



2023

Energy regulation Board **STATISTICAL BULLETIN**



EDITORIAL TEAM

Mr. Alfred Mwila	Director – Economic Regulation
Mr. Rodgers K. Muyangwa	Senior Manager – Research and Pricing
Mr. Cletus Sikwanda	Economist – Research
Mr. Raymond Muyovwe	Statistician
Mr. Noah Kasela	Economic Analyst – Intern
Mr. Chama Besa	Economic Analyst – Intern

VISION

To be the benchmark of excellence in energy regulation in Africa by 2026

MISSION STATEMENT

Efficiently regulate the energy sector and be responsive to stakeholder needs to achieve sustainable, reliable, and quality energy products and services

CORE VALUES

Team work. Integrity. Predictability. Innovation. Transparency

Table of Contents

LIST OF TABLES.....	iv
LIST OF FIGURES.....	iv
UNIT OF MEASURE.....	v
ACKNOWLEDGEMENTS.....	vi
FOREWORD.....	vii
EXECUTIVE SUMMARY.....	viii
I. PETROLEUM SUBSECTOR.....	1
1.1 IMPORTATION OF FUEL	1
1.2 INDENI PRODUCTION.....	1
1.3 CONSUMPTION OF PETROLEUM PRODUCTS.....	2
1.3.1 Annual national consumption of petroleum products.....	2
1.3.2 Daily national average consumption of petroleum products.....	6
1.3.3 Daily national average consumption of petroleum products by province.....	6
1.3.4 Annual national consumption of petroleum products by economic sector	7
1.4 MARKET SHARE OF OIL MARKETING COMPANIES	8
1.4.1 Market share of white petroleum products	8
1.4.2 Market share for Jet A-1	9
1.4.3 Market share for LPG	9
1.5 NATIONAL RETAIL SITES NETWORK.....	10
1.5.1 Number of retail sites by OMC.....	10
1.5.2 Number of retail sites by Province.....	11
1.5.3 Number of retail sites by Province and OMC	12
1.6 TRENDS IN FUEL PRICES	14
1.6.1 Trends in Domestic retail prices.....	14
2. ELECTRICITY SUBSECTOR.....	15
2.1 ELECTRICITY GENERATION.....	15
2.1.1 ZESCO's ELECTRICITY GENERATION FROM MAJOR HYDRO POWER STATIONS.....	15
2.1.2 ELECTRICITY GENERATION FROM SMALL AND MINI HYDRO POWER STATIONS.....	15
2.1.3 ELECTRICITY GENERATION FROM DIESEL POWER PLANTS OWNED BY ZESCO	16
2.1.4 ELECTRICITY GENERATION FROM INDEPENDENT POWER PRODUCERS	16
2.2 ELECTRICITY IMPORTS AND EXPORTS.....	17
2.3 ELECTRICITY CONSUMPTION	18

LIST OF TABLES

Table 1: Imports of refined petroleum products, 2022-2023	1
Table 2: INDENI refinery production of petroleum products, 2012-2023.....	1
Table 3: National fuel consumption of petroleum products by type, 2010-2023.....	2
Table 4: National fuel consumption of petroleum products by type and province, 2022-2023.....	3
Table 5: National consumption of petroleum products by quarter, 2022-2023.....	4
Table 6: National consumption of petroleum products by month, 2022-2023	5
Table 7: Daily national average consumption of petroleum products, 2022-2023	6
Table 8: Provincial average daily consumption of petroleum products, 2022-2023	6
Table 9: Annual consumption of petroleum products by economic sector	7
Table 10: Market share of white petroleum products, 2022-2023	8
Table 11: Market share for Jet A-1, 2022-2023.....	9
Table 12: Market share for LPG, 2022-2023	9
Table 13: Number of retail sites by OMC.....	10
Table 14: Distribution of number of retail sites by province as at 31st December 2023	11
Table 15: Number of retail sites operating as at 31 st December 2023.....	12
Table 16: Trends in domestic retail pump prices for Low Sulphur Gasoil in Kwacha per litre, January-December, 2022-2023	14
Table 17: Trends in retail pump prices for Unleaded Petrol in Kwacha per litre, January- December, 2022-2023	14
Table 18: Trends in retail pump prices for Kerosene in Kwacha per litre, January- December, 2022-2023	14
Table 19: Electricity generation from ZESCO's large hydro power plants, 2013-2023	15
Table 20: Electricity generation from ZESCO's mini- hydro power plants, 2013-2023	15
Table 21: Electricity generation from ZESCO's Diesel power plants, 2013-2023.....	16
Table 22: Electricity generation from Independent power producers, 2013-2023.....	16
Table 23: Comparison of national electricity consumption by economic sector, 2014-2023	18

LIST OF FIGURES

Figure 1: Percentage distribution of retail sites as at 31 st December 2023	11
Figure 2: ZESCO's electricity imports and exports, 2022-2023	17

UNIT OF MEASURE

Bbl	Barrels of oil
GWh	Giga-Watt hour (1,000 MWh)
K	Zambian Kwacha
Km	Kilometre
kV	Kilo Volt
kVA	Kilo Volt Amperes (1,000 Volt Amps)
kW	Kilo Watt
kWh	Kilo Watt Hour
m/bd	million barrels per day
MW	Mega Watt
MWh	Mega Watt Hour (1,000 kWh)
MT	Metric Tonne (in this document means a mass equivalent to 1,000 kg)
m ³	Cubic Meters
US\$	United States of America dollar

ACKNOWLEDGEMENTS

We acknowledge the following organisations for providing data and information that was used in writing this report:

- Bank of Zambia
- Copperbelt Energy Corporation Plc
- The Industrial Development Corporation
- INDENI Energy Company Limited
- Kariba North Bank Extension Power Corporation Limited
- Lunsemfwa Hydropower Company Limited
- Maamba Collieries Limited
- Ministry of Energy
- Ministry of Green Economy and Environment – Meteorological Department
- North Western Energy Corporation Limited
- Office for Promotion of Private Power Investment
- Oil Marketing Companies
- Road Transport and Safety Agency
- Rural Electrification Authority
- TAZAMA Pipelines Limited
- TAZAMA Petroleum Products Limited
- Zambia Revenue Authority
- Zambia Statistics Agency
- Zengamina Power Limited
- ZESCO Limited

FOREWORD

It is my pleasure to introduce the Energy Regulation Board's (ERB) Annual Statistical Bulletin for the year 2023, a reflection of our ongoing commitment to become the benchmark of excellence in energy regulation in Africa by 2026. This report stands as a testament to our dedication to efficiently regulate the energy sector and be responsive to stakeholder needs.

The ERB holds the vital mandate of regulating the energy sector in an efficient manner, and a key aspect of fulfilling this responsibility is providing updated and comprehensive energy statistics. This year's Annual Statistical Bulletin presents a thorough analysis of the electricity, petroleum, and renewable energy sub-sectors. These statistics not only offer insights into the performance and trends within the industry but also play a crucial role in supporting government policy formulation and evaluating existing policies.

In an era of rapid change, where the energy landscape is evolving at an unprecedented pace, the importance of accurate and timely statistics cannot be overstated. As we strive to achieve sustainability, reliability, and quality in our energy products and services, the insights derived from this report will inform decision-makers and contribute to the development of effective policies that meet the needs of our dynamic environment.

This Annual Statistical Bulletin is not confined to a single format; it is available in various mediums, including print and electronic media. We are committed to ensuring that the information is easily accessible to all interested parties. You can conveniently access the report in PDF format on our website (www.erb.org.zm), underscoring our commitment to transparency and open access to information.

I would like to express my appreciation to the dedicated team at the ERB for their tireless efforts in compiling and presenting this comprehensive report. Their commitment to excellence has been pivotal in producing a document that I am confident will serve as a valuable resource for all stakeholders.

I extend an open invitation to all our stakeholders, including government agencies, industry players, and the public, to actively engage with this report. Your comments and suggestions are not only welcomed but are crucial in enhancing the quality and relevance of future publications.

Thank you for your continued support.

Eng. Yohane Mukabe,
Director General
March 2024

EXECUTIVE SUMMARY

The landscape of the energy sector in Zambia experienced several developments during the year 2023. This report reflects the performance of the energy sector in statistical form specifically covering the petroleum, electricity and renewable energy subsectors.

The annual national consumption of unleaded petrol, diesel and kerosene was 445,044.58 MT, 1,107,067.22 MT, and 3,918.72 MT respectively. This entailed a daily national consumption of 1,219.30 MT, 3,033.06 MT, and 10.74 MT for petrol, diesel and kerosene respectively. This demand of petroleum products was met by OMCs that acquired petroleum product through imports and through the TAZAMA pipelines. The annual imports for petrol and diesel were 55,755,103.90 MT and 134,371,399.40 MT respectively. Additionally, the refining of the last comingled feedstock during the conversion of TAZAMA Pipelines Limited to a transporter of finished petroleum products and INDENI Petroleum to an Oil Marketing company (OMC), led to the production of 6,324.47 MT, 40,375.56 MT, and 21,508.62 MT of Kerosene, LSG and petrol respectively. The top three OMCs (Mount Meru Zambia Limited, Puma Energy Zambia Plc, and Totalenergies Zambia Limited) accounted for half of the market share for white petroleum products at 54.6% in the period under review. The domestic pump prices in the year of petrol ranged from a high of K29.98/litre to a low of K24.45/litre, whereas the prices of diesel ranged from a high of K29.96/litre to a low of K21.87/litre.

In the electricity subsector, the national installed generation capacity increased to 3,811.32 MW from 3,771.8 MW in 2022. This comprised on-grid and off-grid stood and was largely dominated by hydro electricity generation at 83.0 percent. Meanwhile, national electricity generation marginal declined by 0.1 percent to 19,372.92GWh from 19,399.11GWh in 2022. This was largely on account of a decline in electricity generation from large hydro power plants.

The report is divided into two main sections. Section I presents the performance of the petroleum subsector, while part two is focussed on the electricity subsector.

I. PETROLEUM SUBSECTOR

I.1 IMPORTATION OF FUEL

Table 1: Imports of refined petroleum products, 2022-2023

Month	Diesel (L)		Heavy Fuel Oil (Kg)		Jet A-I (L)		Kerosene (L)		Petrol (L)	
	2022	2023	2022	2023	2022	2023	2022	2023	2022	2023
January	126 879 614.40	95 551 331.50	9.00	2 385 675.00	1 986 981.00	4 485 676.00	490 939.00	274 083.00	60 815 897.10	32 712 244.00
February	78 245 176.20	101 607 093.40		920 059.00	2 739 505.00	6 965 020.00	930 380.00	569 928.00	43 228 373.10	44 077 850.00
March	105 276 860.00	92 569 382.50	21 977.80	2 271 234.00	2 206 604.00	4 546 027.00	2 179 964.00	72 019.70	45 943 052.00	52 690 516.80
April	93 366 472.80	91 490 024.40	1 303 585.80	2 006 785.00	3 088 631.00	6 140 726.00	418 260.00	817 900.00	47 853 774.20	37 229 080.50
May	105 922 084.00	110 591 635.30	1 656 464.00	1 633 186.00	3 457 221.00	4 424 784.00	230.00	658 000.00	39 397 839.70	44 770 466.20
June	102 606 315.30	117 320 244.40	1 648 150.00	760 638.00	2 526 366.00	4 565 541.00		324 510.00	39 595 660.60	38 062 548.00
July	104 764 346.70	113 754 761.80	1 483 277.00	370 550.00	4 269 599.00	7 634 937.80	1 718 370.00	1 822.90	46 899 826.00	60 018 802.60
August	130 692 444.50	140 654 052.60	626 719.00	506 124.00	4 112 790.00	5 982 578.90	200.00	404.80	49 219 900.80	38 943 476.40
September	122 838 087.30	139 299 113.70	1 384 477.00	430 897.00	3 860 266.00	6 389 244.30	40 989.00	10.00	62 599 572.10	53 630 415.40
October	119 687 302.40	104 232 481.30	1 545 027.00	575 316.00	4 449 472.00	4 716 918.20	661 010.00	10.00	35 828 139.00	52 842 895.00
November	114 232 981.60	107 349 932.70	2 922 366.00	601 599.00	4 100 222.00	4 609 761.00	321 210.00		54 611 814.00	56 053 708.00
December	127 976 856.30	129 293 145.80	2 239 548.00	283 590.00	3 217 019.00	5 131 631.50	430 270.00	10.00	52 369 487.00	46 519 101.00
Grand Total	1 332 488 541.50	1 343 713 199.40	14 831 600.60	12 745 653.00	40 014 676.00	65 592 845.70	7 191 822.00	2 718 698.40	578 363 335.60	557 551 103.90

I.2 INDENI PRODUCTION

Table 2: INDENI refinery production of petroleum products, 2012-2023

Product	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Bitumen (MT)	0.00	-	0.00	359.00	- 228.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Diesel (MT)	322 295.06	226 934.49	308 823.31	261 828.92	212 637.94	216 672.00	274 292.00	294 101.00	160 762.00	18 314.00	0.00	40 375.56
HFO (MT)	51 264.76	96 490.86	125 560.75	120 929.27	102 132.87	176 231.00	118 751.00	172 404.00	79 998.00	16 591.00	0.00	15 454.85
Jet A-I (MT)	0.00	0.00	0.00	0.00	0.00	386.00	10 948.00	1 913.00	-	-	0.00	-
Kerosene (MT)	54 858.60	35 671.87	20 818.77	28 803.51	27 963.32	18 130.00	20 538.00	12 637.00	8 685.00	2 283.00	0.00	6 324.47
LPG (MT)	11 808.52	9 458.14	10 710.54	3 740.48	4 838.90	8 768.00	9 027.00	10 932.00	5 424.00	400.00	0.00	493.20
Unleaded Petrol (MT)	119 043.86	105 885.86	128 404.56	106 702.20	95 285.15	123 591.00	135 733.00	137 836.00	74 497.00	13 774.00	0.00	21 508.62
Grand Total	559 270.80	474 441.22	594 317.93	522 363.38	442 630.18	543 778.00	569 289.00	629 823.00	329 366.00	51 362.00	0.00	84 156.70

I.3 CONSUMPTION OF PETROLEUM PRODUCTS

I.3.1 Annual national consumption of petroleum products

I.4.1.1 Annual national consumption of petroleum products

Table 3: National fuel consumption of petroleum products by type, 2010-2023

Year	Heavy Fuel Oils (MT)	LPG (MT)	Jet-A1 (MT)	Kerosene (MT)	Unleaded Petrol (MT)	Diesel(MT)	Total
2010	46 845.00	1 848.27	29 130.00	17 330.00	160 981.99	496 568.00	752 703.25
2011	49 461.24	2 424.13	32 593.07	19 898.00	182 123.00	577 836.00	864 335.43
2012	60 222.38	657.62	49 476.83	14 669.18	234 224.22	675 756.00	1 035 006.24
2013	50 793.37	3 021.49	49 612.86	12 315.00	275 603.86	676 078.00	1 067 424.58
2014	116 821.21	3 680.15	38 049.39	13 775.87	304 562.06	700 576.70	1 177 465.38
2015	129 149.45	3 229.73	44 159.59	18 299.98	366 524.27	818 417.66	1 379 780.68
2016	97 881.16	2 742.35	27 236.61	16 045.34	347 265.76	791 277.32	1 282 448.54
2017	161 766.37	4 719.04	26 069.75	16 241.66	325 940.13	794 485.10	1 329 222.06
2018	144 609.96	7 006.20	27 105.63	15 334.97	327 029.05	823 821.73	1 344 907.53
2019	173 485.00	7 841.00	29 005.00	10 831.00	346 575.00	885 453.00	1 453 190.00
2020	45 023.05	7 945.04	16 573.35	7 504.17	339 431.09	912 813.96	1 329 290.66
2021	15 384.94	7 981.10	22 056.93	2 536.84	396 661.37	1 020 200.98	1 464 822.16
2022	17 454.85	8 374.17	31 159.66	833.04	425 849.93	1 064 414.36	1 548 086.01
2023	16 983.03	9 489.32	44 146.91	3 918.72	445 044.58	1 107 067.22	1 626 649.77

1.4.1.2 Annual national consumption of petroleum products by province

Table 4: National fuel consumption of petroleum products by type and province (MT), 2022-2023

Product	Central	Copperbelt	Eastern	Luapula	Lusaka	Muchinga	Northern	Northwestern	Southern	Western	Grand Total
Avgas											
2022	140.20	33.68			911.15		4.55	4.34	94.51		1 188.44
2023		29.75			613.99		5.91	12.44	94.02		756.10
Gasoil											
2022	71 392.01	322 002.93	22 467.81	12 381.70	346 442.51	11 191.53	15 132.02	195 571.74	56 749.01	11 083.10	1 064 414.36
2023	79 412.08	249 466.95	25 995.59	11 813.49	423 456.87	14 309.24	13 143.34	230 179.84	48 584.13	10 705.70	1 107 067.22
Heavy Fuel Oil											
2022		16 423.46			1 031.39						17 454.85
2023		15 786.55			1 196.48						16 983.03
Jet A-1											
2022		7 570.69	156.64		22 655.40		207.97	357.85	211.12		31 159.66
2023		10 582.49	155.60		32 696.91		279.21	176.93	255.78		44 146.91
Kerosene											
2022	93.63	99.21	56.48	70.96	456.72		19.57	14.15	22.32		833.04
2023	229.60	868.24	77.13	924.66	1 445.05	34.65	80.00	142.88	116.50		3 918.72
LPG											
2022	376.01	1 852.76	69.71	3.82	5 632.10	3.73	11.83	164.18	238.23	21.79	8 374.17
2023	164.76	1 852.39	50.85	4.39	6 992.23	6.84	14.82	155.71	221.68	25.65	9 489.32
Unleaded Petrol											
2022	32 490.27	81 359.72	22 520.85	8 648.96	211 764.88	5 193.79	10 832.30	15 933.09	29 746.38	7 359.69	425 849.93
2023	31 910.38	87 167.40	24 000.01	9 158.10	219 598.51	6 596.55	11 607.83	17 574.94	30 556.50	6 874.35	445 044.58

I.4.1.3 Quarterly national consumption of petroleum products

Table 5: National consumption of petroleum products by quarter (MT), 2022-2023

Product	2022	2023
Avgas		
Quarter 1	175.89	137.65
Quarter 2	284.69	214.06
Quarter 3	449.22	238.96
Quarter 4	278.64	165.43
Avgas Total	1 188.44	756.10
Gasoil		
Quarter 1	237 336.87	239 097.85
Quarter 2	258 289.31	276 735.26
Quarter 3	301 080.14	304 434.80
Quarter 4	267 708.04	286 799.31
Gasoil Total	1 064 414.36	1 107 067.22
Heavy Fuel Oil		
Quarter 1	3 107.17	5 963.65
Quarter 2	3 820.04	5 295.33
Quarter 3	3 958.85	3 560.85
Quarter 4	6 568.80	2 163.20
Heavy Fuel Oil Total	17 454.85	16 983.03
Jet A-1		
Quarter 1	5 838.16	9 061.66
Quarter 2	7 422.97	10 914.76
Quarter 3	9 130.12	12 367.81
Quarter 4	8 768.42	11 802.68
Jet A-1 Total	31 159.66	44 146.91
Kerosene		
Quarter 1	732.88	467.27
Quarter 2	24.68	1 240.98
Quarter 3	32.53	1 251.77
Quarter 4	42.94	958.69
Kerosene Total	833.04	3 918.72
LPG		
Quarter 1	1 972.98	2 305.40
Quarter 2	2 190.09	2 389.25
Quarter 3	2 344.87	2 441.11
Quarter 4	1 866.24	2 353.56
LPG Total	8 374.17	9 489.32
Unleaded Petrol		
Quarter 1	101 575.88	104 475.11
Quarter 2	99 727.16	109 846.79
Quarter 3	113 928.54	118 319.82
Quarter 4	110 618.34	112 402.86
Unleaded Petrol Total	425 849.93	445 044.58
Grand Total	1 549 274.44	1 627 405.87

1.4.1.4 Monthly national consumption of petroleum products

Table 6: National consumption of petroleum products by month (MT), 2022-2023

Product	January	February	March	April	May	June	July	August	September	October	November	December
Avgas												
2022	34.22	74.23	67.44	74.14	88.61	121.95	138.43	189.69	121.10	147.74	71.17	59.73
2023	28.67	39.22	69.76	51.26	87.67	75.13	102.28	84.68	52.00	48.22	69.11	48.10
Gasoil												
2022	77 322.64	74 619.96	85 394.28	77 885.49	87 867.71	92 536.10	96 397.20	101 494.78	103 188.16	92 682.77	89 509.21	85 516.06
2023	84 216.63	73 800.40	81 080.82	82 638.58	93 870.98	100 225.70	98 572.88	102 807.84	103 054.08	98 196.85	97 347.32	91 255.14
Heavy Fuel Oil												
2022	982.13	1 706.90	418.14	1 130.82	1 539.80	1 149.42	1 766.77	902.88	1 289.20	1 883.33	2 544.42	2 141.05
2023	2 574.37	1 905.25	1 484.04	1 930.02	2 047.04	1 318.28	692.13	1 686.55	1 182.17	884.33	740.19	538.68
Jet A-1												
2022	1 902.90	1 780.02	2 155.23	2 913.24	2 625.04	1 884.68	2 867.24	3 201.97	3 060.91	3 160.46	2 501.34	3 106.62
2023	3 117.87	2 573.42	3 370.36	4 009.64	3 462.50	3 442.63	4 249.68	4 347.70	3 770.43	4 104.82	3 762.31	3 935.55
Kerosene												
2022	480.04	14.68	238.16	7.03	14.48	3.17	0.18	-	32.35	-	23.71	19.23
2023	233.53	158.03	75.71	86.00	734.44	420.54	425.93	397.60	428.25	284.47	377.57	296.65
LPG												
2022	676.38	607.93	688.68	660.33	773.85	755.91	833.09	796.37	715.41	602.69	554.06	709.49
2023	952.06	584.59	768.75	672.53	827.04	889.69	816.46	855.84	768.82	804.60	731.26	817.70
Unleaded Petrol												
2022	33 903.55	32 151.59	35 520.75	29 819.90	34 301.35	35 605.91	36 878.15	37 685.64	39 364.76	37 332.72	35 909.54	37 376.08
2023	34 648.10	36 036.71	33 790.30	34 364.08	39 179.35	36 303.35	40 705.30	39 134.94	38 479.58	37 487.74	36 994.31	37 920.81

1.3.2 Daily national average consumption of petroleum products

Table 7: Daily national average consumption of petroleum products, 2022-2023

Product	Average Daily Consumption (MT)		Average Daily Consumption (L)	
	2022	2023	2022	2023
Avgas	3.26	2.07	3 255.99	2 071.51
Gasoil	2 916.20	3 033.06	3 471 671.10	3 610 786.76
Heavy Fuel Oil	47.82	46.53	47 821.50	46 528.85
Jet A-I	85.37	120.95	107 382.31	151 188.04
Kerosene	2.28	10.74	2 852.88	13 420.27
LPG	22.94	26.00	22 942.93	25 998.13
Unleaded Petrol	1 166.71	1 219.30	1 555 616.18	1 625 733.62

1.3.3 Daily national average consumption of petroleum products by province

Table 8: Provincial average daily consumption of petroleum products, 2022-2023

Product	Average Daily Consumption (MT)		Average Daily Consumption (L)	
	2022	2023	2022	2023
Central				
Avgas	0.38	-	384.11	-
Gasoil	195.59	217.57	232 850.67	259 008.73
Kerosene	0.26	0.63	320.65	786.31
LPG	1.03	0.45	1 030.16	451.39
Unleaded Petrol	89.01	87.43	1 18 685.91	1 16 567.61
Copperbelt				
Avgas	0.09	0.08	92.27	81.51
Gasoil	882.20	683.47	1 050 237.86	813 656.06
Heavy Fuel Oil	45.00	43.25	44 995.78	43 250.82
Jet A-I	20.74	28.99	26 090.09	36 241.39
Kerosene	0.27	2.38	339.76	2 973.42
LPG	5.08	5.08	5 076.05	5 075.04
Unleaded Petrol	222.90	238.81	297 204.44	318 419.71
Eastern				
Gasoil	61.56	71.22	73 280.53	84 786.66
Jet A-I	0.43	0.43	539.80	532.89
Kerosene	0.15	0.21	193.42	264.14
LPG	0.19	0.14	190.99	139.33
Unleaded Petrol	61.70	65.75	82 267.93	87 671.28
Luapula				
Gasoil	33.92	32.37	40 383.88	38 530.63
Kerosene	0.19	2.53	243.00	3 166.64
LPG	0.01	0.01	10.47	12.03
Unleaded Petrol	23.70	25.09	31 594.39	33 454.26
Lusaka				
Avgas	2.50	1.68	2 496.31	1 682.16
Gasoil	949.16	1 160.16	1 129 949.46	1 381 137.86
Heavy Fuel Oil	2.83	3.28	2 825.73	3 278.03
Jet A-I	62.07	89.58	78 074.95	1 11 975.70
Kerosene	1.25	3.96	1 564.11	4 948.80
LPG	15.43	19.16	15 430.42	19 156.81
Unleaded Petrol	580.18	601.64	773 570.32	802 186.35
Muchinga				
Gasoil	30.66	39.20	36 502.06	46 670.72
Kerosene	-	0.09	-	118.68
LPG	0.01	0.02	10.23	18.73
Unleaded Petrol	14.23	18.07	18 972.77	24 097.00

Northern				
Avgas	0.01	0.02	12.47	16.19
Gasoil	41.46	36.01	49 354.28	42 868.02
Jet A-I	0.57	0.76	716.69	956.19
Kerosene	0.05	0.22	67.03	273.97
LPG	0.03	0.04	32.40	40.60
Unleaded Petrol	29.68	31.80	39 570.06	42 403.03
Northwestern				
Avgas	0.01	0.03	11.90	34.07
Gasoil	535.81	630.63	637 872.61	750 749.63
Jet A-I	0.98	0.48	1 233.23	605.92
Kerosene	0.04	0.39	48.47	489.32
LPG	0.45	0.43	449.82	426.59
Unleaded Petrol	43.65	48.15	58 203.05	64 200.68
Southern				
Avgas	0.26	0.26	258.93	257.58
Gasoil	155.48	133.11	185 091.37	158 460.96
Jet A-I	0.58	0.70	727.56	875.95
Kerosene	0.06	0.32	76.45	398.99
LPG	0.65	0.61	652.69	607.35
Unleaded Petrol	81.50	83.72	108 662.59	111 621.91
Western				
Gasoil	30.36	29.33	36 148.39	34 917.50
LPG	0.06	0.07	59.70	70.27
Unleaded Petrol	20.16	18.83	26 884.71	25 111.79

1.3.4 Annual national consumption of petroleum products by economic sector

Table 9: Annual consumption of petroleum products by economic sector

Product/Economic sector	2022	2023
Avgas		
Non-mining	100.0%	100.0%
Gasoil		
Mining	33.2%	32.8%
Non-mining	28.3%	27.9%
Retail	38.5%	39.4%
Heavy Fuel Oil		
Mining	94.1%	92.7%
Non-mining	5.9%	6.0%
Retail	0.0%	1.3%
Jet A-I		
Mining	0.1%	0.0%
Non-mining	99.9%	100.0%
Retail	0.0%	0.0%
Kerosene		
Mining	0.0%	3.5%
Non-mining	4.9%	4.6%
Retail	95.1%	91.9%
LPG		
Mining	1.2%	0.5%
Non-mining	52.0%	41.2%
Retail	46.8%	58.3%
Unleaded Petrol		
Mining	0.2%	0.1%
Non-mining	4.0%	4.0%

Retail	95.9%	95.9%
--------	-------	-------

I.4 MARKET SHARE OF OIL MARKETING COMPANIES

I.4.1 Market share of white petroleum products

Table 10: Market share of white¹ petroleum products, 2022-2023

OMC	2022	2023
Puma Energy Zambia PLC	19.1%	19.9%
Mount Meru Petroleum (Z) Ltd	18.3%	19.3%
TotalEnergies Zambia Limited	18.5%	15.4%
Engen Petroleum	6.7%	6.4%
Oryx Energies Zambia Limited	5.5%	4.1%
Rubis Energy Zambia Ltd	4.5%	4.0%
Spectra Oil Zambia	3.6%	3.6%
Karan Petroleum Zambia Limited	1.1%	2.8%
Lake Petroleum Ltd	2.8%	2.6%
Petroda Zambia Ltd	3.0%	2.6%
Oasis Oil Zambia	1.6%	2.4%
Eco Petroleum	1.9%	1.9%
Zamfuel Petroleum Ltd	1.2%	1.8%
SGC Investments Ltd	1.7%	1.7%
Hass Petroleum Zambia Ltd	0.7%	1.2%
Surya Energy	1.3%	1.0%
Korridor Zambia Fuel Limited	1.0%	1.0%
Zhongkuang Zambia Services Co. Ltd	0.8%	1.0%
Dalbit Petroleum Limited	1.0%	0.9%
Stream Energy Ltd	0.5%	0.7%
Harvest	0.0%	0.7%
Refuel Petroleum Corporation	0.4%	0.5%
Alfa Energy Zambia Limited	0.1%	0.5%
LBM Investment Ltd	0.7%	0.4%
Sapphire Energy Company Ltd	0.0%	0.4%
Asharami Energy Limited	0.6%	0.4%
Simba Oil Company Ltd	0.3%	0.3%
Collum Lunm Tian Ltd	0.2%	0.3%
Sino Petroleum	0.2%	0.2%
Endrone Petroleum Corporation	0.2%	0.2%
Zacks Hardware	0.1%	0.2%
Luapula oils Ltd	0.2%	0.2%
Petrolink Limited	0.3%	0.2%
Oilbay Zambia	0.2%	0.1%
Www Investments Ltd	0.1%	0.1%
Admire Energy Limited	0.1%	0.1%
Quality Petroleum Ltd	0.1%	0.1%
Tribute Investments Limited	0.1%	0.1%
Boma Energy Limited	0.0%	0.1%
Hamdi Investments & Trading Company Limited	0.0%	0.1%
Ufuel Zambia Ltd	0.1%	0.1%
Lushomo Energy Limited	0.1%	0.1%
Japawa	0.1%	0.1%
Petromas Energy Ltd	0.0%	0.1%
Ravasia Petroleum	0.0%	0.1%
Others	1.0%	0.4%

¹ Gasoil, Petrol and Kerosene are referred to as white petroleum products

Total	100.0%	100.0%
--------------	---------------	---------------

1.4.2 Market share for Jet A-I

Table 11: Market share for Jet A-I, 2022-2023

OMC	2022	2023
Puma Energy Zambia PLC	63.4%	56.7%
TotalEnergies Zambia Limited	36.6%	43.3%
Grand Total	100.0%	100.0%

1.4.3 Market share for LPG

Table 12: Market share for LPG, 2022-2023

OMC	2022	2023
Mount Meru Petroleum (Z) Ltd	19.3%	25.2%
Oryx Gas Zambia Limited	13.9%	15.2%
Afrox Zambia Ltd	21.0%	13.4%
Falcon Gas Zambia Ltd	8.3%	13.2%
Ogaz Zambia Limited	14.8%	10.4%
Exclusive Brands Africa	6.3%	6.7%
Rubis Energy Zambia Ltd	5.9%	6.1%
Minegases Co. Ltd	5.4%	4.4%
Chingases Company Limited	4.9%	3.5%
Puma Energy Zambia PLC	0.0%	1.9%
Oilbay Zambia	0.1%	0.1%
Grand Total	100.0%	100.0%

I.5 NATIONAL RETAIL SITES NETWORK

I.5.1 Number of retail sites by OMC

Table 13: Number of retail sites by OMC

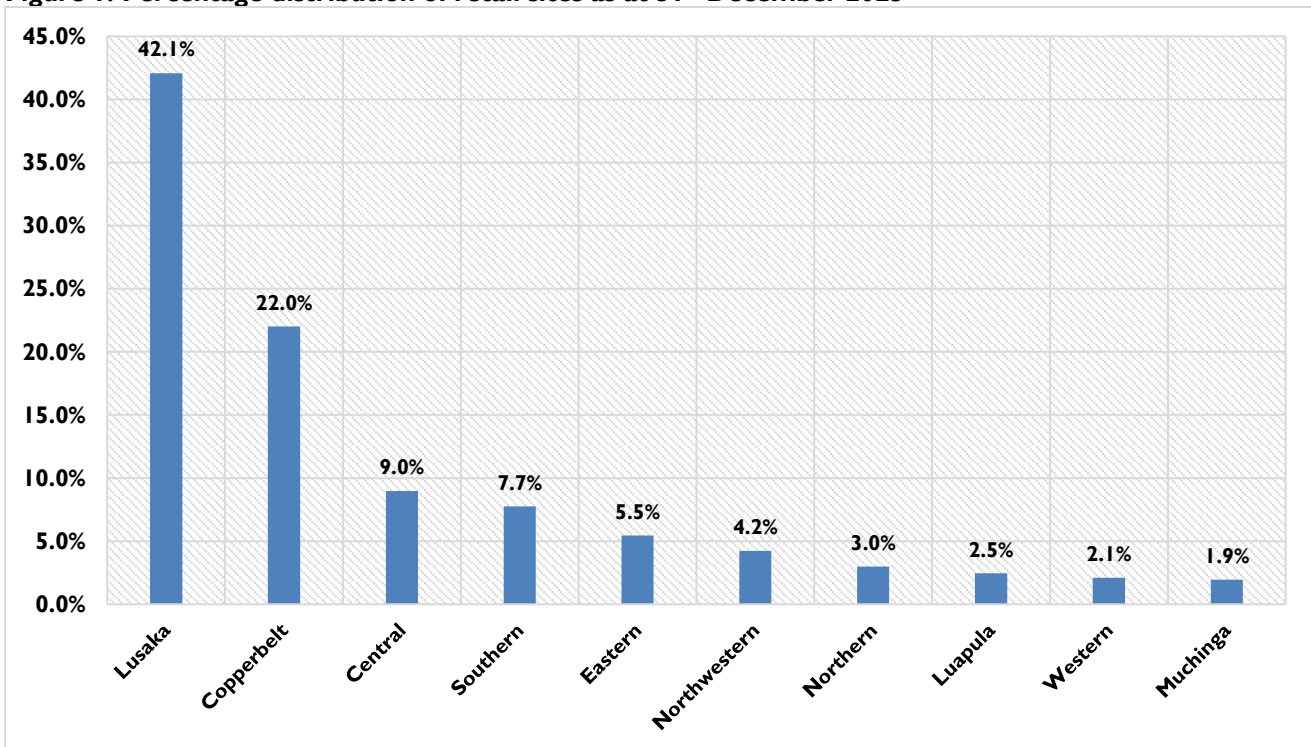
OMC	Number	% Share
Mount Meru Petroleum Zambia Ltd	81	14.3
Totalenergies Zambia	65	11.4
Puma Energy Zambia	64	11.3
Vivo Energy Zambia	59	10.4
Rubis Zambia Ltd	41	7.2
Lake Petroleum Ltd	36	6.3
Oryx Energies Zambia Limited	27	4.8
SGC	27	4.8
Petroda Zambia Ltd	25	4.4
Zamfuel	18	3.2
Karan Petroleum Z Ltd	15	2.6
Oasis Oil Ltd	15	2.6
Eco Petroleum Ltd	11	1.9
Harvest Group	11	1.9
Surya Energy	9	1.6
LBM Investments Limited	7	1.2
Hass	6	1.1
Spectra Oil Corporation	5	0.9
Petrolink	4	0.7
Simba Oil Company	3	0.5
Zacks	3	0.5
Boma Energy Limited	2	0.4
Endrone Petroleum	2	0.4
Oilbay (Z) Ltd	2	0.4
Quality Petroleum	2	0.4
Refuel	2	0.4
Tribute Investments	2	0.4
ACM Petroleum	1	0.2
Admire Energy Ltd	1	0.2
Alfa Energy Limited	1	0.2
Apex Energies Ltd	1	0.2
Asharami Energy Resources Zambia	1	0.2
Benzol Petroleum	1	0.2
Collum Lunm Tian Petroleum	1	0.2
Energy belt Zambia Limited	1	0.2
Fa Fuel Ltd	1	0.2
Hamdi Investment & Trading Ltd (Hitco Petroleum)	1	0.2
Japawa	1	0.2
Luapula Oils Ltd	1	0.2
Lushomo	1	0.2
Ngucha Energy Corp Ltd	1	0.2
Nyenyezi Investment Ltd	1	0.2
Ordodoil Company Limited	1	0.2
Ravasia	1	0.2
Sino Petroleum Limited	1	0.2
Star Oil Company Ltd	1	0.2
Ufuel	1	0.2
United Metro	1	0.2
WWW Investments	1	0.2
Zeekna Investment Company Ltd	1	0.2
Zhongkuang Zambia Services Co. Ltd	1	0.2
Grand Total	568	100.0

1.5.2 Number of retail sites by Province

Table 14: Distribution of number of retail sites by province as at 31st December 2023

Province	Number of Sites	% Share
Central	51	9.0%
Copperbelt	125	22.0%
Eastern	31	5.5%
Luapula	14	2.5%
Lusaka	239	42.1%
Muchinga	11	1.9%
Northern	17	3.0%
Northwestern	24	4.2%
Southern	44	7.7%
Western	12	2.1%
Grand Total	568	100.0%

Figure 1: Percentage distribution of retail sites as at 31st December 2023



I.5.3 Number of retail sites by Province and OMC

Table 15: Number of retail sites operating as at 31st December 2023

Province	OMC	Number of OMCs
Central	Karan Petroleum Z Ltd	2
	Lake Petroleum Ltd	5
	Lushomo	1
	Mount Meru Petroleum Zambia Ltd	10
	Oasis Oil Ltd	4
	Oilbay (Z) Ltd	1
	Petrolink	1
	Puma Energy Zambia	3
	Rubis Zambia Ltd	5
	Simba Oil Company	1
	Spectra Oil Corporation	1
	Surya Energy	2
	Totalenergies Zambia	7
	Ufuel	1
	Vivo Energy Zambia	1
	Www Investments	1
	Zacks	1
	Zamfuel	4
Copperbelt	Boma Energy Limited	2
	Eco Petroleum Ltd	4
	Fa Fuel Ltd	1
	Hamdi Investment & Trading Ltd (Hitco Petroleum)	1
	Hass	3
	Karan Petroleum Z Ltd	2
	Lake Petroleum Ltd	11
	Lbm Investments Limited	2
	Mount Meru Petroleum Zambia Ltd	10
	Oryx Energies Zambia Limited	7
	Petroda Zambia Ltd	6
	Petrolink	2
	Puma Energy Zambia	16
	Rubis Zambia Ltd	14
	Sgc	10
	Star Oil Company Ltd	1
	Surya Energy	1
	Totalenergies Zambia	19
	United Metro	1
	Vivo Energy Zambia	11
Zhongkuang Zambia Services Co .Ltd	1	
Eastern	Lake Petroleum Ltd	2
	Mount Meru Petroleum Zambia Ltd	4
	Oasis Oil Ltd	6
	Oryx Energies Zambia Limited	3
	Puma Energy Zambia	5
	Rubis Zambia Ltd	3
	Sgc	2
	Totalenergies Zambia	1
	Vivo Energy Zambia	2
Zamfuel	3	
Luapula	Eco Petroleum Ltd	1
	Karan Petroleum Z Ltd	1
	Lbm Investments Limited	1
	Luapula Oils Ltd	1
	Mount Meru Petroleum Zambia Ltd	2
	Oilbay (Z) Ltd	1
	Oryx Energies Zambia Limited	1
	Puma Energy Zambia	3
	Sgc	1
	Totalenergies Zambia	1
Vivo Energy Zambia	1	
Lusaka	Admire Energy Ltd	1
	Alfa Energy Limited	1
	Apex Energies Ltd	1
	Asharami Energy Resources Zambia	1
	Benzol Petroleum	1
	Collum Lunm Tian Petroleum	1
	Eco Petroleum Ltd	1
	Energybelt Zambia Limited	1
	Harvest Group	11
	Hass	2
	Karan Petroleum Z Ltd	7
	Lake Petroleum Ltd	14
	Mount Meru Petroleum Zambia Ltd	30

	Ngucha Energy Corp Ltd	1
	Oasis Oil Ltd	5
	Ordodoil Company Limited	1
	Oryx Energies Zambia Limited	12
	Petroda Zambia Ltd	17
	Puma Energy Zambia	24
	Quality Petroleum	2
	Ravasia	1
	Rubis Zambia Ltd	12
	Sgc	10
	Simba Oil Company	2
	Sino Petroleum Limited	1
	Spectra Oil Corporation	4
	Surya Energy	6
	Totalenergies Zambia	28
	Vivo Energy Zambia	33
	Zamfuel	7
	Zeekna Investment Company Ltd	1
Muchinga	Eco Petroleum Ltd	1
	Japawa	1
	Lake Petroleum Ltd	1
	Lbm Investments Limited	1
	Mount Meru Petroleum Zambia Ltd	3
	Puma Energy Zambia	1
	Totalenergies Zambia	2
	Zacks	1
Northern	Eco Petroleum Ltd	3
	Endrone Petroleum	2
	Lbm Investments Limited	3
	Mount Meru Petroleum Zambia Ltd	2
	Puma Energy Zambia	1
	Sgc	2
	Totalenergies Zambia	1
	Vivo Energy Zambia	2
	Zacks	1
Northwestern	Eco Petroleum Ltd	1
	Karan Petroleum Z Ltd	1
	Lake Petroleum Ltd	1
	Mount Meru Petroleum Zambia Ltd	7
	Nyenyenzi Investment Ltd	1
	Petroda Zambia Ltd	1
	Petrolink	1
	Puma Energy Zambia	3
	Sgc	1
	Totalenergies Zambia	2
	Tribute Investments	2
	Vivo Energy Zambia	2
	Zamfuel	1
Southern	Acm Petroleum	1
	Karan Petroleum Z Ltd	2
	Lake Petroleum Ltd	2
	Mount Meru Petroleum Zambia Ltd	10
	Oryx Energies Zambia Limited	3
	Petroda Zambia Ltd	1
	Puma Energy Zambia	5
	Refuel	1
	Rubis Zambia Ltd	6
	Sgc	1
	Totalenergies Zambia	3
	Vivo Energy Zambia	6
	Zamfuel	3
Western	Hass	1
	Mount Meru Petroleum Zambia Ltd	3
	Oryx Energies Zambia Limited	1
	Puma Energy Zambia	3
	Refuel	1
	Rubis Zambia Ltd	1
	Totalenergies Zambia	1
	Vivo Energy Zambia	1
Grand Total		568

I.6 TRENDS IN FUEL PRICES

I.6.1 Trends in Domestic retail prices

Table 16: Trends in domestic retail pump prices for Low Sulphur Gasoil in Kwacha per litre, January- December, 2022-2023

Period	January	February	March	April	May	June	July	August	September	October	November	December	Minimum	Mean	Maximum
2022	21.16	18.93	21.54	26.22	25.64	25.64	28.01	24.87	23.12	26.16	27.38	27.38	18.93	24.67	28.01
2023	26.44	29.25	29.25	26.28	24.64	21.87	21.87	23.36	26.88	29.96	29.96	29.96	21.87	26.64	29.96

Table 17: Trends in retail pump prices for Unleaded Petrol in Kwacha per litre, January- December, 2022-2023

Period	January	February	March	April	May	June	July	August	September	October	November	December	Minimum	Mean	Maximum
2022	21.16	19.84	21.96	26.50	24.15	24.95	26.75	23.19	21.54	22.74	24.31	25.89	19.84	23.58	26.75
2023	24.49	27.22	28.52	27.59	27.59	24.45	24.93	25.57	29.42	29.98	29.98	29.98	24.45	27.48	29.98

Table 18: Trends in retail pump prices for Kerosene in Kwacha per litre, January- December, 2022-2023

Period	January	February	March	April	May	June	July	August	September	October	November	December	Minimum	Mean	Maximum
2022	15.39	15.39	15.39	19.32	18.76	18.76	21.27	18.43	16.71	16.06	19.23	20.45	15.39	17.93	21.27
2023	19.98	22.29	22.29	22.29	20.47	19.74	18.53	20.44	20.44	20.44	20.44	20.44	18.53	20.65	22.29

2. ELECTRICITY SUBSECTOR

2.1 ELECTRICITY GENERATION

2.1.1 ZESCO's ELECTRICITY GENERATION FROM MAJOR HYDRO POWER STATIONS

Table 19: Electricity generation from ZESCO's large hydro power plants (GWh), 2013-2023

Year	Kafue Gorge	Kariba North Bank	Victoria falls
2013	7 463.00	4 507.00	810.00
2014	6 666.00	4 999.00	811.00
2015	6 417.00	4 316.00	785.00
2016	5 853.00	2 964.00	754.00
2017	7 363.00	2 689.00	684.00
2018	6 527.00	3 597.00	723.00
2019	6 165.00	3 021.00	725.00
2020	6 027.00	3 431.00	764.00
2021	7 185.00	4 288.00	731.40
2022	7 154.03	3 615.15	685.42
2023	7 497.97	2 955.17	819.35

2.1.2 ELECTRICITY GENERATION FROM SMALL AND MINI HYDRO POWER STATIONS

Table 20: Electricity generation from ZESCO's mini- hydro power plants (GWh), 2013-2023

Year	Chishimba Falls	Lunzua	Lusiwasi Lower	Lusiwasi Upper	Musonda Falls	Shiwan'gandu
2013	22.20	3.80	55.70	-	21.10	-
2014	23.70	3.50	58.70	-	20.50	0.70
2015	24.20	26.00	63.90	-	6.40	1.00
2016	17.80	60.90	41.30	-	-	1.60
2017	15.80	40.40	46.20	-	6.10	2.10
2018	15.70	69.30	66.00	-	54.00	2.70
2019	18.40	69.70	26.20	-	51.00	3.30
2020	12.80	84.00	34.50	-	57.00	3.20
2021	11.36	72.01	29.57	51.27	53.92	2.44
2022	10.85	41.15	20.77	42.08	45.43	0.54
2023	16.00	53.04	17.38	60.83	56.83	0.57

2.1.3 ELECTRICITY GENERATION FROM DIESEL POWER PLANTS OWNED BY ZESCO

Table 21: Electricity generation from ZESCO's Diesel power plants (GWh), 2013-2023

Year	Chama	Itezhi tezhi	Kabompo	Luangwa	Lundazi	Shang'ombo	Zambezi
2013	-	-	3.10	2.40	-	-	3.10
2014	-	-	3.00	2.60	-	0.70	2.50
2015	-	0.50	3.50	2.90	-	0.80	3.00
2016	-	0.20	3.80	3.30	-	0.90	2.90
2017	-	-	0.20	3.30	-	1.00	1.10
2018	-	-	-	3.40	-	1.10	-
2019	-	-	-	4.00	-	1.10	-
2020	0.10	-	-	1.70	0.90	1.00	-
2021	0.10	-	-	-	0.30	1.10	-
2022	0.28	-	-	-	1.12	1.07	-
2023	0.08	-	-	-	0.75	1.22	-

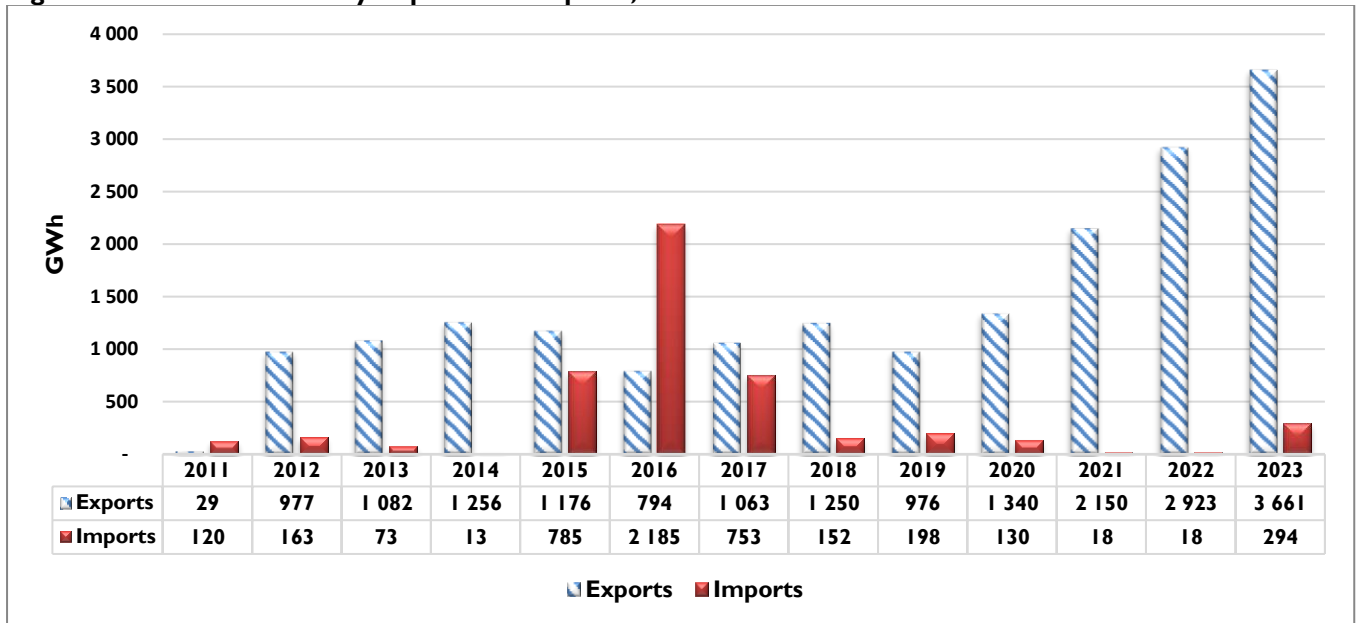
2.1.4 ELECTRICITY GENERATION FROM INDEPENDENT POWER PRODUCERS

Table 22: Electricity generation from Independent power producers (GWh), 2013-2023

Year	Bangweulu Power Limited	Itezhi tezhi Power Corporation	Kafue Gorge Lower	Kariba North Bank Extension	Lunsemfwa Hydro Power Limited	Maamba Collieries Limited	Ndola Energy Corporation Limited	Ngonye Power Limited
2013	-	-	-	-	398.40	-	0.03	-
2014	-	-	-	1 162.00	297.00	-	393.40	-
2015	-	-	-	1 179.00	216.50	-	380.00	-
2016	-	536.70	-	672.00	121.90	326.40	323.60	-
2017	-	735.40	-	599.00	292.60	1 279.40	698.80	-
2018	-	709.21	-	1 611.00	318.56	2 041.47	451.02	-
2019	77.06	715.80	-	1 363.00	174.01	1 886.93	698.74	40.50
2020	92.15	772.18	-	1 494.00	172.41	1 895.61	596.23	58.00
2021	89.24	829.11	893.33	731.00	354.09	1 296.62	117.17	58.42
2022	84.54	757.80	2 966.65	1 501.20	247.78	2 164.70	-	58.57
2023	86.97	828.68	4 038.54	527.54	218.71	2 126.33	6.65	60.32

2.2 ELECTRICITY IMPORTS AND EXPORTS

Figure 2: ZESCO's electricity imports and exports, 2022-2023



2.3 ELECTRICITY CONSUMPTION

Table 23: Comparison of national electricity consumption by economic sector, 2014-2023

Electricity Consumption (GWh)	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Transport	38.9	36.9	31.8	28.6	31.8	32.5	32.0	28.4	33.4	31.3
Mining (Quarries)	7650.9	7355.1	6 551.3	6 062.8	6 551.3	6 829.5	6 320.2	5 977.6	6 313.8	5 933.5
Finance and property	907.4	908.3	835.4	628.2	835.4	713.9	640.0	498.6	516.9	487.4
Trade	91.0	87.8	82.8	81.4	82.8	113.8	110.2	97.4	109.8	107.4
Manufacturing	354.5	384.6	375.4	381.8	375.4	593.1	503.4	469.8	530.8	479.2
Domestic (Including households)	4387.7	4548.5	4 477.3	3 814.6	4 477.3	4 336.9	4 146.9	3 382.9	3 482.0	3 250.8
Agriculture	312.2	286.5	293.7	261.4	293.7	297.0	261.5	227.9	260.4	241.4
Energy and water	119.5	106.8	113.7	92.9	113.7	68.5	80.9	87.7	89.1	73.2
Others	44.2	56.2	60.5	69.2	60.5	84.1	87.3	80.1	98.5	99.1
Construction	6.9	7.3	9.4	7.8	9.4	10.8	9.6	7.1	15.2	17.2
PPA	729.2	0.0	0.0	52.4	0.0	0.0	0.0	0.0	0.0	0.0
Total Consumption	13 913.0	13 777.9	12 831.3	11 428.8	12 831.4	13 080.1	12 192.0	10 829.1	11 449.9	10 720.5