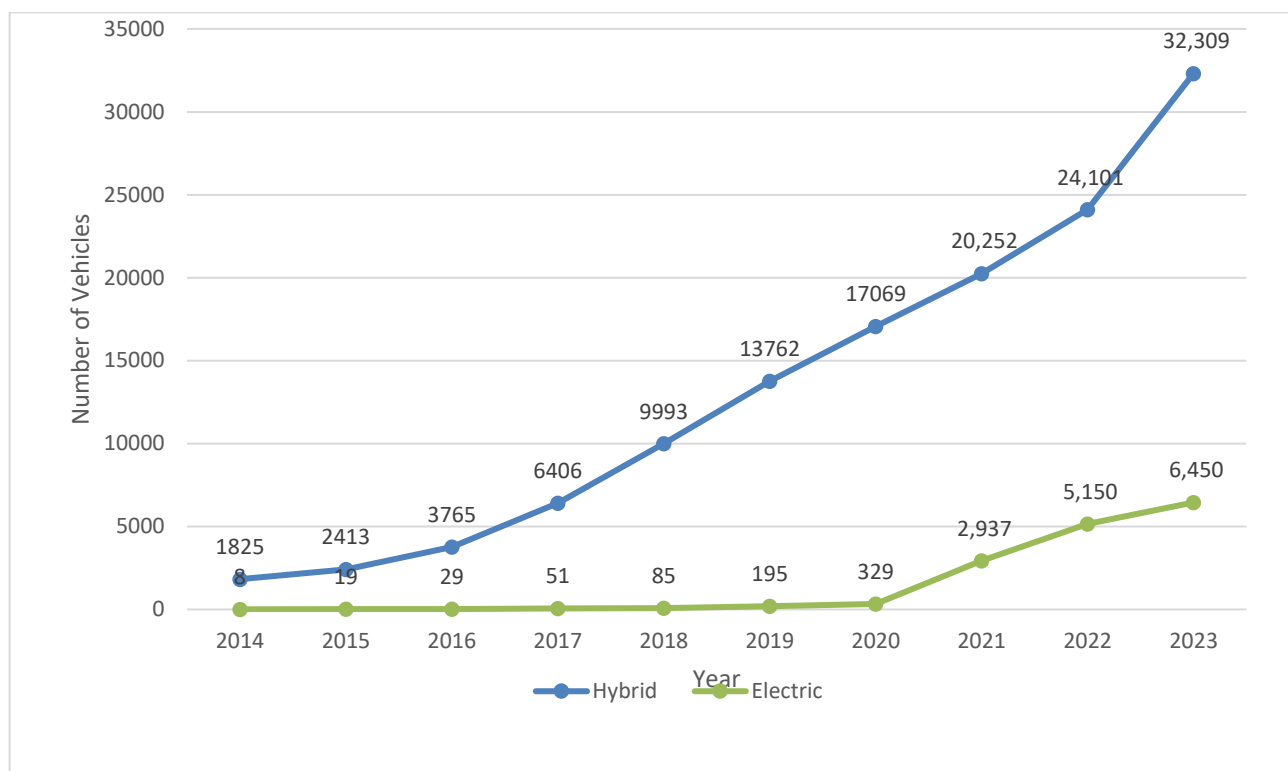
Figure 4. 2- Vehicle fleet by type of fuel in 2023

Table 4.1 below, gives the number of hybrid (petrol/electric) and electric vehicles as from 2014 to 2023.

Table 4.1 – Hybrid and Electric Vehicles , 2014 - 2023

Vehicles Registered	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Hybrid	1825	2413	3765	6406	9993	13762	17069	20,252	24,101	32,309
Electric (Cars/Bus es/Van)	6	11	10	22	34	110	136	224	387	1025
Total Electric (Includes Electric Autocycle etc).	8	19	29	51	85	195	329	2,937	5,150	6,450

As of 2023, Mauritius had 32,309 hybrid vehicles and 6,450 fully electric vehicles. This represents a significant year-on-year increase, reflecting sustained policy support through incentives and customs exemptions campaigns



Data Source: National Transport Authority

Figure 4. 3– Trend in EV and Hybrid Vehicles (2014 – 2023)

Between 2014 and 2023, hybrid vehicles grew , while EVs increased significantly, from under 100 in 2017 to over 6,000 in 2023. The upward trajectory supports the ongoing transition toward low-emission vehicles.

4.2.2 Fuel Consumption

Table 4.2 gives the fuel consumption in the sub-sectors of the transport sector in 2023.

Total transport fuel consumption in 2023 was 499.86 ktoe, with gasoline accounting for 180.48 ktoe, diesel 159.04 ktoe, and aviation fuel 32.53 ktoe. The remaining share came from fuel oil, LPG, and electricity use, including Metro Express and EVs

Table 4. 2- Fuel consumption (ktoe) in the transport sector, 2023

Transport sector	Gasolene	Diesel	Aviation fuel (local aircraft)	LPG	Fuel Oil	Electricity	Total (ktoe)
Land	212.54 ktoe	177.32 ktoe		2.86 ktoe		0.91 ktoe (Metro Express)	393.69 ktoe
						0.05 ktoe (EVs)	
Aviation			95.70 ktoe				95.70 ktoe
Sea	5.23 ktoe	2.04 ktoe			3.21 ktoe		10.47 ktoe
Total (ktoe)	217.77 ktoe	179.36 ktoe	95.70 ktoe	2.86 ktoe	3.21 ktoe	0.96 ktoe	499.86 ktoe

Data Source: Statistics Mauritius

Table 4. 3 – Electric Consumption for EVs

	YEAR 2023	
CEB Tariff - EV charger	EV Chargers Connected (cumulative)	Total kWh
Tariff 150C	310	515,896
Tarif 150CF	26	65,788

Electricity consumption by EVs reached 581,684 kWh in 2023 an increase over previous years, though still marginal in the overall transport energy balance

The share of fuel consumption in the each of the transport sub-sector is shown in figure 4.4 below.

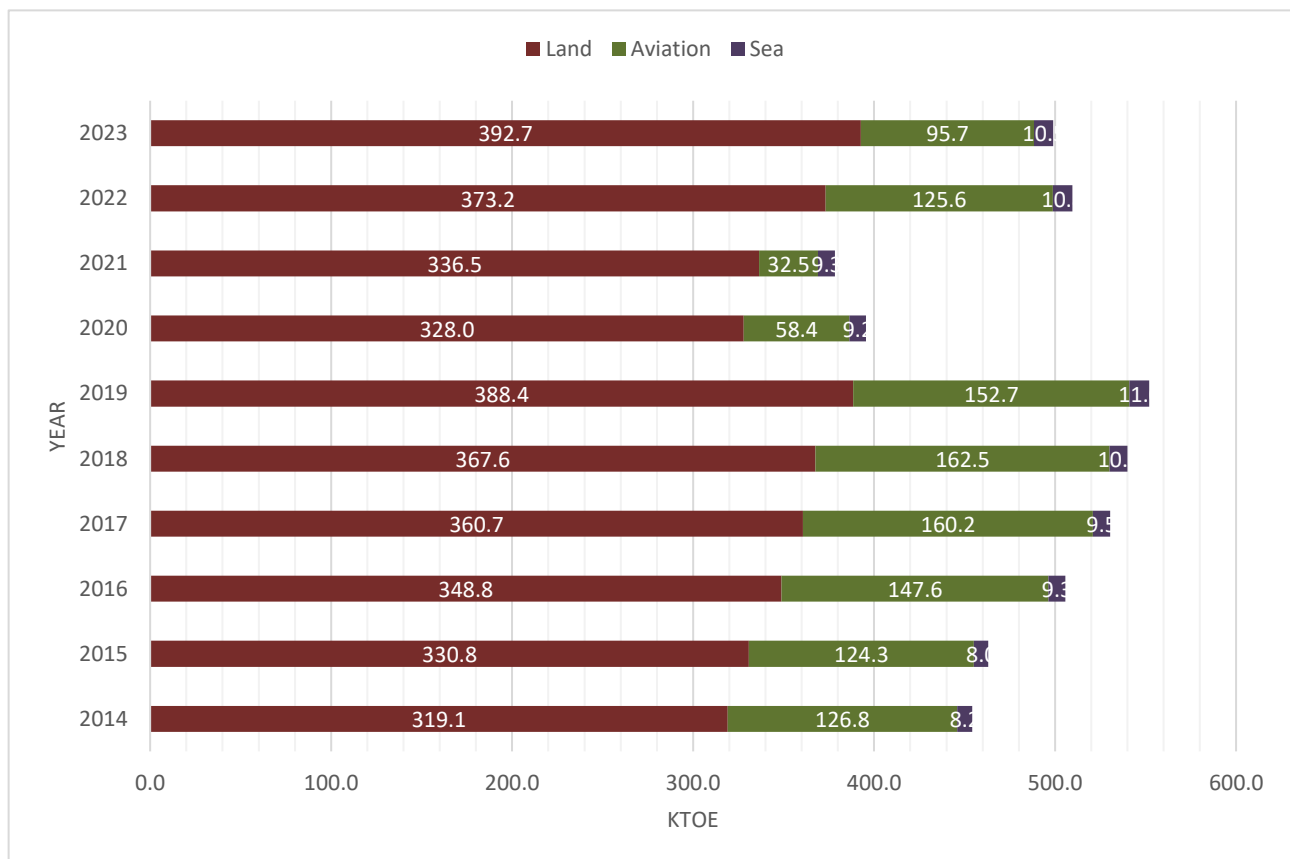


Data Source: Statistics Mauritius

Figure 4. 4 – Share of Fuel Consumption in Each Sub Sector

Land transport made up 79% of transport energy use, aviation 19%, and maritime transport 2%. The pattern has remained stable, though increased electrification and efficiency could shift future shares.

Figure 4.5 shows the trend in each sub sector as from 2014 to 2023



Data Source: Statistics Mauritius

Figure 4. 5 - Trend of fuel consumption in sub-sectors of transport sector 2014 – 2023

4.2.2.1 Fuel Consumption – Land Sector

The trend of fuel consumption in the land transport sector over the period 2014 to 2023 is shown in Figure 4.6.

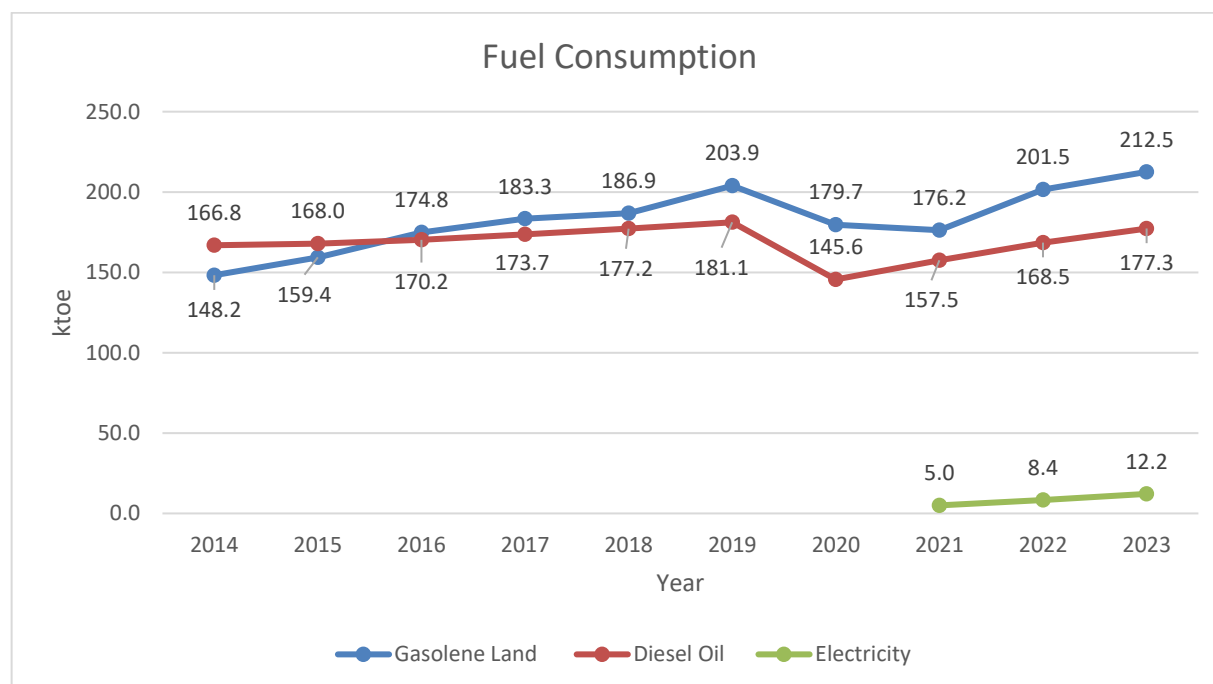


Figure 4. 6 – Trend of Fuel Consumption Transport Sector (2014 – 2023)

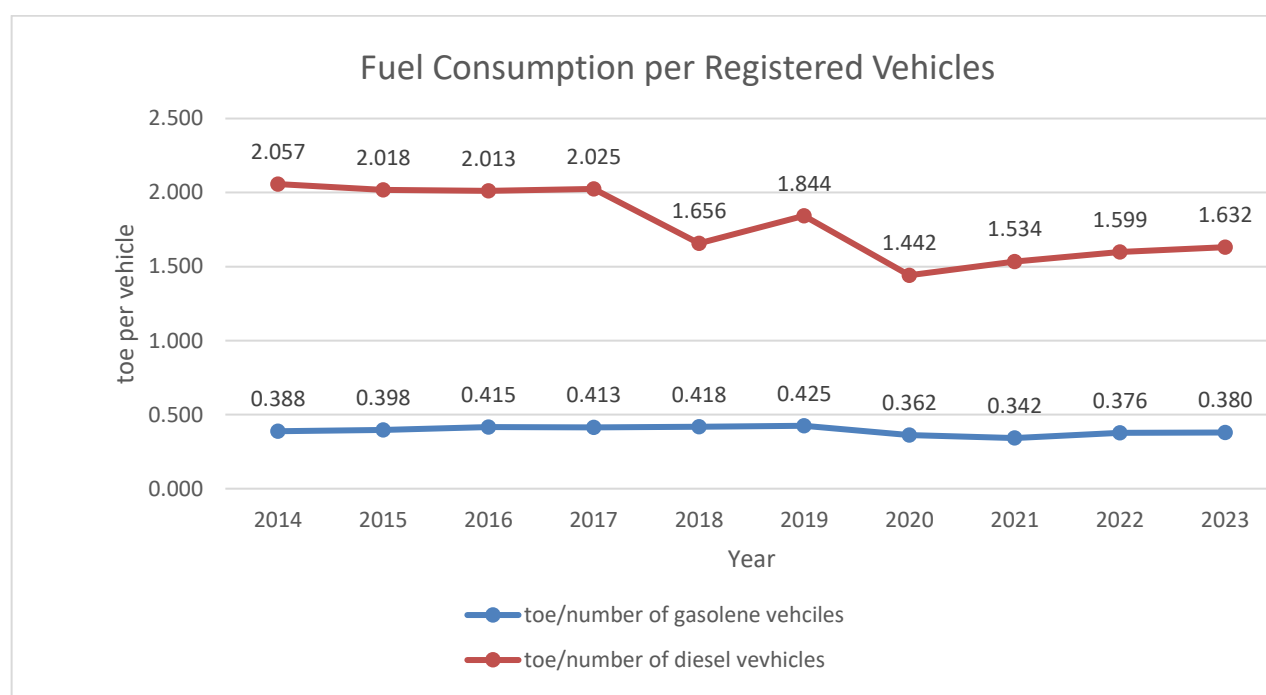


Figure 4. 7 – Fuel Consumption per Registered Vehicles

This figure illustrates the trend in average annual fuel consumption per registered vehicle, expressed in tonnes of oil equivalent (toe) per vehicle, for gasoline and diesel vehicles in Mauritius over the period 2014 to 2023.

Gasoline Vehicles (including hybrids)

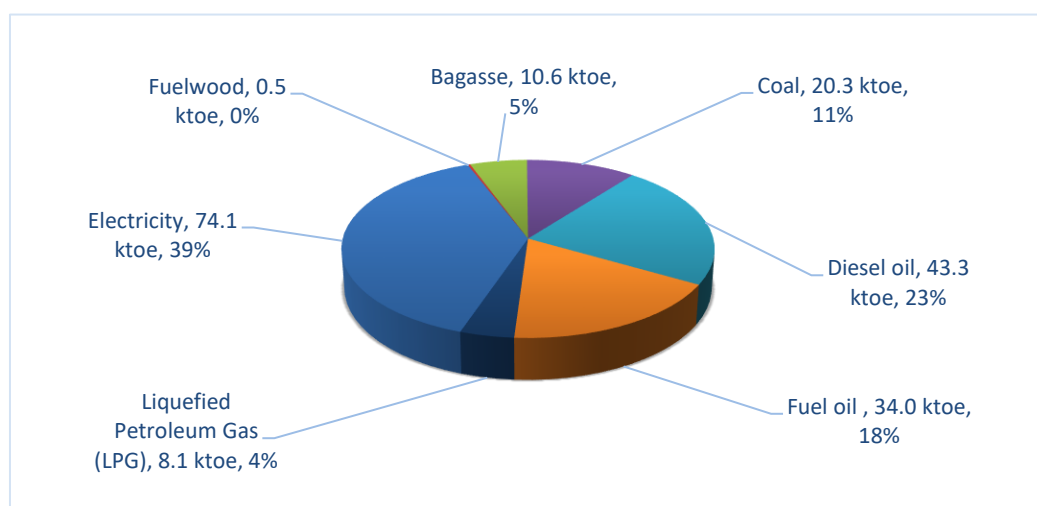
The fuel consumption per gasoline vehicle has remained relatively stable, fluctuating between 0.388 toe/vehicle in 2014 and 0.380 toe/vehicle in 2023. A slight peak was observed in 2019 (0.425 toe), followed by a dip in 2020 (0.362 toe), which coincides with reduced travel during the COVID-19 pandemic. The inclusion of hybrid vehicles in the gasoline category may partly explain the generally flat trend, as hybrids are more fuel-efficient and thus reduce average fuel use per vehicle.

Diesel Vehicles

The average fuel consumption per diesel vehicle was significantly higher than for gasoline vehicles, starting at 2.057 toe/vehicle in 2014, and showing a decreasing trend with notable year-to-year fluctuations. After peaking again in 2019 at 1.844 toe, consumption dropped sharply to 1.442 toe in 2020, and then gradually increased to 1.632 toe in 2023.

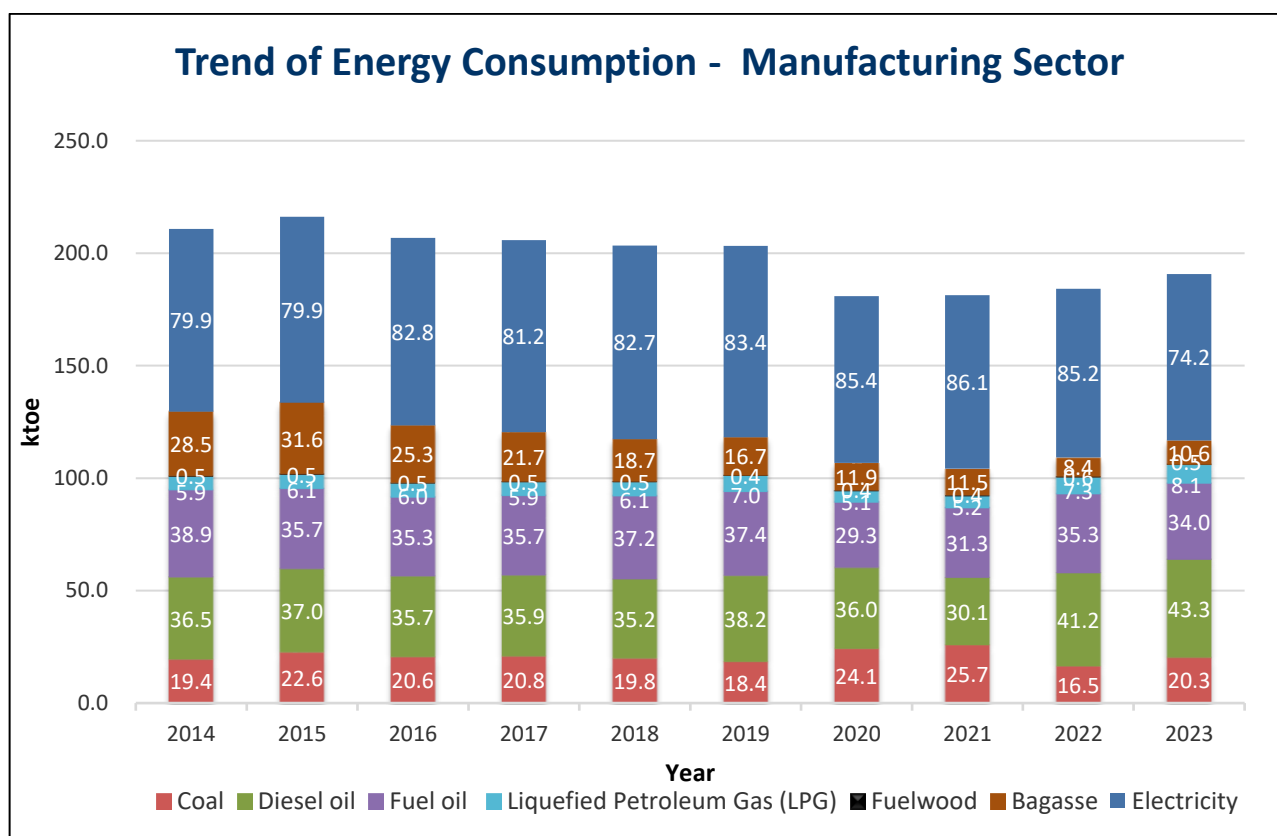
4.3 Final energy consumption - Manufacturing sector

In 2023, electricity accounted for the largest share of energy consumption in the manufacturing sector at 39% (74.1 ktoe). This was followed by diesel oil (23%, 43.3 ktoe), fuel oil (18%, 34.0 ktoe), and coal (11%, 20.3 ktoe). Bagasse contributed 5% (10.6 ktoe), while LPG represented 4% (8.1 ktoe). Fuelwood use remained marginal at 0.5 ktoe (0%). This reflects the sector's continued reliance on both electricity and fossil fuels, with a minor contribution from renewables. Over the last decade, energy consumption in manufacturing has remained relatively stable, with electricity consistently being the dominant energy source.



Data Source: Statistics Mauritius

Figure 4. 8 - Share of energy sources in the manufacturing sector, 2023

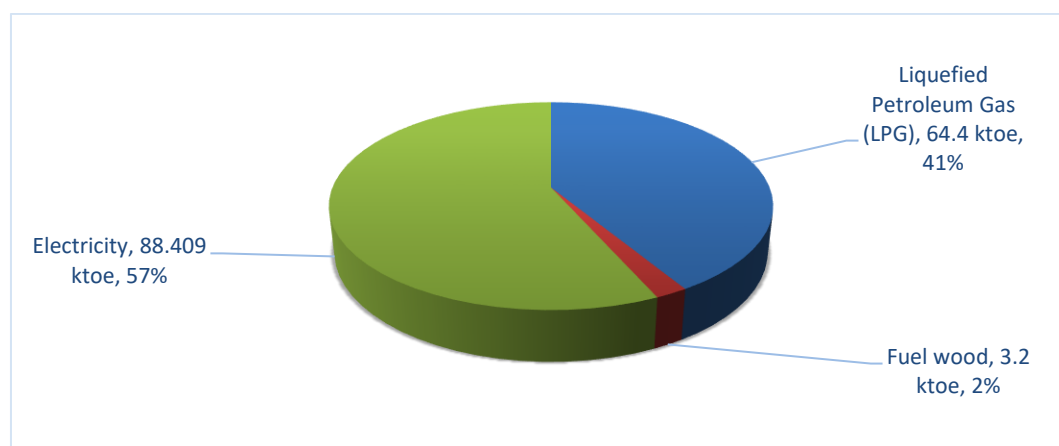


Data Source: Statistics Mauritius

Figure 4. 9 - Trend of energy consumption in the manufacturing sector, 2014 – 2023

4.4 Final energy consumption - Household sector

Electricity continued to dominate household energy consumption in 2023, accounting for 57% (88.4 ktoe). LPG followed with a share of 41% (64.4 ktoe), indicating its widespread use for cooking.

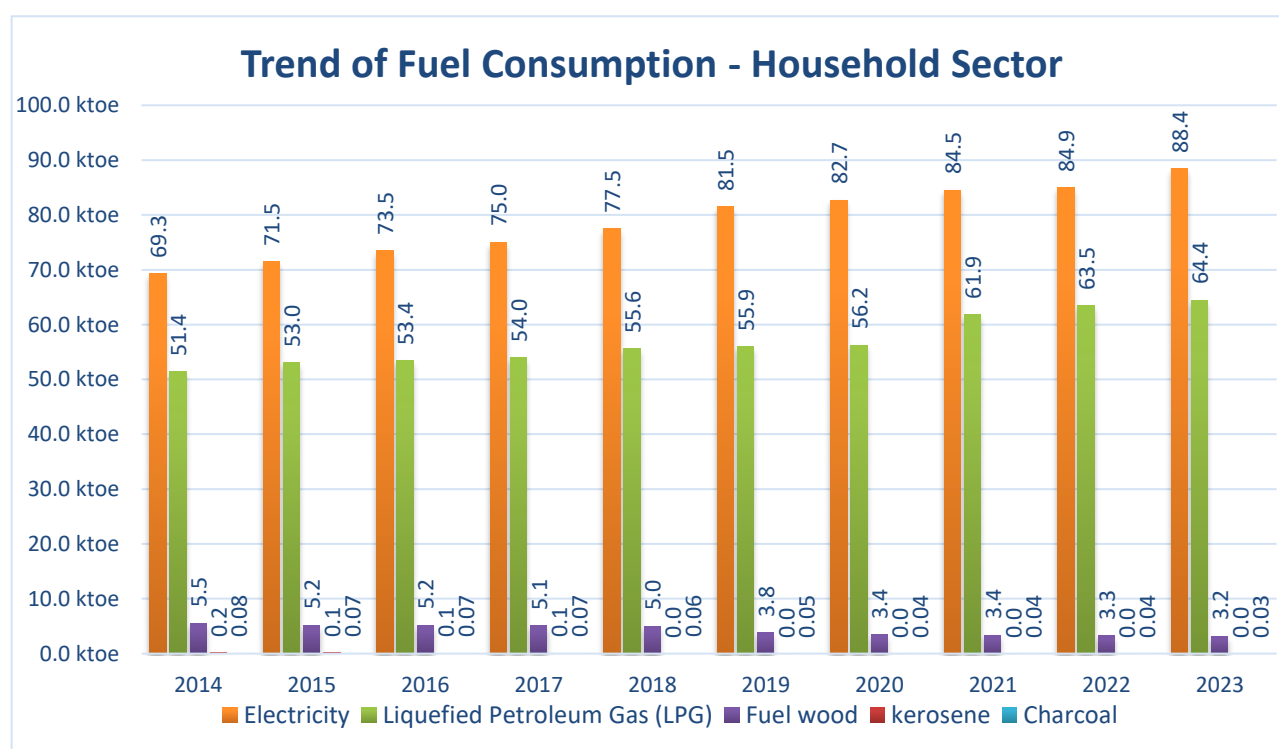


Data Source: Statistics Mauritius

Figure 4. 10 - Share of energy sources, household sector, 2023

As can be seen from Figure 4.10, the main sources of energy for the household sector are LPG and electricity. LPG is used mostly for cooking and water heating. Fuel wood is still in use as cooking fuel albeit insignificant.

The trend of each fuel consumption over the period 2014 - 2023 is shown in Figure 4.11. Between 2014 and 2023, electricity use in households steadily increased, peaking in 2023. LPG consumption followed a similar trend, reflecting rising appliance use. Meanwhile, traditional fuels such as fuelwood and kerosene declined significantly.

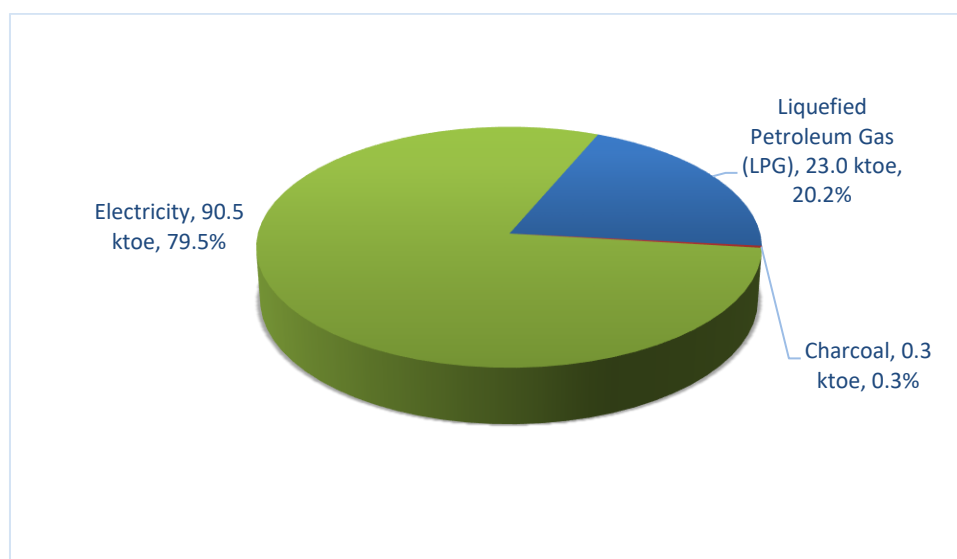


Data Source: Statistics Mauritius

Figure 4. 11- Trend of fuel consumption in the household sector, 2014 – 2023

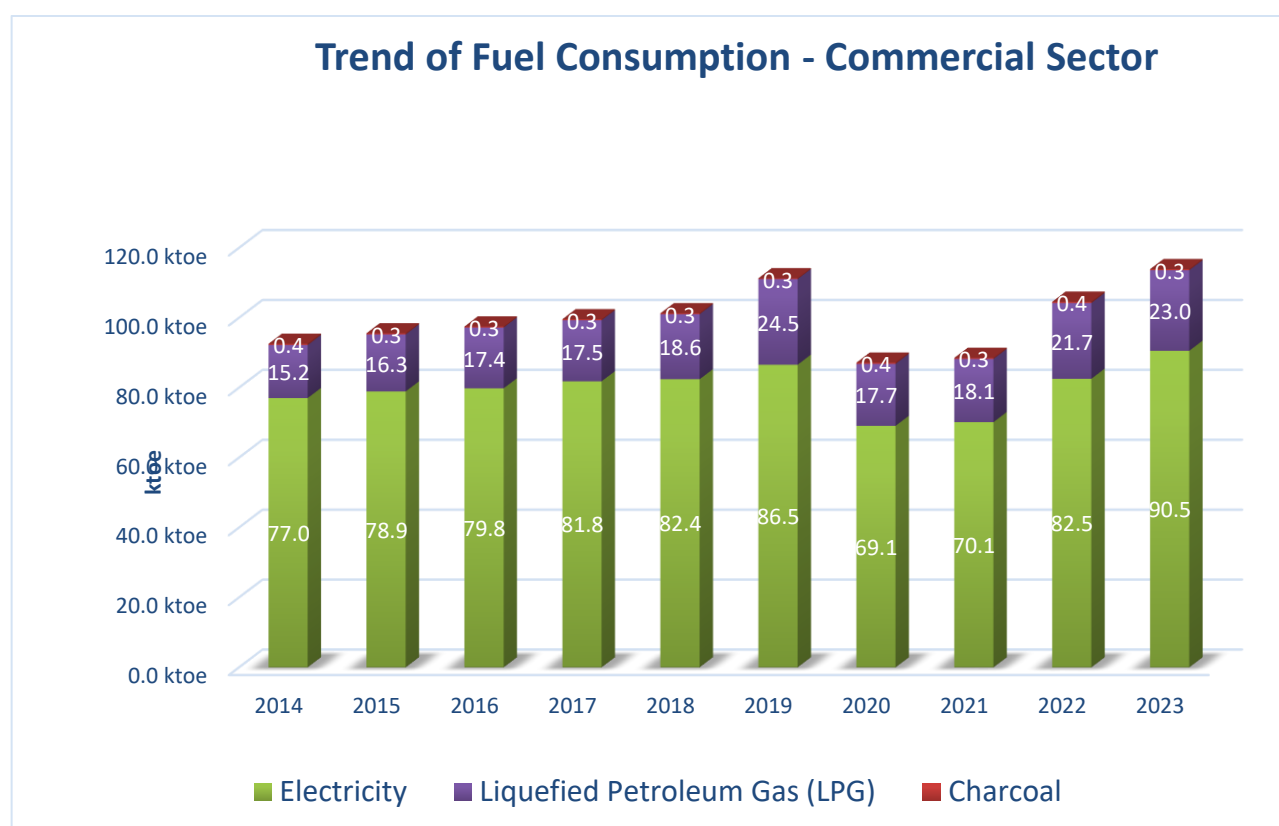
4.5 Final energy consumption - Commercial sector

In 2023, the commercial sector relied heavily on electricity, which made up 79.5% (90.5 ktoe) of total consumption. LPG followed with 20.2% (23.0 ktoe), while charcoal use was minimal at 0.3 ktoe (0.3%). The predominance of electricity highlights the sector's growing need for lighting, cooling, and IT equipments.



Data Source: Statistics Mauritius

Figure 4. 12 - Share of energy sources in the commercial sector, 2023



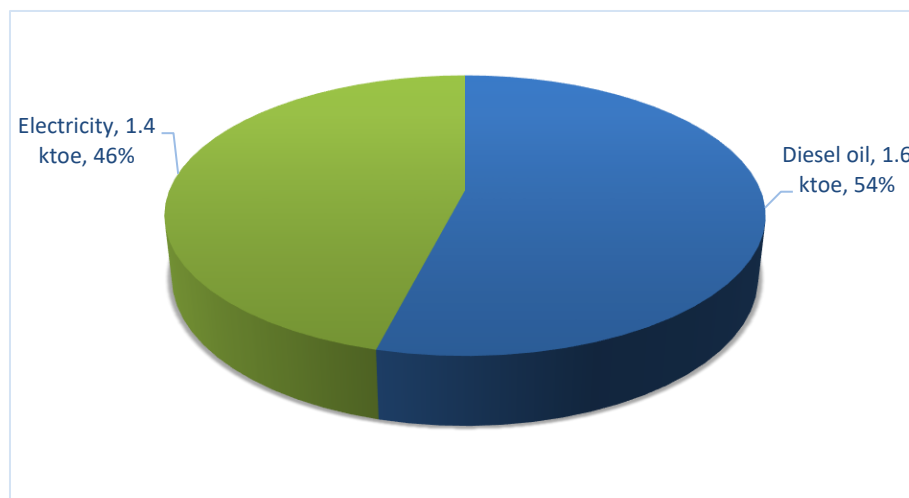
Data Source: Statistics Mauritius

Figure 4. 13- Trend of fuel consumption in the commercial sector, 2013 – 2022

The use of electricity in commercial activities rose steadily over the past decade, particularly between 2021 and 2023. LPG consumption also increased, while charcoal remained largely unchanged. The upward trend underscores the sector's expansion and shift towards cleaner energy.

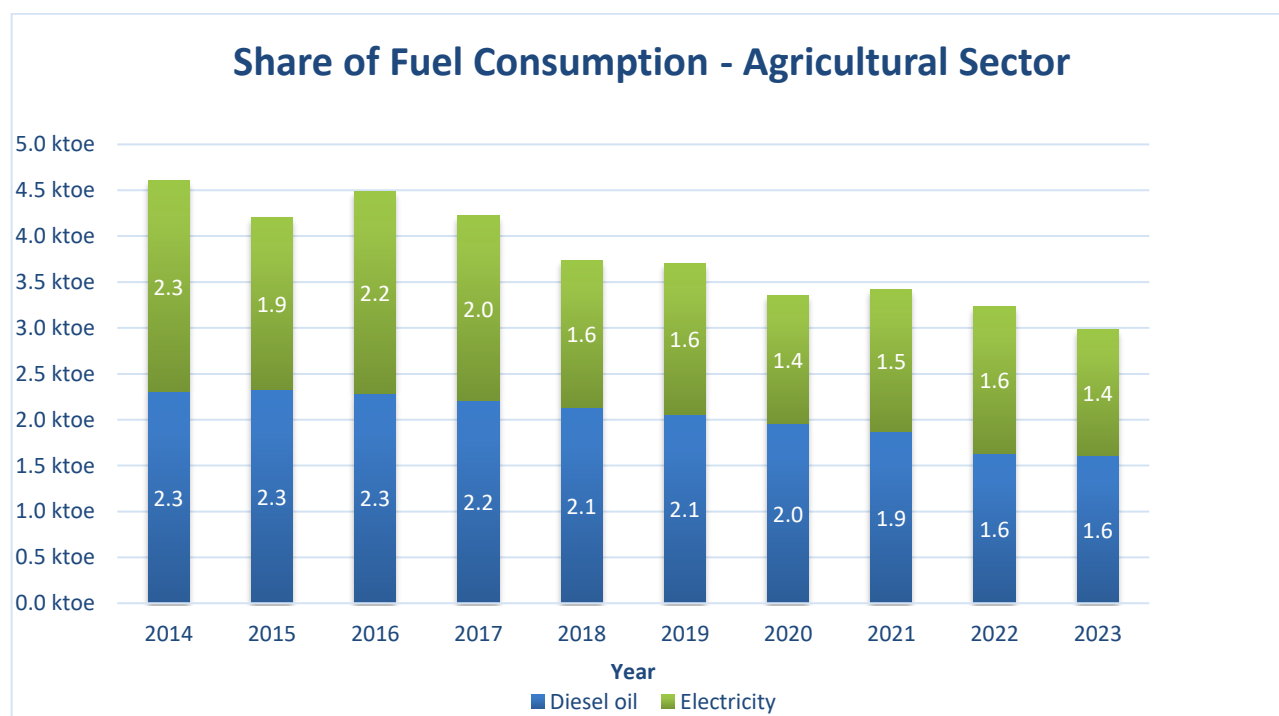
4.6 Final energy consumption - Agricultural sector

In 2023, diesel oil and electricity were the sole energy sources in agriculture, with diesel oil accounting for 54% (1.6 ktoe) and electricity 46% (1.4 ktoe). This split reflects the sector's operational reliance on mechanised irrigation and diesel-powered machinery.



Data Source: Statistics Mauritius

Figure 4. 14 - Share of energy sources in agricultural sector, 2023



Data Source: Statistics Mauritius

Figure 4. 15 - Share of fuel consumption in the agricultural sector, 2014 – 2023

4.7 Fossil Fuel consumption

Electricity production was the largest consumer of fossil fuels in 2023, representing 49.9% (691.9 ktoe) of total use. This was followed by the transport sector with 36.0% (498.9 ktoe), manufacturing at 7.6% (105.7 ktoe), and households at 4.7% (64.4 ktoe). Commercial, agricultural, and other uses accounted for the remaining 1.7%. The data highlight the electricity and transport sectors as key targets for decarbonisation..

Table 4. 4 - Fossil fuel consumption (ktoe) by sector, 2023

Sector	Coal	Gasolene	Diesel	Aviation fuel	Kerosene	Fuel oil	LPG	Total
Electricity production	383.5		0.3		6.4	301.7		691.9
Manufacturing	20.3		43.3			34.0	8.1	105.7
Commercial							23.0	23.0
Household					0.0		64.4	64.4
Transport (incl. sea)		217.8	179.4	95.7		3.2	2.9	498.9
Agriculture			1.6					1.6
Others							0.5	0.5
Total	403.8	217.8	224.6	95.7	6.4	338.9	98.9	1386.1

Data Source: Statistics Mauritius

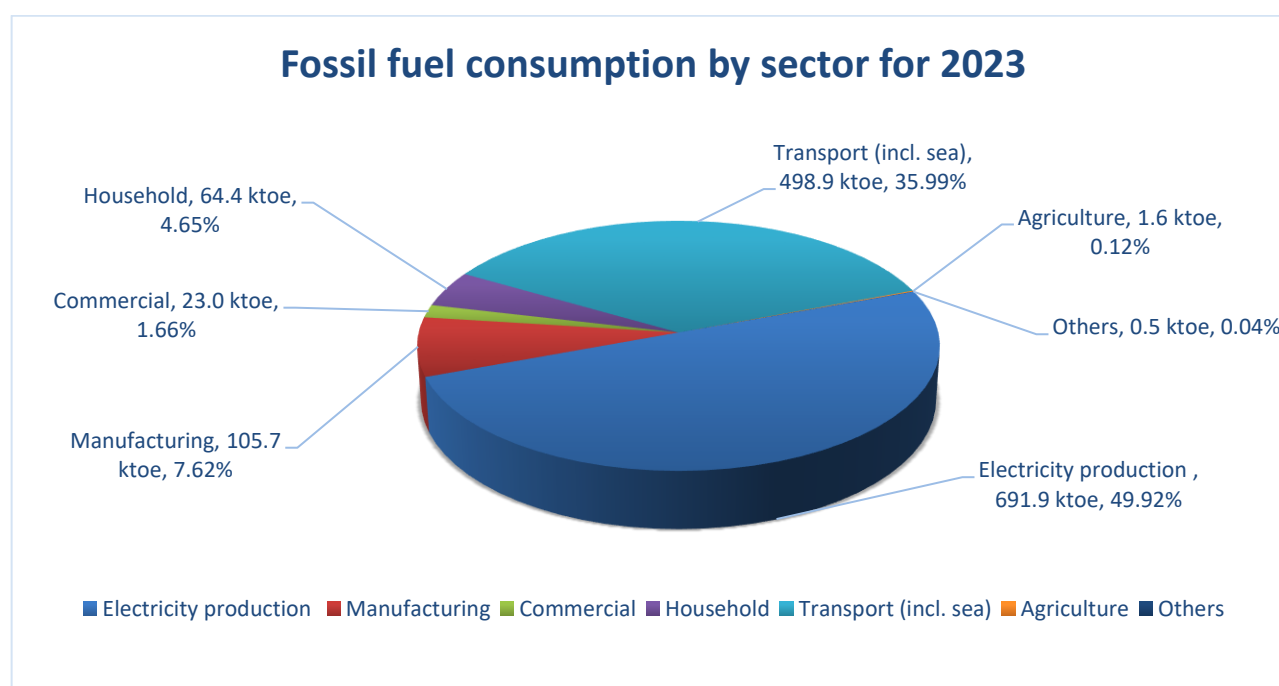


Figure 4. 16- Share of fossil fuel consumption by sector, 2023

4.8 Sales of Electricity

In 2023, total electricity sales reached 2,813.7 GWh. The commercial sector accounted for the largest share, followed by domestic consumption. This distribution reflects strong demand growth in commercial and residential sectors.

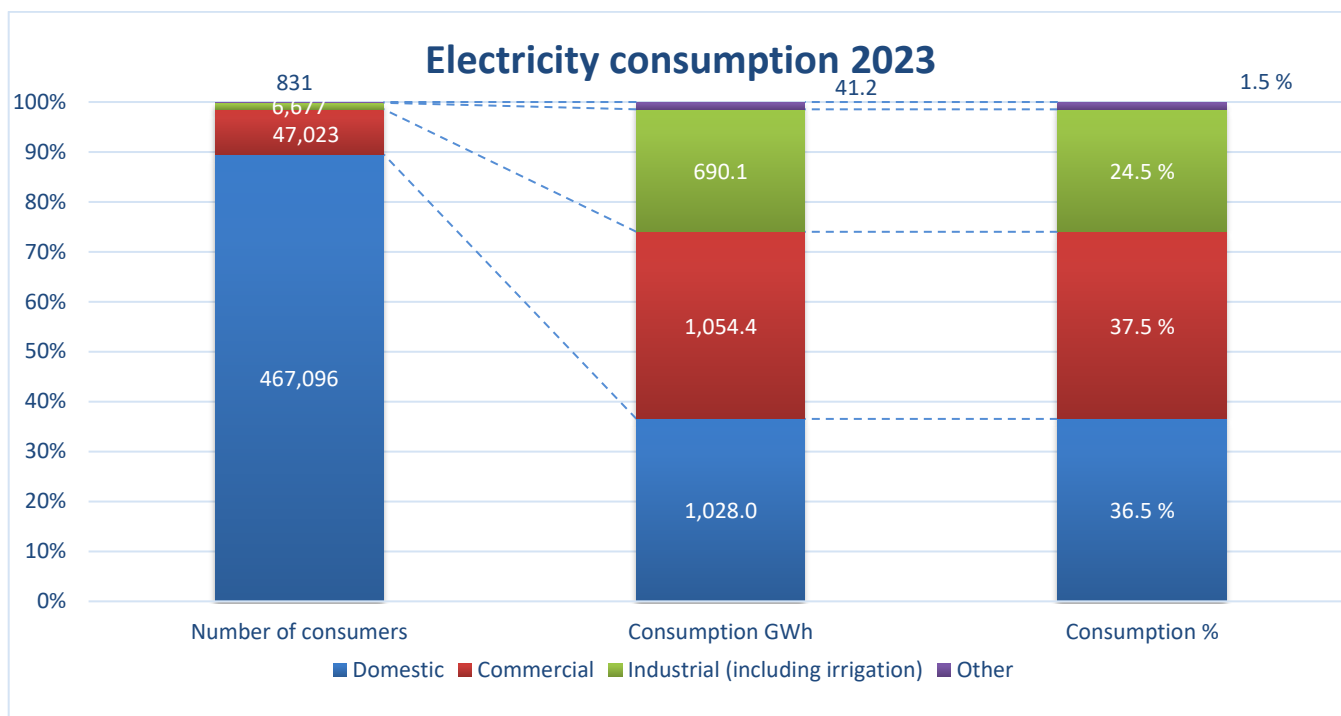
Table 4. 5 - Sales Electricity per category of consumers, 2022 - 2023

Data Source: Statistics Mauritius

Type of tariff	Number of consumers		Electricity Sold - GWh		Electricity Sold - %	
	2022	2023	2022	2023	2022	2023
Domestic	459,932	467,096	987.5	1028.0	36.6 %	36.5
Commercial	46,210	47,023	960.5	1054.4	35.6 %	37.5
Industrial (including irrigation)	6,625	6,677	709.2	690.1	26.3 %	24.5
Other ¹	798	831	40.9	41.2	1.5 %	1.5
Total	513,565	521,627	2,698.1	2813.7	100.0 %	100.0

Figure 4.17 gives details on the number of different category consumers, the electricity consumption in each category and the share of consumption of each of these for the year 2023. Electricity production was the largest consumer of fossil fuels in 2023, representing 49.9% (691.9 ktoe) of total use. This was followed by the transport sector with 36.0% (498.9 ktoe), manufacturing at 7.6% (105.7 ktoe), and households at 4.7% (64.4 ktoe).

¹ 'Other' means sugar factories, street lighting & traffic lights, pumping for irrigation and temporary supply



Data Source: Statistics Mauritius

Figure 4. 17 - Sales of Electricity per category of consumers, 2023

An analysis of domestic electricity consumption is given in Table 4.6, which shows an increase from 2.03 MWh/consumer/year in 2014 to 2.20 MWh/consumer/year in 2023.

Table 4. 6 - Analysis of domestic electricity consumption, 2014 – 2023

Domestic consumers	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Consumption (GWh)	806.3	831.0	854.5	872.7	899.3	945.0	959.0	980.2	987.5	1028.0
Number of consumers	396,335	404,463	413,068	420,876	428,569	436,831	444,947	452,806	459,932	467,096
Annual electricity consumption per consumer (MWh/consumer/year)	2.03	2.05	2.07	2.07	2.10	2.16	2.16	2.16	2.15	2.20
Annual Electricity Consumption per Consumer Growth Rate %	1.3%	1.0%	0.7%	0.2%	1.2%	3.1%	-0.4%	0.4%	-0.8%	2.5%
Average daily consumption per inhabitant (kWh/inhabitant/day)	1.75	1.80	1.85	1.89	1.95	2.05	2.08	2.12	2.14	2.23

Data Source: Statistics Mauritius

Chapter 5 – CO₂ EMISSIONS DUE TO FOSSIL FUELS

5.1 Introduction

Greenhouse gases (GHGs) are atmospheric gases that absorb and retain heat, contributing to the Earth's warming through the well-known “greenhouse effect.” These gases include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and others, which collectively act as a thermal blanket around the Earth. While water vapour is the most abundant GHG, carbon dioxide is the most significant contributor due to its persistence and concentration increase from human activities.

However, excessive accumulation of GHGs from human activities—especially from the burning of fossil fuels—has led to enhanced greenhouse warming. Monitoring and managing these emissions is critical for mitigating climate change impacts and supporting international climate commitments such as those under the Paris Agreement.

5.2 Greenhouse Gas Emissions

Since the onset of industrialisation around 1750, atmospheric concentrations of greenhouse gases, particularly carbon dioxide, have increased significantly. CO₂ levels have risen from approximately 280 parts per million (ppm) in the pre-industrial era to over 400 ppm in recent years. This rise has occurred despite the natural absorption of emissions by carbon sinks like oceans and forests.

GHG emissions from human activities include six gases regulated under the Kyoto Protocol:

- Carbon dioxide (CO₂)
- Methane (CH₄)
- Nitrous oxide (N₂O)
- Hydrofluorocarbons (HFCs)
- Perfluorocarbons (PFCs)
- Sulphur hexafluoride (SF₆)

The dominant source of CO₂ emissions is the combustion of fossil fuels such as coal, fuel oil, gasoline, diesel, LPG, and natural gas. Other contributors include land use changes, deforestation, and certain agricultural practices, but these are relatively minor in the Mauritian context.

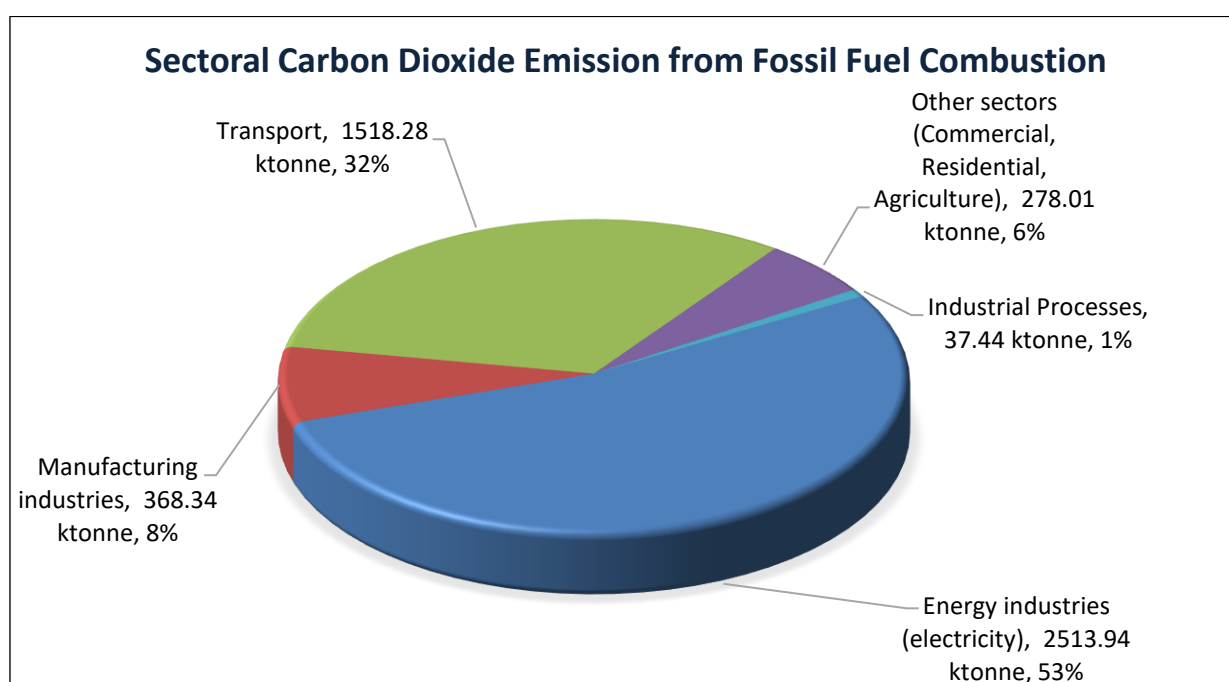
This report focuses exclusively on CO₂ emissions arising from fossil fuel combustion, which represent the majority of emissions in Mauritius. The main sectors analysed include electricity generation, transport, manufacturing, and residential use, as these are the primary energy-consuming activities in the country

5.3 Inventory of CO₂ from energy sources for the Republic of Mauritius in 2023

In 2023, carbon dioxide (CO₂) emissions from fossil fuel combustion across the Republic of Mauritius were primarily driven by the electricity generation and transport sectors, which together accounted for nearly 80% of total emissions. Electricity production alone contributed approximately 2,513.94 kilotonnes (kt) of CO₂, reflecting the continued reliance on coal and fuel oil for power generation.

The transport sector emitted an estimated 1518, kt of CO₂ in 2023, mainly from gasoline and diesel used in road vehicles and aviation fuels. While the growing adoption of electric and hybrid vehicles is a positive development, it has not yet significantly reduced sectoral emissions due to the expanding vehicle fleet and sustained use of internal combustion engines.

The manufacturing sector accounted for 368 kt of CO₂ emissions, mostly from the use of fuel oil, diesel, and coal in industrial processes. Meanwhile, households and the commercial sector emitted 278 kt primarily from the use of LPG.



Data Source: Statistics Mauritius

Figure 5. 1 - Sectoral carbon dioxide emissions from fossil fuel combustion, 2023

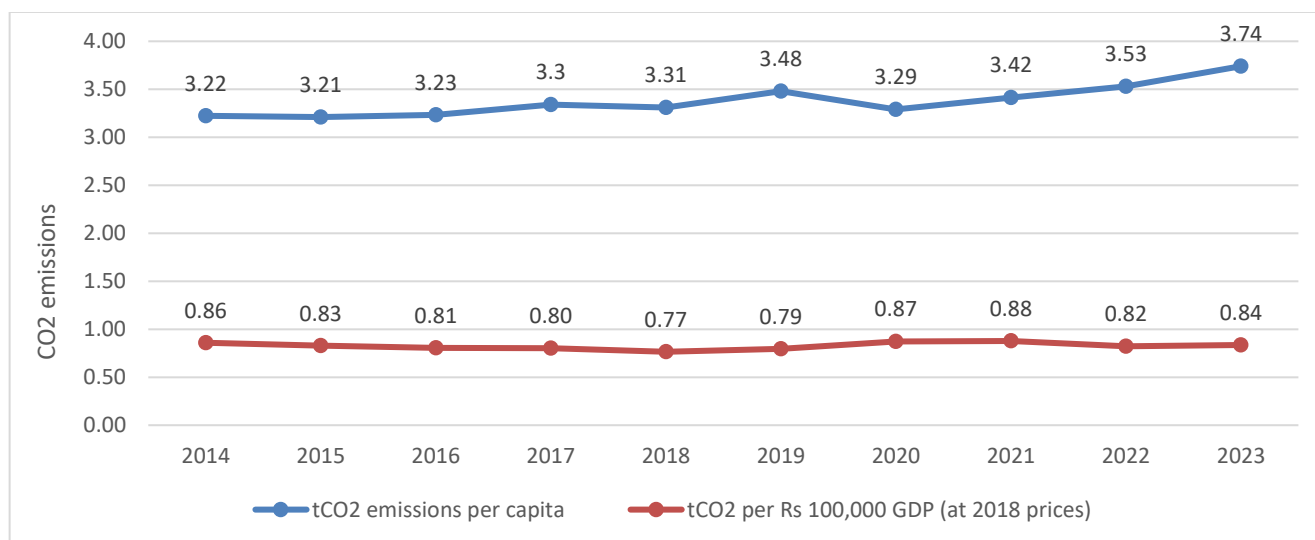
5.4 Trend of CO₂ emissions

Table 5.1 and Figure 5.2 show the trend in tonnes of CO₂ emissions per capita and per Rs 100,000 GDP (at 2018 prices). It may be observed that the amount of CO₂ emitted with respect to GDP has generally been decreasing from 2013 to 2019, however it has increase as from 2019 to 2023.

Table 5. 1 - CO₂ emissions, 2014 – 2023

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Net CO ₂ emissions (ktonnes)	3,696.3	3,685.4	3,723.7	3,861.5	3,825.5	4,086.5	3,843.0	3,989.3	4072.3	4421.4
tCO ₂ emissions per capita	3.22	3.21	3.23	3.34	3.31	3.5	3.3	3.4	3.5	3.7
tCO ₂ per Rs 100,000 GDP (at 2018 prices)	0.86	0.83	0.81	0.80	0.77	0.79	0.87	0.88	0.82	0.84

Data Source: Statistics Mauritius



Data Source: Statistics Mauritius

Figure 5. 2 - Trend of CO₂ emissions, 2014 – 2023

5.5 CO₂ emission in the transport sector (inclusive of aviation)

In 2023, emissions totaled 1518.28 ktonnes of CO₂, marking a 2.4% increase compared to 2022, when emissions were 1482.45 ktonnes.

5.6 CO₂ emissions for electricity generation

In 2023, the total CO₂ emissions from electricity generation amounted to 2513.94 ktonnes representing an increase of 8.8% compared to 2022.

The Grid Emission Factors for the national grid of Mauritius for 2023 are as follows:

Table 5. 2- 2023 Grid Emission Factors for National Grid of Mauritius

Type of Project	Operation Margin (tCO ₂ /MWh)	Built Margin (tCO ₂ /MWh)	Combined Margin (tCO ₂ /MWh)
PV and wind	0.916	0.4923	0.8101
All other projects	0.916	0.4923	0.7041

Data Source: CEB

OM: Operational Margin

BM: Built Margin

CM: Combined Margin

5.7 CO₂ emissions avoided for Island of Mauritius

Table 5.3 shows the CO₂ emission avoided due to the production of electricity from renewable energy sources for the Island of Mauritius in 2023

Table 5. 3 - Avoided CO₂ emission for the Island of Mauritius, 2023

Renewable energy source	2023			
	Effective Capacity (MW)	Total RE (GWh)	% Share in Electricity Mix	Avoided CO ₂ Emissions (tCO ₂ e)
(i) On-shore wind	9.35	7.333	0.23	5940
(ii) Solar Energy - SSDG	19.11	18.919	0.59	15326
(iii) Solar Energy - MSDG	11.08	11.968	0.37	9695
(iv) Solar Energy – Utility + CEB PV	10.82	5.842	0.18	4733
(iv) Solar Energy – IPP	74.59	111.18	3.46	90067
(v) Biomass - Bagasse	131.5	309.2	9.61	218060
(vi) Biomass -Cane trash		6.713	0.21	4727
(vii) Landfill Gas	3	13.318	0.41	9377
(viii) Hydro	56.2	94.442	2.94	66497
Total	315.65	578.915	18.00	424422

Data Source: CEB

5.8 CO₂ emissions avoided for Island of Rodrigues

Table 5.4 shows the CO₂ emission avoided due to the production of the electricity from renewable energy sources for the Island of Rodrigues in 2023.

Table 5.4 - Avoided CO₂ emission for the Island of Rodrigues, 2023

Data Source: CEB

Renewable energy source	2023			
	Installed Capacity (MW)	Total RE (GWh)	% Share in Electricity Mix	Avoided CO ₂ Emissions (tCO ₂ e)
(i) On-shore wind	1.22	1.305	2.69%	1057
(ii) Solar Energy - SSDG	0.594	0.552	1.14%	447
(iii) Solar Energy - MSDG	0.1	0.154	0.32%	125
(iv) Solar Energy - Utility	1	0.110	0.23%	89
(V) Solar Energy – CEB PV	0.09	0.065	0.13%	53
Total	3.004	2.186	4.50%	1771

Note:

- (1) Grid Emission Factor for the island of Mauritius:
- (2) Biomass is assumed to be carbon neutral.
- (3) Emission Factor of Landfill gas 54.6 tons/TJ (IPCC 2006), $EF_{\text{Landfill}} = 196.56 \text{ tons/GWh}$

6. KEY FIGURES

Table 6. 1 – Key Figures

Indicator	Unit	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Total primary energy requirement	<i>ktoe</i>	1,491.7	1,534.4	1,555.3	1,599.8	1,586.3	1,600.3	1,334.0	1,367.1	1484.7	1537.6
<i>Imported</i>	<i>ktoe</i>	1,279.4	1,283.2	1,328.5	1,385.3	1,381.9	1,395.8	1,156.5	1,198.5	1335.5	1386.7
<i>Local</i>	<i>ktoe</i>	212.3	251.3	226.8	214.5	204.4	204.5	177.5	168.7	149.2	150.7
Annual increase (Primary Energy)	%	2.5	2.9	1.4	2.9	-0.8	0.9	-16.6	2.5	8.6	3.6
Import Dependency	%	85.8	83.6	85.4	86.6	87.1	87.2	86.7	87.7	89.9	90.2
GDP in 2018 rupees	<i>Rs M</i>	429,514	445,365	462,567	480,783	500,047	514,505	439,662	454,627	494,148	529,441
Population		1,260,934	1,262,605	1,263,473	1,264,613	1,265,303	1,265,711	1,265,740	1,266,060	1,262,249	1,260,767
Energy intensity	<i>toe per Rs 100000 GDP at 2018 prices</i>	0.35	0.34	0.34	0.33	0.32	0.31	0.30	0.30	0.30	0.29
Per capita primary energy requirement	<i>toe</i>	1.18	1.22	1.23	1.27	1.25	1.26	1.05	1.08	1.18	1.22

Data Source: Statistics Mauritius

6.1 SUMMARY TABLE 2023

-¹ Consumption in ktoe
+¹ Production and supply

Fossil Fuels								Renewable Energy								Electricity	Heat	TOTAL
Coal	Petroleum products							Biomass				Hydro	Solar		Wind			
	Gasolene	Diesel	Aviation fuel	Kerosene	HFO	LPG	Used oils	Bagasse	Landfill Gas	Fuelwood	Charcoal		PV	Thermal		+ Prod	+ Prod	
																- Cons	- Cons	

Primary Energy and Supply

Local Production (LP)
Imported Resources
Re-exports and bunkering
Stocks (+ destocking; - stocking)
TOTAL Primary Energy (PE)
% Energy independence (LP/PE)

								123.9	1.1	4.0		8.1	12.8		0.7			150.7
378.0	191.8	335.2	249.7	7.0	694.9	100.0				0.0	0.2							1956.8
		-107.8	-131.8		-387.0	0.0												-626.6
25.7	25.9	-2.2	-22.2	-0.6	31.0	-1.0												56.7
403.8	217.8	225.3	95.7	6.4	338.9	98.9	0.0	123.9	1.1	4.0	0.2	8.1	12.8	0.0	0.7	0.0	0.0	1537.6
																		9.8

Secondary Energy

Coal input for electricity production
HFO and diesel input for electricity production
Bagasse input for electricity production
Kerosene input for electricity production
Biogas input for electricity production
Hydro input for electricity production
PV input for electricity production
Wind input for electricity production
Electricity production own use
Solar Thermal heat production
Fuelwood to charcoal
TOTAL Secondary supply (SS)

-383.5																84.6		-298.9
		-0.7			-292.0											128.3		-164.4
							-113.3									24.3		-89.0
				-6.4												0.2		-6.2
								-1.1								1.5		0.4
												-8.1				11.0		2.9
													-12.7			13.3		0.6
															-0.6	1.3		0.7
																-4.0		-4.0
																		0.0
										-4.2	0.0							-4.2
-383.5	0.0	-0.7	0.0	-6.4	-292.0	0.0	0.0	-113.3	-1.1	-4.2	0.0	-8.1	-12.7	0.0	-0.6	260.6	0.0	-561.9

Energy Distribution

Final distribution (D=PE+SS)
Losses (L=(D+F))
TOTAL final distribution (D+L)

20.3	217.8	224.6	95.7	0.0	46.9	98.9	0.0	10.6	0.0	-0.2	0.2	0.0	0.1	0.0	0.1	260.6	0.0	975.7
0.0	0.0	-0.3	0.0	0.0	-9.8	0.0	0.0	0.0	0.0	3.8	0.1	0.0	-0.1	0.0	-0.1	-1.7	0.0	-8.2
20.3	217.8	224.3	95.7	0.0	37.2	98.9	0.0	10.6	0.0	3.6	0.3	0.0	0.0	0.0	0.0	258.9	0.0	967.5
																		967.54

Final Energy Consumption

Manufacturing
Commercial
Household
Transport
Agriculture
Others
TOTAL (F)

-20.3		-43.3			-34.0	-8.1		-10.6		-0.5						-74.1		-190.8
						-23.0					-0.3					-90.5		-113.8
				0.0		-64.4				-3.2	0.0					-88.4		-156.0
	-217.8	-179.4	-95.7		-3.2	-2.9										-1.0		-499.9
		-1.6														-1.4		-3.0
						-0.5										-3.5		-4.0
-20.3	-217.8	-224.3	-95.7	0.0	-37.2	-98.9	0.0	-10.6	0.0	-3.6	-0.3	0.0	0.0	0.0	0.0	-258.9	0.0	-967.54

6.2 GROWTH PERCENTAGE (%) IN 2023 COMPARED TO 2022

-' Consumption in ktoe
+' Production and supply

Fossil Fuels								Renewable Energy										
Coal	Petroleum products							Biomass				Hydro	Solar		Wind	Electricity	Heat	TOTAL
	Gasolene	Diesel	Aviation fuel	Kerosene	HFO	LPG	Used oils	Bagasse	Landfill Gas	Fuelwood	Charcoal		PV	Thermal		+ Prod	+ Prod	
																- Cons	- Cons	

Primary Energy and Supply

Local Production (LP)

Imported Resources

TOTAL Primary Energy (PE)

								5.1 %	-22.6 %	-4.0 %		-26.4 %	-3.7 %		-44.2 %			1.0 %
4.0 %	-1.0 %	10.5 %	9.7 %	1.4 %	-4.3 %	0.1 %												1.8 %
12.4 %	5.5 %	5.1 %	-23.8 %	690.1 %	1.9 %	-5.0 %		5.1 %	-22.6 %	-4.0 %		-26.4 %	-3.7 %		-44.2 %			7.2 %

Secondary Energy

Coal input for electricity production

HFO and diesel input for electricity production

Bagasse input for electricity production

Kerosene input for electricity production

Biogas input for electricity production

Hydro input for electricity production

PV input for electricity production

Wind input for electricity production

Electricity production own use

Solar Thermal heat production

Fuelwood to charcoal

TOTAL Secondary supply (SS)

11.9 %																		12.0 %
		1.9 %			2.7 %													2.8 %
								3.4 %										1.8 %
				687.4 %														657.7 %
									-26.7 %									
												-26.4 %						
													-4.5 %					
														-53.8 %				
										0.0 %	0.0 %							0.0 %
11.9 %		1.9 %		687.4 %	2.7 %			3.4 %	-26.7 %	0.0 %		-26.4 %	-4.5 %		-53.8 %	4.7 %		8.0 %

Final Energy Consumption

Manufacturing

Commercial

Household

Transport

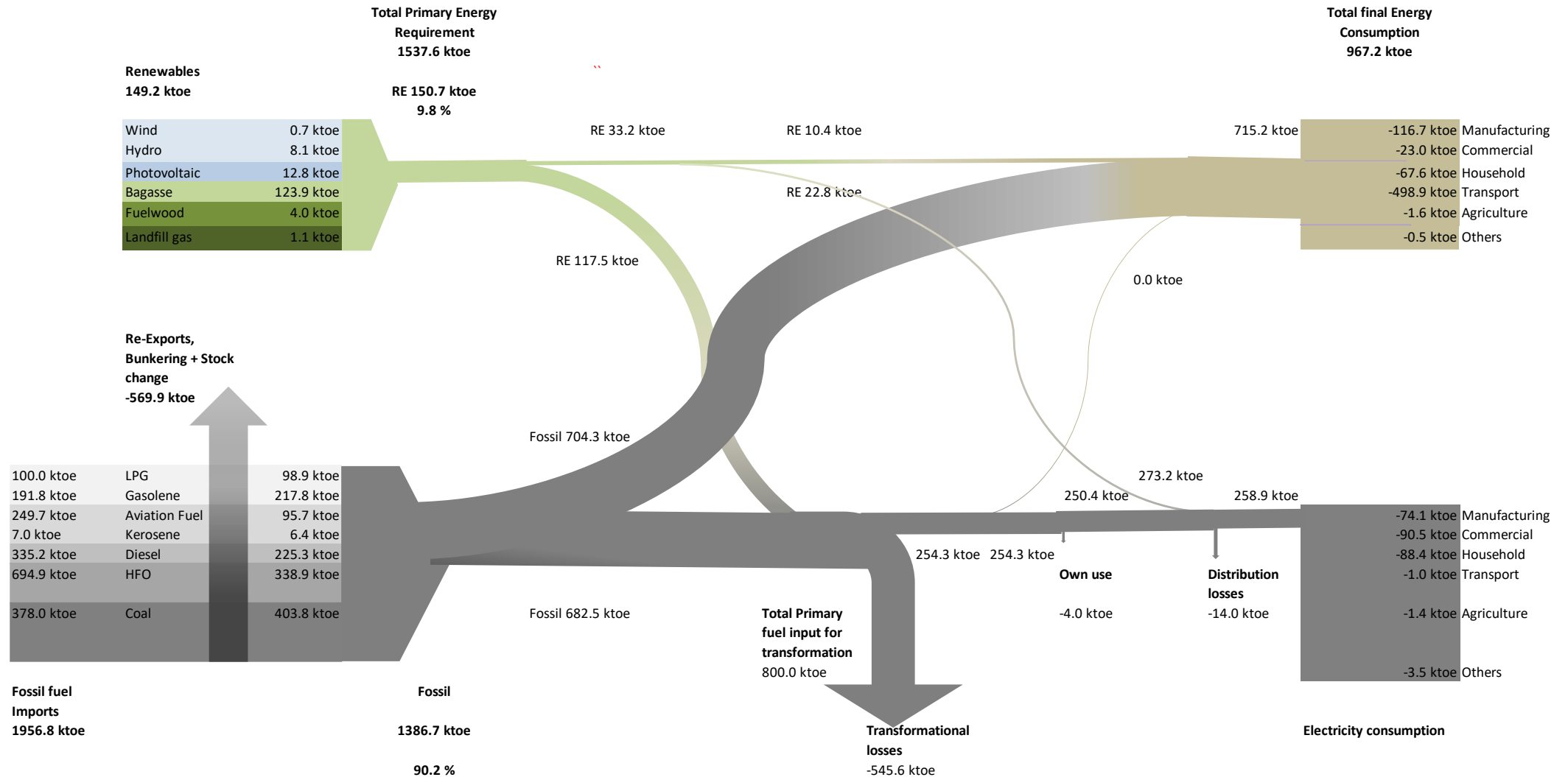
Agriculture

Others

TOTAL (F)

22.9 %		5.2 %			-3.8 %	10.4 %		25.9 %		-22.1 %						-1.2 %		3.5 %
						6.1 %										9.7 %		9.0 %
						1.5 %				-4.0 %	0.0 %					4.1 %		2.8 %
	5.5 %	5.1 %	-23.8 %		-14.4 %	-8.6 %										-88.1 %		-3.5 %
		0.0 %														-12.5 %		-6.3 %
						-34.1 %										0.0 %		-6.3 %
22.9 %	5.5 %	5.1 %	-23.8 %		-4.8 %	2.6 %		25.9 %		-6.8 %	0.0 %					1.2 %		0.2 %

6.3 ENERGY PATTERN 2023



6.4 TABLE OF INDICATORS

Item	Indicators	Unit	2019	2020	2021	2022	2023
Primary Energy Requirement	Primary Energy Requirement	ktoe	1,600.3	1,333.9	1,367.1	1,484.7	1,537.6
	Share of local resources: local primary requirement/total primary requirement	%	12.8	13.3	12.3	10.1	9.8
Energy intensity	Energy intensity per inhabitant: Primary energy Requirement/population	toe/inhab	1.26	1.05	1.08	1.18	1.22
	Energy intensity per 100,000 (2018 Rs): Primary Energy Requirement/GDP	toe/Rs	0.31	0.30	0.30	0.30	0.29
Electricity Production	Total fossil fuel input for electricity production	ktoe	659.9	590.3	645.8	638.1	692.5
	Total renewable input for electricity production	ktoe	160.3	135.0	127.6	109.5	113.3
	Total electricity production	GWh	3,236.6	2882.4	2992.1	3119.2	3265.5
	Penetration of renewable resources	%	21.7	23.9	21.5	19.2	17.6
Final electricity consumption per sector	Total electricity sold	GWh	2,754.0	2,448.2	2524.3	2698.1	2813.7
	Domestic sector	%	34.3	39.2	38.8	36.6	36.5
	Commercial sector	%	36.3	32.5	31.9	35.6	37.5
	Industrial sector	%	28.0	26.8	27.6	26.3	24.5
	Others	%	1.4	1.6	1.6	1.5	1.5
	Annual electricity consumption per consumer (Domestic) ²	MWh/Consumer/year	2.16	2.16	2.16	2.15	2.20
	Annual electricity consumption per consumer (Commercial)	MWh/Consumer/year	22.51	17.70	17.71	20.79	22.42
	Annual electricity consumption per consumer (Industrial)	MWh/consumer/year	119.07	100.35	106.07	107.5	103.35
Final energy consumption in transport sector	Total energy consumption (transport)	ktoe	552.1	395.6	378.3	509.5	498.9
CO ₂ Emissions	Total CO ₂ emissions	ktCO ₂	4,264.2	3,653.96	4324.8	4406.4	4716.7
	Net CO ₂ emissions	ktCO ₂	3,903.3	3,290.95	3989.2	4072.3	4421.4
	Energy sector	%	56.69	59.86	54.92	52.03	53.30
	Manufacturing sector	%	7.92	7.88	7.47	7.82	7.81

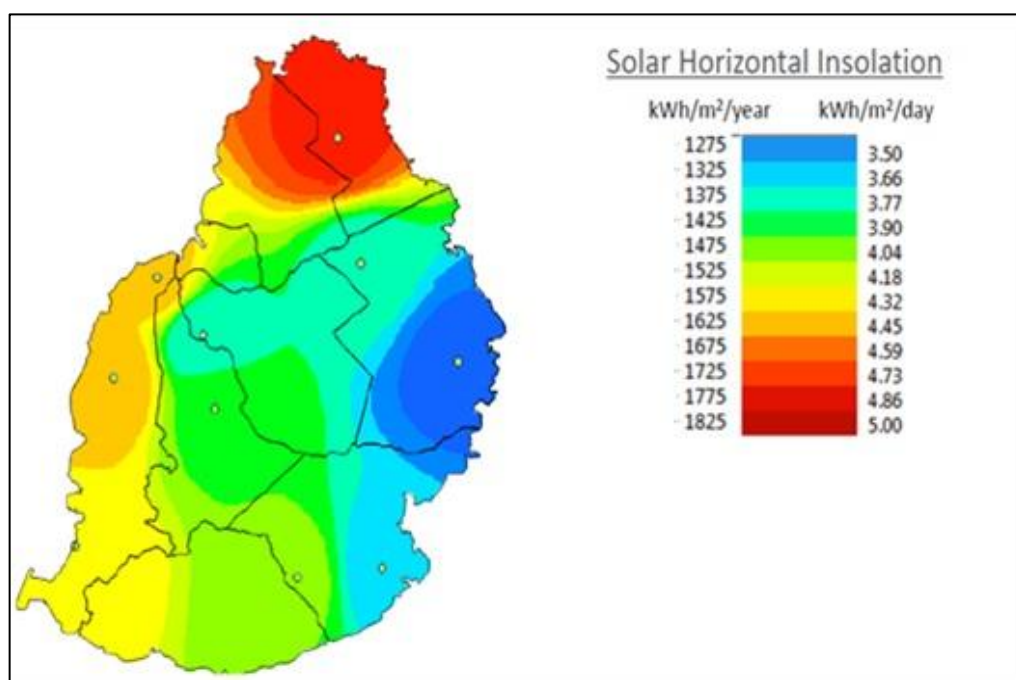
²Domestic sector in this document includes CEB residential consumers, charitable and religious institutions.

Item	Indicators	Unit	2019	2020	2021	2022	2023
	Transport sector	%	26.00	23.04	30.66	32.98	32.19
	Others	%	8.18	6.92	6.02	6.31	5.89
	CO ₂ emissions per kWh of electricity generated (Grid emission factor) ³	gCO ₂ /kWh	917.8 ⁴	954.3	954.3	704.1	704.1

Data Source: Statistics Mauritius

6.5 Annexes

Figure 6.1 gives the solar potential by region.



Data Source: Ministry of Energy and Public Utilities

Figure 6. 1- Solar potential by region

Photovoltaic (PV) systems continue to play a vital role in Mauritius' transition toward a more sustainable energy future. They significantly contribute to national efforts aimed at enhancing

³Data Source: CEB

⁴Data Source: ABS ASB0046-2019 Standardized Baseline Mauritius Grid Emission Factor, United Nations Framework Convention on Climate Change

renewable energy uptake and reducing environmental impact. The strategic importance of PV systems can be highlighted across several dimensions:

Renewable Energy Generation: PV systems harness solar radiation to produce clean electricity, offering a sustainable alternative to fossil fuels. Their deployment supports the country's long-term objective of increasing the share of renewable energy in the national energy mix.

Reduced Environmental Impact: As PV systems operate without emitting greenhouse gases or other pollutants, they contribute to a measurable reduction in Mauritius' carbon footprint. Their use is aligned with the country's climate change commitments and environmental protection goals.

Enhanced Energy Independence: By generating electricity locally from solar energy, Mauritius reduces its dependence on imported fossil fuels. This shift strengthens national energy security and buffers the economy against global energy price volatility.

Energy Mix Diversification: Integrating PV systems into the electricity generation portfolio contributes to a more balanced and resilient energy system that can better adapt to shifts in supply and demand.

Initial wind energy resource assessments in Mauritius date back to the 1980s, when a UNDP-sponsored study reported wind speeds ranging between 4 m/s and 7 m/s at 10 metres height. More recently, Dhunny and Lollchund (2017) from the University of Mauritius produced updated wind resource maps using higher-resolution modelling techniques. Their study provided estimates of yearly mean wind speeds at various hub heights, offering a more accurate and comprehensive overview of Mauritius' wind energy potential.

These updated assessments are crucial for identifying viable locations for utility-scale and distributed wind energy projects, particularly as the country seeks to diversify its renewable energy mix and achieve its clean energy targets under national and international climate commitments.. Based on this wind speed map, it can be observed that wind power potential of Mauritius is best in the South-East, lower in central plateau and South-West region in a typical year. Regions in the South-East may be best suited for this source of power.⁵

⁵ Data Source: Ministry of Energy and Public Utilities

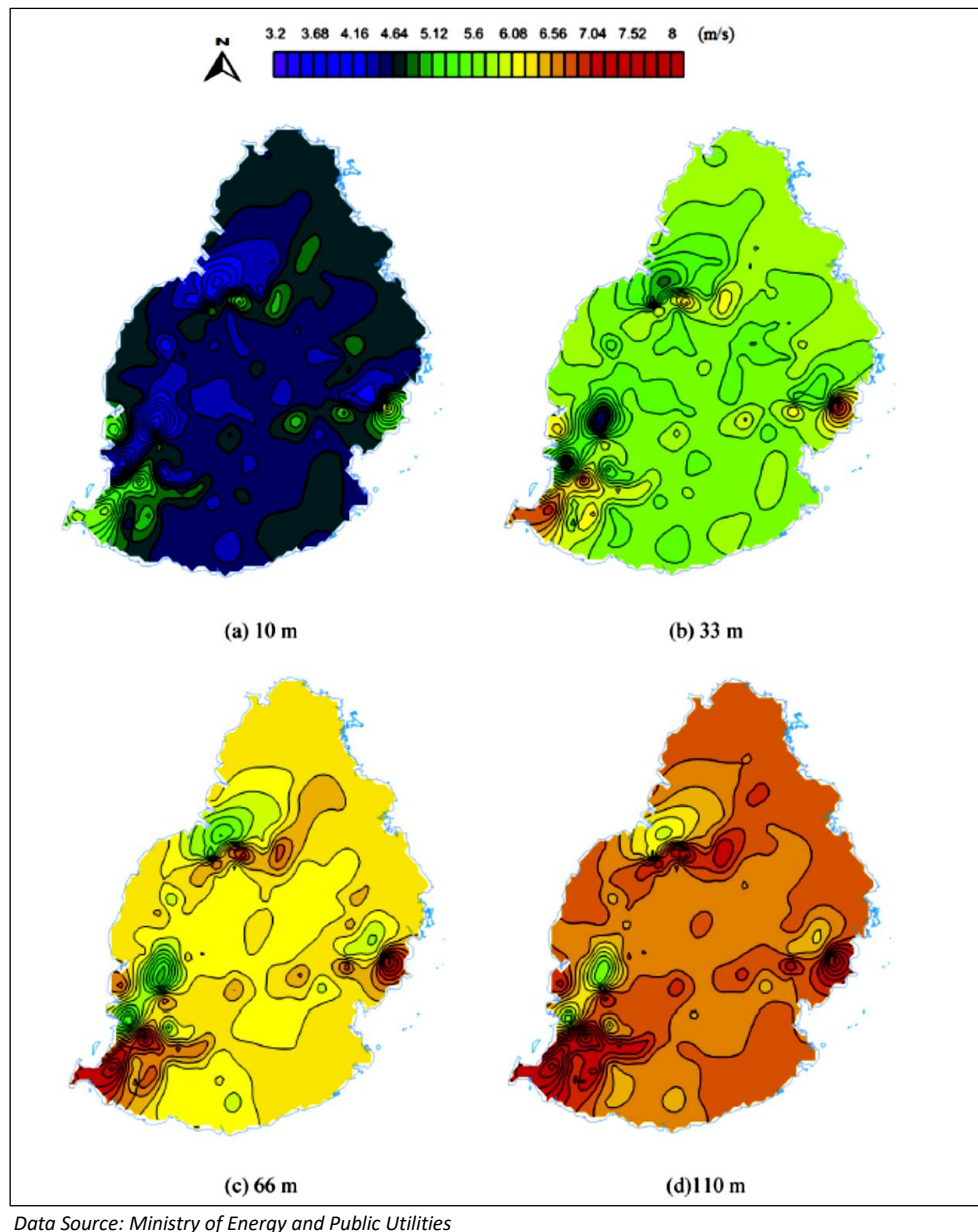


Figure 6. 2- Computed yearly mean wind speed map at multiple heights above ground

Wind power involves converting the kinetic energy of wind into useful forms of energy, most commonly electricity through wind turbines. Other traditional applications include mechanical power via windmills, water pumping using wind pumps, and wind propulsion for ships. In the context of Mauritius, wind energy is primarily harnessed for electricity generation.

7. GLOSSARY

Aviation fuel:

A kerosene type meeting the required properties for use in jet engines and aircraft-turbine engines.

Bagasse:

Cellulosic residue left after sugar is extracted from sugar cane.

Capacity:

The maximum power available from a power station at a point in time:

- *Installed capacity*: The nameplate capacity of the generator set.
- *Plant capacity*: The net capacity measured at the terminals of the stations, i.e., after deduction of the power absorbed by the auxiliary installations and the losses in the station transformers.
- *Effective capacity*: It is the plant capacity less any amount of derated capacity from the installed capacity.

Charcoal:

Comprises the solid residue obtained by the destructive distillation of wood in the absence of air.

Coal:

Fossil fuel that has a high degree of coalification, with a gross calorific value over 24MJ/kg (5700 Kcal/kg) on an ash-free but moist basis.

Diesel oil:

Consists primarily of medium oil distilling between 180°C and 380°C.

Electric energy dependence:

The ratio of electricity generation from fossil fuels and electricity generation total.

Electric dependency ratio:

Ratio between electricity production from fossil fuels and the total electricity production.

Energy:

Capacity for doing work or for producing heat. Producing heat is a common manifestation of 'doing work' as are producing light and motive force.

Energy intensity:

A measure of the energy efficiency of the economy of the country. Provides a measure of the efficiency with which energy is being used in production. A lower ratio usually reflects a more efficient use of energy.

Energy unit:

The International System of Units (SI unit) of energy is the Joule.

Final energy:

Energy that is supplied to consumers (electricity, petrol, diesel, natural gas, fuel oil, heating oil).

Final energy consumption:

Energy consumption by final user- i.e. energy which is not being used for transformation into other forms of energy. The consumption by sector is presented as follows:

Agriculture: Energy used for irrigation and by other agricultural equipments;

Commercial & distributive trade: Energy consumed by the business and commercial sector;

Residential: Consumption of energy by residential sector;

Manufacturing: Consumption in industry and construction; and

Transport: Includes consumption by land vehicles, ships and local aircrafts.

Fossils fuel:

Formed from the fossilized remains of dead plants and animals by exposure to heat and pressure in the Earth's crust over hundreds of millions of years.

Fuel:

Term used to describe energy sources that must be subjected to combustion in order to release the energy stored up inside them.

Fuel wood:

All forms of woody material.

Fuel oils:

Heavy oils from the refining process of crude oil and used as fuel in power stations. It is also commonly used by ships and industrial large-scale heating boilers installations as a fuel in furnaces or boilers in the manufacturing sector.

Gasolene:

A mixture of relatively volatile hydrocarbons, which have been blended to form a fuel suitable for use in spark-ignition internal combustion engines.

Gross Domestic Product (GDP):

The aggregate money value of all goods and services produced within a country out of economic activity during a specified period, usually a year, before provision for the consumption of fixed capital.

Gigawatt hour (GWh):

Unit of electrical energy, equal to 3.6 terajoules (TJ).

Hybrid motor vehicle:

A motor vehicle which for the purpose of its mechanical propulsion, has at least two different energy convertors and two different on-vehicle energy storage systems.

IPP (Independent Power Producers):

Entities which, in addition to their main activities, themselves produce(individually or in combination) electric energy intended, in whole or in part, to meet their own needs and for sale to the CEB throughout the year from bagasse during the cane harvest period and coal outside this period.

Kerosene (excl. Aviation fuel type):

A medium oil distilling between 150°C and 300°C and which is used in sectors other than aircraft transport.

Kilowatt (kW):

Unit of electrical power equal to 1 000 watts.

Kilowatt hour (kWh):

Unit of electrical energy equal to one kilowatt (1 kW) of power expended for one hour (3 600 s) or 3 600 000 joules.

Liquefied Petroleum Gas (LPG):

Consists mainly of propane or butane, derived from either petroleum refining process or extracted from petroleum streams. It is normally liquefied under pressure for transportation and storage. In Mauritius it is often used to power cooking stoves or gas water heaters and to fuel some types of vehicle.

Losses (transmission / distribution losses):

Comprise losses in transmission and distribution of electric energy and losses in transformers, which are *not* considered as integral parts of the power stations.

Normal cubic metre (Nm³):

Common unit used to refer to gas emissions or exchange. It is the value that a gas of a constant mass occupies under normal or standard condition.

Own use (station use and loss):

Included are consumption by station auxiliaries and losses in transformers, which are considered as integral parts of the power stations.

Peak demand:

Term used in energy demand management describing a period in which electrical power is expected to be provided for a sustained period at a significantly higher than the average supply level. Peak demand fluctuations may occur on daily, monthly seasonal and yearly cycles.

Petroleum products:

The primary source of petroleum products is crude oil. Petroleum or crude oil is a naturally occurring, flammable liquid found in rock formations in the Earth. Diesel oil, fuel oils, Gasolene, Kerosene and Liquefied petroleum gas (LPG) are among the major products derived from crude oil distillation.

Primary energy:

Primary energy designates energy from sources that involve only extraction or capture. Primary energy is not derived from any other forms of energy. By convention, sources of energy that occur naturally such as coal, heavy fuel oil, fuel wood are termed primary energy.

Primary energy consumption:

The final energy consumption in which is included the losses and consumption of producers and transformers of energy.

Production:

Comprises gross production, i.e., the amount of electric energy produced, including that consumed by station auxiliaries and any losses in transformers that are considered integral parts of the power station.

Renewable energy or Renewables:

Natural resources that, after exploitation, can return to their previous stock levels by natural processes of growth or replenishment.

Secondary energy:

Designates energy from all sources of energy that results from transformation of primary sources. e.g. electricity from coal.

Solar Thermal:

Solar energy harnessed in the form of thermal energy

Thermal plants:

Comprises of conventional thermal plants of all types that require combustion of fuels to generate electricity. They include steam-operated generating plants and plants using internal combustion engines or gas turbines.

Thermal sources of electricity:

These include coal, oil and its derivatives and bagasse.

Tonne (t):

The tonne (SI symbol: t) is a metric system unit of mass equal to 1,000 kilograms.

Tonne of oil equivalent (toe):

Amount of heat obtained by the perfect combustion one tonne of oil, defined as 41.868 gigajoules.

Watt (W):

The conventional unit to measure a rate of conversion of energy. One watt equals to 1 Joule per second.

ENERGY CONVERSION FACTORS

	tonne	toe
Gasolene	1	1.08
Diesel Oil	1	1.01
Dual Purpose Kerosene (DPK)	1	1.04
Fuel Oil	1	0.96
Liquified Petroleum Gas (LPG)	1	1.08
Coal	1	0.62
Bagasse	1	0.16
Fuelwood	1	0.38
Charcoal	1	0.74

	GWh	ktoe
Hydro/Wind/Landfill gas/Photovoltaic	1	0.086
Electricity	1	0.086

1 toe = 0.041868 terajoule (TJ) (net calorific value)

8. REFERENCES

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2. Digest of Energy and Water Statistics 2023, Statistics Mauritius
3. Renewable Energy Roadmap 2030 for the Electricity Sector, Ministry of Energy and Public Utilities.
4. ASB0046-2019 Standardized Baseline Mauritius Grid Emission Factor, United Nations Framework Convention on Climate Change.

Note:

- All data in this report refer to the Republic of Mauritius, unless otherwise specified and may be subject to revision in subsequent issues. The figures for Republic of Mauritius include those for the Island of Mauritius and the Island of Rodrigues.
- Rounding error may be present on certain totals.

Disclaimer:

This report has been compiled using data from Statistics Mauritius, Ministry of Energy and Public Utilities (MEPU), National Land Transport Authority (NLTA), Central Electricity Board (CEB), Wastewater Management Authority (WMA) and Mauritius Meteorological Services (MMS). Neither the Energy Efficiency Management Office (EEMO), nor any of its employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness or usefulness of any information in this report.