

Statistical Bulletin
January to June
2020

VISION

"A proactive, firm and fair energy regulator"

MISSION STATEMENT

"To regulate the energy sector in order to ensure the efficient provision of reliable and quality energy services and products"

EDITORIAL TEAM

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FOREWORD



I am pleased to present to you the 2020 mid-year Energy Regulation Board (ERB)'s statistical bulletin publication. This year's edition marks the eighth publication since its inauguration in the year 2014.

The bulletin is in line with the ERB's mandate to regulate the energy sector in an efficient manner by providing updated energy statistics. It highlights the performance of the energy sector in the first half year of 2020 with statistics on licensing, pricing, electricity generation, petroleum consumption and other energy related statistics which are accompanied by graphs.

The information published in the statistical bulletin is of great significance to various stakeholders including the Government, investors, researchers, academicians, licensees, and regulators; and is useful for various purposes including policy formulation, planning, monitoring and implementation of sustainable national development and decision-making. The report can be accessed on the ERB website (www.erb.org.zm) in pdf format for free.

I would like to thank all stakeholders that provided valuable contributions and data used in this publication. I am confident that the expanded coverage will provide you with an in-depth understanding of Zambia's energy landscape. I would therefore like to invite all our readers and users of statistical information to send us comments and suggestions on the relevance of the information presented herein. Your feedback and suggestions will aid in the improvement of publication to ensure that it is responsive to your information needs.

Langiwe H. Lungu (Ms)
Executive Director

September 2020

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LIST OF ABBREVIATIONS

ERB **Energy Regulation Board**

HFO Heavy Fuel Oil

INDENI Petroleum Refinery Company Limited INDENI

Independent Power Producer IPP

ITT Itezhi Tezhi

KFG Kafue Gorge

KNBC Kariba North Bank Company Limited

KNBE Kariba North Bank Extension Power Corporation Limited

NFT Ndola Fuel Terminal

OMC Oil Marketing Company

SAPP Southern African Power Pool

SADC Southern African Development Community

SNEL Societe Nationale d'Electricite Technical Assistance Project

TAZAMA TAZAMA Pipelines Limited

ZESA Zimbabwe Electricity Supply Authority

ZESCO ZESCO Limited

UNITS OF MEASUREMENT

Bbl Barrels of oil (159 litres)

Giga-Watt per hour (1,000 MWh) GWh

Zambian Kwacha (ZMW) Κ

Kilometre Km kV Kilo Volt

Kilo Volt Amperes (1,000 Volt Amps) kVA

Kilo Watt kW kWh Kilo Watt hour

Metric Tonne (in this document means a mass equivalent to 1,000 kg) ΜT

Mega Watt hour (1,000 kWh) MWh

m³ **Cubic Meters**

United States of America dollar US\$

ACKNOWLEDGEMENT

We acknowledge the following organisations that provided data and information used in writing this bulletin:

- Copperbelt Energy Corporation Plc
- INDENI Petroleum Refinery Company Limited
- KNBE Power Corporation Ltd
- Lunsemfwa Hydropower Company Limited
- Maamba Collieries Limited
- Ndola Energy Company
- Northwestern Energy Corporation
- Oil Marketing Companies
- Regional Electricity Regulators Authority (RERA)
- TAZAMA Pipelines
- Zengamina Power Limited
- ZESCO Limited

EXECUTIVE SUMMARY

Executive Summary

Highlights of key developments in the Energy Sector during the period of January to June 2020

The national installed capacity of electricity stood at 2,981.23 MW as at 30th June 2020. With regards to the installed capacity by technology, hydro generation accounted for 80.5 percent followed by coal at 10.1 percent. Further Heavy Fuel Oil generation was at 3.7 percent, while Diesel and Solar were at 2.8 percent & 3.0 percent, respectively.

ZESCO generation from large hydro power plants marginally decreased from 5,828,523 MWh in the first half of 2019 to 5,481,773 MWh in the first half of 2020. Meanwhile, the mini and small hydro power plants generation sent out increased to 128,476 MWh in the first half 2020 from 108,293 MWh in the first half in 2019. The generation from Independent Power Plants declined to 1,654,650 MWh in the first half of 2020 from 1,681,571 MWh in the first half 2019. Further, power generation from ZESCO diesel power plants was recorded at 2,466 MWh in the first half of 2020 compared to 2,485 MWh under the same period in 2019.

The Government imports of petroleum feedstock decreased to 196,725.11 MT during the period under review compared to 413,012.81 MT in 2019. Gas oil remained the most consumed petroleum product in the period under review at 2,736,568.75 litres per day followed by petrol at 1,124.972.18 litres per day. The consumption of other products namely, Heavy Fuel oil; Jet A-1; Kerosene and LPG was at 213,550.82kgs per day; 58,196.00 litres per day; 25,747.69 litres per day; and 22,244.48 kgs per day, respectively. Total Zambia Limited and Puma Energy Plc continued to dominate the market for white petroleum products in the country with a combined market share of 48.2 percent.

1.0 INTRODUCTION

About the ERB Bi-annual Statistical Bulletin 1.1

1.1.1 Source of Data

The data published in the ERB's biannual statistical bulletin is based information primarily on from regulated entities as submitted to the regulator.

1.1.2 Reporting Period

bi-annual statistical bulletin The highlights the key developments that have occurred in the energy sector during the period January to June in relation to the preceding year.

1.1.3 Regulated Utilities

The concept of regulating the energy sector in Zambia dates back as far as 1994 when the government promulgated the National Energy Policy to guide the development and management of the energy the sector. The liberalization policy which allowed many players to come into the sector led to the formation of the ERB, which was established in 1997, following the enactment of the Energy Regulation Act Cap 436 of the laws of Zambia in 1995.

The ERB regulates undertakings in the sector including energy electricity, fossil fuels (petroleum) and other forms of energy such as solar and coal through specialized licences issued.

In order to enhance development in the country, Government launched the 2019 National Energy Policy which has facilitated new legislation, the Energy Regulation Act No. 12 of 2019 and Electricity Act No. 11 of 2019 which empowers the ERB to undertake its mandate to greater extents.

1.1.4 **Selected Global economic** indicators influencing the performance of the Energy Sector in Zambia

Zambia's energy resource base comprises of electricity, petroleum and renewable energy. While petroleum is wholly imported, Zambia is endowed with manv forms of eneray resource(s) such as coal, biomass and renewable energy. It has untapped reserves of these other forms of energy. The energy sector in many parts of the world is characterized by monopolistic market structures which are an impediment to the economic efficiency that is associated with a competitive market. The fundamental directly influencing factors the performance of the energy sector in Zambia include the exchange rate, interest rates, inflation and crude oil prices.

2.0 LICENSING STATISTICS

2.1 ELECTRICITY SUB-SECTOR LICENSING

Table 1: Number of Electricity sub-sector licenses processed for the period of January 2020 to June 2020

Sub- sector	TYPE OF LICENCE	Provisional Licenses	Standard Licenses
Electricity	Manufacture, Wholesale Importation and Installation of Solar Energy Systems	15	16
Total		15	16

2.2 PETROLEUM SUB-SECTOR LICENSING

Table 2: Number of Petroleum sub-sector licenses processed for the period of January 2020 to June 2020

Sub- sector	TYPE OF LICENCE	Provisional Licenses	Standard Licenses
	Blending and Packaging	0	1
	Combined License to Distribute, Import and Export Petroleum Products	11	11
Petroleum	Combined License to Distribute, Import and Export Petroleum Products (LPG)	1	0
	Export of Liquefied Petroleum Gas (Butane)	24	28
Petroleum Products (LPG) Export of Liquefied Petroleum Gas (Buta	Importation of Petroleum Products (Lubricants)	10	15
	Road Transportation of Petroleum Products	16	12
Total		62	67

3.0 ELECTRICITY SUB-SECTOR STATISTICS 3.1.1 INSTALLED GENERATION CAPACITY

Table 3: Installed Generation Capacity as at end of June 2020

		Machine	Installed	
Undertaking	Station	Туре	Capacity (MW)	
	Kafue Gorge	Hydro	990	
	Kariba North	Hydro	720	
	Kariba North extension	Hydro	360	
	Victoria Falls	Hydro	108	
ZESCO Limited	Lunzua River	Hydro	14.8	
	Lusiwasi	Hydro	12	
	Chishimba Falls	Hydro	6	
	Musonda Falls	Hydro	10	
	Shiwang'andu	Hydro	1	
Itezhi-tezhi Power Corporation	Itezhi-tezhi	Hydro	120	
Zengamina Limited	Ikelengi	Hydro	0.7	
Lusemfwa Hydro Power Company	Mulungushi	Hydro	32	
Lusenniwa nyuro Power Company	Lunsemfwa	Hydro	24	
	Total Hydro		2,398.50	
Maamba Collieries Limited	Maamba Power Plant	Coal	300	
	Total Coal		300	
	Bancroft	Diesel	20	
Copperbelt Energy Corporation Generation Plants	Luano	Diesel	40	
Copperbert Energy Corporation Generation Flants	Luanshya	Diesel	10	
	Mufulira	Diesel	10	
ZESCO Generation Plants	Shang'ombo	Diesel	1	
	Luangwa	Diesel	2.6	
	Total Diesel		83.6	
Ndola Energy Generation Plants	Ndola	Heavy Fuel Oil	110	
	Total HFO		110	
Bangweulu	Lusaka	Solar	54	
Ngonye	Lusaka	Solar	34	
Rural Electrification Authority Generation Plants	Samfya	Solar	0.06	
Copperbelt Energy Corporation	Kitwe	Solar	1	
Muhanya Solar Limited	Sinda Village	Solar	0.03	
Mugurameno	Chirundu	Solar	0.01	
Standard Microgrid	Kafue	Solar	0.02	
Solera Power	Luangwa	Solar	0.01	
	Total Solar		89.13	
Grand Total			2,981.23	

3.1.2 National Installed Electricity Generation Capacity

Solar, 3.0% Coal, 10.1% Diesel, 2.8% HFO, 3.7% Hydro, 80.5%

Figure 1: National Installed capacity by technology as at 30th June 2020

3.2 **GENERATION SENT OUT**

3.2.1 ZESCO's Generation from Large Hydro Power Plants (MWh)

Table 4: Electricity Generation from ZESCO's large hydro power plants from January to June 2018 vs 2020¹

STATION/ MONTH	KI	÷G	KN	ВС	KN	ВЕ	VICTOR	IA FALLS	TOTAL		
	2019	2020	2019	2020	2019	2020	2019	2020	2019	2020	
January	402,084	500,608	401,819	112,095	172,056	168,792	64,338	63,380	1,040,297	844,875	
February	440,319	489,138	326,246	93,231	114,252	169,116	67,916	68,413	948,733	819,898	
March	583,762	535,434	245,117	220,945	99,365	112,112	76,565	68,645	1,004,809	937,136	
April	551,036	452,758	192,442	308,472	142,236	111,636	73,494	68,306	959,208	941,172	
May	504,397	476,107	268,286	344,891	113,460	93,192	72,097	73,224	958,240	987,414	
June	538,482	493,675	247,702	326,107	57,624	66,684	73,428	64,812	917,236	951,278	
Total	3,020,080	2,947,720	1,681,612	1,405,741	698,993	721,532	427,838	406,780	5,828,523	5,481,773	

¹ ZESCO's large hydro power plants refer to Kafue Gorge, Kariba North Bank, Kariba North Bank Extension Power plants

ZESCO's generation from small and mini hydro power plants (MWh) 3.2.2

Table 5: Generation sent out from ZESCO's small and mini hydro power plants from January to June 2019 vs 2020²

STATION/	LUSI	WASI	CHISHIMBA		MUSONDA		LUNZUA		SHIWAN'GANDU		TOTAL	
MONTH	2019	2020	2019	2020	2019	2020	2019	2020	2019	2020	2019	2020
January	2,298	3,294	1,711	1,223	6,482	5,993	5,555	7,292	249	254	16,295	18,056
February	1,433	2089	1,238	1,251	5,863	5,443	8,545	9,718	249	283	17,328	18,784
March	1,638	8862	1,231	986	6,527	5,332	10,040	10,663	220	257	19,656	26,100
April	1,994	4216	2,350	1,298	6,527	6,268	9,437	10,139	301	293	20,609	22,214
May	1,738	4566	2,234	1,566	6,394	7,051	8,509	10,534	323	288	19,198	24,005
June	2,293	3113	2,181	1,398	3,989	6,387	6,415	8,127	329	292	15,207	19,317
Total	11,394	26,140	10,945	7,722	35,782	36,474	48,501	56,473	1,671	1,667	108,293	128,476

ZESCO's generation from diesel power plants (MWh) 3.2.3

Table 6: Generation sent out from ZESCO's diesel power plants from January 2020 to June 2020

MONTH /STATION	SHANG'OMBO	LUANGWA	CHAVUMA	СНАМА	LUNDAZI	TOTAL
Jan-20	83	349	0	9	59	500
Feb-20	78	323	0	1	40	442
Mar-20	83	363	0	0	51	497
Apr-20	80	356	0	0	16	452
May-20	83	330	0	5	45	463
Jun-20	81	0	0	8	23	112
Total	488	1,721	0	23	234	2,466

² ZESCO's small and mini hydro power plants refer to Lusiwasi, Chishimba falls, Musonda falls, Lunzua and Shiwang'andu power plants.

Generation from Independent Power Producers (IPPs)³ 3.2.4

Table 7: Trends in Electricity generation (MWh) sent out by each IPP from January to June 2019 & 2020

STATION Bangweulu Power Company		Itezhi tezhi Power Corporation Limited		Lusemfwa Hydro Power Corporation		Maamba Collieries Limited		Ndola Energy Corporation Limited		Ngonye Power Company Limited		TOTAL		
Month/Year	2019	2020	2019	2020	2019	2020	2019	2020	2019	2020	2019	2020	2019	2020
January	-	7,313.00	36,827.00	22,445.00	23,254.00	118.00	148,454.00	166,892.00	16,679.00	71,119.00	-	4,116.00	225,214.00	272,003.00
February	-	6,527.00	48,454.00	20,537.00	29,164.00	982.00	123,027.00	185,628.00	18,590.00	47,238.00	-	3,828.00	219,235.00	264,740.00
March	5,084.00	8,055.00	68,554.00	45,908.00	37,048.00	2,557.00	139,833.00	171,947.00	65,467.00	41,256.00	786.00	5,062.00	316,772.00	274,785.00
April	5,853.00	8,190.00	54,318.00	80,130.00	32,729.00	-	119,216.00	149,653.00	48,537.00	4,456.00	2,908.00	5,274.00	263,561.00	247,703.00
May	8,825.00	8,942.00	65,110.00	87,081.00	29,800.00	2,173.00	178,397.00	197,996.00	46,309.00	-	4,073.00	5,238.00	332,514.00	301,430.00
June	7,631.00	6,384.00	82,471.00	84,825.00	21,264.00	7,679.00	173,106.00	191,554.00	35,174.00	-	4,629.00	3,547.00	324,275.00	293,989.00
Grand Total	27,393	45,411	355,734	340,926	173,259	13,509	882,033	1,063,670	230,756	164,069	12,396	27,065	1,681,571	1,654,650

³ IPPs refers to Lunsemfwa, Ndola Energy Co., Kariba North Bank Extension, ITPC, Bangweulu Solar, Ngonye Solar and Maamba Coal plants

3.3 PLANNED ELECTRICITY GENERATION PROJECTS

Table 8: Expected electricity generation projects

Project Name	Туре	Owner	Capacity (MW)	Expected Completion Date
Kafue Gorge Lower Hydro Project	Hydro	ZESCO	750	2020
Lusiwasi Lower Hydro Scheme	Hydro	ZESCO	86	ТВА
Lusiwasi Upper Hydro Scheme	Hydro	ZESCO	15	2020
Luapula River Hydro Scheme	Hydro	ZESCO	600	TBA
Batoka Gorge Hydropower Project	Hydro	ZESCO	1200	TBA

3.4 ZESCO ELECTRICITY EXPORTS AND IMPORTS

Table 9: ZESCO's Imports and Exports for January to June 2017, 2018, 2019 & 2020

	ZESCO ELECTRICITY EXPORTS AND IMPORTS												
	20	17	20:	18	20	19	2020						
Period	Exports (GWh)	Imports (GWh)	Exports (GWh) Imports (GWh)		Exports (GWh)	Imports (GWh)	Exports (GWh)	Imports (GWh)					
January	64.4	114.64	92.55	61.67	81.84	1.28	84.05	62.88					
February	67.96	65.22	63.67	55.97	86.26	1.19	80.92	46.66					
March	91.11	56.29	77.61	22.13	87.17	1.24	114.34	5.21					
April	111.05	41.44	130.58	0.86	57.16	1.38	110.17	2.28					
Мау	122.03	58.1	97.22	1.01	49.16	1.56	119.70	1.38					
June	97.56	58.82	93.39	1.35	81.99	10.6	110.22	1.43					
Total	554.11	394.51	555.02	142.99	443.58	17.25	619.4	119.84					

3.4.1 Electricity Exports by Export Market (GWh)

Table 10: Electricity exports by export market for January to June 2020

Month/ Destination	Nampower	SNEL	ESCOM	via Distribution (LV Exports)	LV Exports via Kitwe, Luano	LV Zumbo	via SAPP MARKET	Total
Jan-19	28.56	44.36	1.43	7.73	1.92	0.06	-	84.05
Feb-19	32.92	36.65	1.43	7.91	1.97	0.05	-	80.92
Mar-19	56.33	44.65	1.34	8.28	2.15	0.06	1.54	114.34
Apr-19	54.00	44.78	1.22	7.30	2.18	0.05	0.63	110.17
May-19	55.11	54.06	1.20	6.16	2.42	0.05	0.71	119.70
Jun-19	52.54	47.93	1.20	6.25	2.25	0.05	-	110.22
Total	279.45	272.42	7.81	43.64	12.90	0.31	2.88	619.40

3.4.2 Electricity Imports by Import Market (GWh)

Table 11: Electricity imports by import market for January to June 2020

Source/ Month	January	February	March	April	May	June
LV Imports	1,327.00	1,185.00	1,142.00	1,255.39	1,383.00	1,431.00
via SAPP Market	26,543.00		4,067.00	1,028.00	ı	1
ESKOM	35,009.00	45,475.00	-	-	1	-
Total	62,879.00	46,660.00	5,209.00	2,283.39	1,383.00	1,431.00

3.5 ELECTRICITY CONSUMPTION BY ECONOMIC SECTOR (GWh)

Table 12: Monthly consumption of electricity by sector January 2020 to June 2020

				_			
SECTOR	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	TOTAL
Othore	F 726 00	E 002.00	C E33 00	F 310 00	F 74F 00	E 202.00	24 500 00
Others	5,726.00	5,882.00	6,533.00	5,310.00	5,745.00	5,392.00	34,588.00
Agriculture	13,774.00	11,222.00	16,268.00	18,258.00	28,603.00	29,821.00	117,946.00
Mining (Quarry)	13,093.00	16,062.00	19,061.00	16,745.00	19,940.00	21,187.00	106,088.00
Manufacturing	33,984.00	32,504.00	37,476.00	24,922.00	28,181.00	30,115.00	187,182.00
Energy and Water	7,039.00	6,767.00	6,664.00	7,636.00	7,636.00	7,509.00	43,251.00
Construction	485.00	450.00	510.00	438.00	521.00	764.00	3,168.00
Trade	8,163.00	7,948.00	7,439.00	5,809.00	5,954.00	5,933.00	41,246.00
Transport	2,332.00	2,238.00	2,396.00	2,238.00	2,319.00	2,320.00	13,843.00
Finance and Property	57,360.00	55,159.00	58,873.00	53,261.00	57,818.00	62,906.00	345,377.00
Services (Households)	283,021.00	292,570.00	294,143.00	301,315.00	313,854.00	314,960.00	1,799,863.00
PPA	1,012.00	1,012.00	1,155.00	10,670.00	8,248.00	8,248.00	30,345.00
Mines and CEC	4,812,745.00	3,252,474.00	502,412.00	266,241.00	557,001.00	414,673.00	9,805,546.00
Total	5,238,734.00	3,684,288.00	952,930.00	712,843.00		903,828.00	12,528,443.00

3.6 **CUSTOMER BASE BY UTILITY COMPANY**

3.6.1 **ZESCO's customer base by tariff category**

Table 13: ZESCO's customer base by tariff category as at 30th June 2020

CATEGORY	June, 2019	June, 2020		
Residential	894,829.00	929,281.00		
Maximum Demand	8,398.00	8,562.00		
Commercial	77,365.00	81,722.00		
Agriculture	814.00	825.00		
Social	10,941.00	11,428.00		
Total	992,347.00	1,031,818.00		

3.6.2 Zengamina's customer base by tariff category

Table 14: Zengamina customer base by tariff category as at 30th June 2020

CATEGORY	TOTAL	PERCENTAGE (%)
Community Service	6	0.81
Large Enterprise & Institution	23	3.11
Priority Commercial User	3	0.41
Residential	671	90.68
Small Enterprise	37	5.00
Total	740	100

Northwestern Energy Corporation (NWEC) customer base by tariff category 3.6.3

Table 15: Northwestern Energy Corporation customer base by tariff category as at 30th June 2020

CATEGORY	TOTAL	PERCENTAGE (%)
Residential	3,352	97.2
Maximum Demand	0	0.0
Commercial	92	2.7
Agriculture	0	0.0
Social	5	0.1
Total	3,449	100.0

3.7 REGIONAL AND DOMESTIC ELECTRICITY TARIFFS

3.7.1 **ZESCO Electricity tariffs**

Table 16: ERB approved electricity tariffs as at 30th June 2020

Customer category	Tariff components	Approved Tariffs as at 30th June 2019	Approved Tariffs as at 30th June 2020
1. METERED RESIDENTIAL (Prepaid) (capacity 15 kVA)			
R1 – Consumption from 1 - 100 kWh in a month	Energy charge/kWh	0.15	0.47
R2 – Consumption between 101kWh - 300 kWh in a month	Energy charge/kWh	0.89	0.85
R3 – Consumption above 300kWh	Energy charge/kWh	Nil	1.94
•	Fixed Monthly Charge	18.23	Abolished
2. Commercial Tariffs (capacity 15kVA)	, ,	<u> </u>	
C1 – Consumption up to 200kWh	Energy charge/kWh	0.54	1.07
C2 – Consumption above 200kWh	Energy charge/kWh	Nil	1.85
	Fixed Monthly Charge	96.41	Abolished
3. Social Services			
Schools, Hospital, Orphanages, churches, water pumping & street	Energy charge K/kWh	0.49	1.19
lighting	Fixed Monthly Charge	83.84	203.73
4. Maximum Demand Tariffs			
	MD Charge (K/kVA/Month)	24.45	42.79
	Energy Charge (K/kWh)	0.35	0.61
MD1- Capacity between 16 - 300 kVA	Fixed Monthly Charge (K/Month)	239.44	419.02
• •	Off Peak MD Charge (K/KVA/Month)	12.22	21.39
	Off Peak Energy Charge (K/kWh)	0.26	0.46
	Peak MD Charge (K/KVA/Month)	30.56	53.48
	Peak Energy Charge (K/kWh)	0.44	0.77
	MD Charge (K/kVA/Month)	45.73	80.03
	Energy Charge (K/kWh)	0.3	0.53
	Fixed Monthly Charge (K/Month)	478.84	837.97
MD2- Capacity 301 to 2,000 kVA	Off Peak MD Charge (K/KVA/Month)	22.87	40.01
	Off Peak Energy Charge (K/kWh)	0.23	0.39
	Peak MD Charge (K/KVA/Month)	57.17	100.03
	Peak Energy Charge (K/kWh)	0.37	0.66
	MD Charge (K/KVA/Month)	73.06	126.39
	Energy Charge (K/kWh)	0.25	0.43
	Fixed Monthly Charge (K/Month)	1,014.55	1,755.17
MD3- Capacity 2,001 to 7,500kVA	Off Peak MD Charge (K/KVA/Month)	36.52	63.2
	Off Peak Energy Charge (K/kWh)	0.18	0.32
	Peak MD Charge (K/KVA/Month)	91.33	157.99
	Peak Energy Charge (K/kWh)	0.3	0.54
	MD Charge (K/KVA/Month)	73.47	127.39
	Energy Charge (K/kWh)	0.21	0.36
	Fixed Monthly Charge (K/Month)	2,029.13	3,510.39
MD4-Capacity 7500kVA to 25,000 kVA	Off Peak MD Charge (K/KVA/Month)	36.73	63.55
	Off Peak Energy Charge (K/kWh)	0.16	0.27
	Peak MD Charge (K/KVA/Month)	91.84	158.88
	Peak Energy Charge (K/kWh)	0.25	0.45
Bulk Distributors tariff	Maximum Demand customers - MD Charge/KVA/month	Nil	58.6
(Purchasers of Power for distribution)	Retail customers – Energy charge / kWh	Nil	0.49
NOTE; The above tariffs are:- (a) Exclusive of 3% Government excise duty			
(b) Exclusive of 16% Value Added Tax (VAT)			

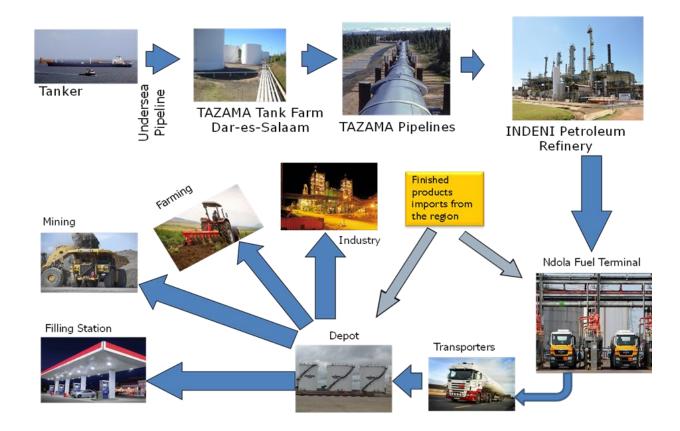
3.7.2 Regional Electricity tariffs

30.00 27.12 25.00 20.00 16.81 16.00 15.36 13.72 15.00 12.81 10.35 10.54 9.35 10.00 7.40 7.39 7.15 5.00 2.48 South Africa Lesotho Mozambique Malani Mauritius Wanibia Tantania **₩** Electricity tariffs in US\$c

Figure 2: SADC average electricity tariffs (USc/kWh) as at 29th February 2020

4.0 PETROLEUM SUB-SECTOR STATISTICS

Figure 3: Players in the fuel supply chain



4.1 RETAIL SERVICE STATIONS PROVINCIAL DISTRIBUTION

Table 17: Retail service stations by provincial distribution as at 30th June 2020

омс	Central	Copperbelt	Eastern	Luapula	Lusaka	Muchinga	Northern	Northwestern	Southern	Western	Grand Total
ADMIRE ENERGY					1						1
ATLAS		1									1
CHEEKA INVESTMENT								1			1
COLLUM LUNM TIAN LTD					1						1
ECO PETROLEUM LIMITED		4		1		1	1				7
ENDRONE PETROLEUM		_		_	1		2				3
ENIGMA	1										1
HASHI ENERGY ZAMBIA LTD	3				1	1					5
HASS PETROLEUM ZAMBIA LTD		2			2					1	5
нітсо		1									1
JAPAWA						1					1
KASGON				1							1
KOBIL	2	7	3		11				5	1	29
LAKE PETROLEUM	3	9			10	1		1	1		25
LBM INVESTMENTS LIMITED		1		1		1	3	-	_		6
LUAPULA OILS		_		1		_					1
MON FUEL AND OIL INVESTMENT LIMITED								1			1
MOUNT MERU PETROLEUM ZAMBIA LTD	8	8	2	2	18	1	1	3	5	1	49
NGUCHA ENERGY CORPORATION				1	5			1		1	8
OASIS OIL LTD			5		3						8
OILBAY ZAMBIA LIMITED	1										1
ORYX OIL ZAMBIA LIMITED		6	2	1	4				2		15
PETRODA		6			16			1			23
PETROLINK	1										1
PRIME OIL LTD		1									1
PUMA	3	14	5	1	21	1	1	2	6	3	57
RAVASIA					1						1
REFUEL PETROLEUM CORPORATION					1					1	2
SAMFUEL		3									3
SGC INVESTMENTS		12	2		9	1	1	1	2		28
SIMBA ENERGY		1									1
SIMBA OIL					1						1
SPECTRA OIL CORPORATION					4						4
STAROIL		1									1
SUBAN PETROLEUM		1									1
TOTAL ZAMBIA	7	17	1	1	25	2	1	2	3	1	60
TRIBUTE INVESTMENTS LTD								2			2
UFUEL	1										1
VIVO ENERGY (ENGEN PETROELUM)	1	7	1		18		2		3		32
VUMA ENERGY										1	1
WADA CHOVU		1									1
WWW INVESTMENTS LIMITED	1										1
ZACKS	1					1					2
ZAMFUEL PETROLEUM LTD			1								1
ZHONGKUANG ZAMBIA SERVICES CO.LTD		1									1
Grand Total	33	104	22	10	153	11	12	15	27	10	397

PETROLEUM UPLIFTS BY OIL MARKETING COMPANIES 4.2

Diesel ⁴uplifts by Oil Marketing Companies 4.2.1

Table 18: Actual Quantities of Diesel Uplifted at Government Fuel depots for January to June 2019 & 2020

Product/Month	2019	2019	2020	2020
Diesel	Quantity (m³)	Average No. Trucks/Day	Quantity (m³)	Average No. Trucks/Day
January	74,711.57	69	68,899.49	64
February	69,464.94	71	51,963.26	51
March	72,304.51	67	44,941.81	41
April	80,891.20	77	29,763.47	28
May	89,349.07	82	29,269.64	27
June	85,932.18	82	23,822.92	23
Grand Total	472,653.47	75	248,660.60	39

Unleaded Petrol uplifts by Oil Marketing Companies 4.2.2

Table 19: Actual Quantities of Unleaded Petrol Uplifted at Government Fuel depots for January to June 2019 & 2020

Product/Month	2019	2019	2020	2020
Unleaded Petrol	Quantity (m³)	Average No. Trucks/Day	Quantity (m³)	Average No. Trucks/Day
January	34,848.77	32	29,422.39	27
February	32,547.84	32	17,722.98	17
March	36,122.64	33	14,046.35	13
April	35,680.08	34	10,389.97	10
May	40,410.71	37	11,683.04	11
June	36,422.11	35	13,666.76	13
Grand Total	216,032.15	34	96,931.48	15

⁴ This is a combination of Gasoil and Low Sulphur Gasoil

4.3 **GOVERNMENT IMPORTATION OF PETROLEUM FEEDSTOCK**

Table 20: Volumes of Petroleum Feedstock Imports for January to June 2017, 2018, 2019 & 2020

Year	Cargo Name	Month	Tonnage (MT)
2020	MT. Almi star	Jan-20	98,822.30
	MT. Desh Samman V	Apr-20	97,902.19
7	Total		196,725.11
	MT. Desh Samman III	Jan-19	102,916.04
6	MT. Desh Samman IV	Mar-19	102,799.17
2019	MT. Fos Picasso	May-19	105,078.95
7	MT. Fos Picasso 2nd	Jun-19	102,124.99
	Total		412,919.15
	MT. Desh Mahima IV	Jan-18	103,700.68
2018	MT. Desh Mahima V	Mar-18	104,125.92
20	MT. Desh Samman	May-18	104,099.81
	Total		311,926.41
7	MT. Desh Mahima II	Apr-17	105,506
2017	MT. Desh Garima	May-17	104,802
7	Total		210,308.00

4.4 **OIL MARKETING COMPANIES IMPORTATION OF FINISHED PETROLEUM PRODUCTS**

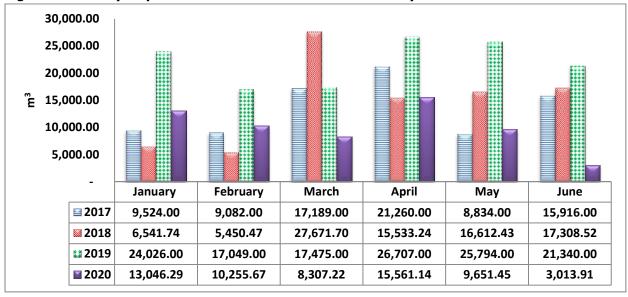
Table 21: Monthly Imports of Petrol and Gasoil by OMCs for January to June 2020

Product	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
Petrol (Litres)	16,659,739.00	15,355,239.70	19,308,898.00	24,684,828.20	20,849,122.60	29,194,897.40
Gasoil (Litres)	26,019,670.00	23,088,102.50	51,695,563.90	41,204,705.20	65,167,315.70	66,063,210.90
Total (Litres)	42,679,409.00	8,443,342.20	71,004,461.90	65,889,533.40	86,016,438.30	95,258,108.30

4.5 GOVERNMENT IMPORTATION OF FINISHED PETROLEUM PRODUCTS

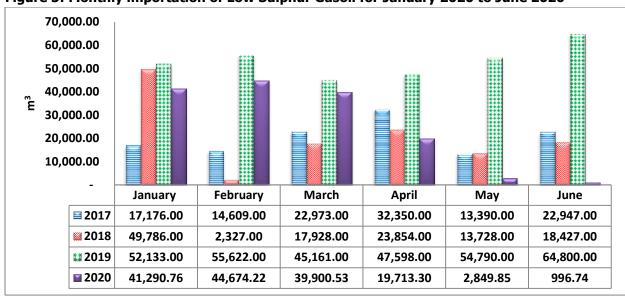
4.5.1 Government Importation of Unleaded Petrol, January, 2020 – June, 2020

Figure 4: Monthly Importation of Unleaded Petrol for January 2020 to June 2020



4.5.2 Government Importation of Low Sulphur Gasoil, January, 2020 – June, 2020

Figure 5: Monthly importation of Low Sulphur Gasoil for January 2020 to June 2020



4.6 INDENI REFINERY PRODUCTION OF PETROLEUM PRODUCTS

Table 22: Production of petroleum products by INDENI for January to June 2019 & 2020⁵

	Gasoi	I (MT)	НГО	(MT)	Jet A1	(MT)	kerosei	ne (MT)	LPG/Cor Butan	mmercial e (MT)	Unleade (M	
Month	2019	2020	2019	2020	2019	2020	2019	2020	2019	2020	2019	2020
January	32,135.47	30,378.00	15,644.60	16,106.00	8.00	-	1,283.68	46.00	1,261.82	1,278.00	15,152.25	11,897.00
February	23,108.63	28,731.00	13,630.38	10,269.00	235.58	-	1,778.97	1,525.00	859.68	1,038.00	11,179.07	10,863.00
March	26,176.73	18,010.00	13,995.42	5,383.00	703.00	-	966.14	1,133.00	722.40	508.00	11,464.70	7,397.00
April	26,266.34	- 165.00	11,039.75	- 612.00	1,252.31	-	1,253.94	- 163.00	1,307.32	- 41.00	14,416.19	2,205.00
May	18,523.94	- 501.00	6,724.32	- 884.00	9.00	-	1,180.08	- 26.00	981.76	1.00	9,260.81	1,239.00
June	28,116.57	- 133.00	13,830.59	- 136.00	7.00	-	924.99	-	1,309.62	- 5.00	13,255.77	84.00

4.7 NATIONAL MONTHLY AVERAGE CONSUMPTION OF PETROLEUM PRODUCTS Table 23: National Monthly Consumption of Gasoil⁶ for January-June 2018, 2019 & 2020

Table 23. National Floridity Consumption of Gason for Sandary-Sune 2010, 2013 & 2020				
Month/Product	Gasoil (Litres)			
Month, Product	2018	2019	2020	
January	74,942,556.92	74,217,131.81	81,219,882.27	
February	65,657,712.84	69,006,756.12	73,764,183.83	
March	73,228,986.37	72,257,724.00	79,458,766.55	
April	77,328,278.02	78,842,287.59	80,048,886.75	
May	85,357,807.08	93,039,516.22	91,961,755.30	
June	86,431,015.87	87,399,189.97	89,780,811.00	
Grand Total	462,946,357.10	474,762,605.70	496,234,285.69	

Table 24: National Monthly Consumption of Heavy Fuel Oil for January-June 2018, 2019 & 2020

Month/Product	Heavy Fuel Oil (Kgs)			
Month/Product	2018	2019	2020	
January	15,722,540.62	8,418,824.12	17,751,676.94	
February	16,255,734.54	9,924,404.27	3,913,240.17	
March	15,456,764.72	3,505,171.76	12,513,531.67	
April	3,306,086.97	19,870,147.28	2,031,960.00	
May	4,929,286.74	22,110,576.22	225,120.00	
June	2,808,906.00	12,630,427.57	2,430,720.00	
Grand Total	58,479,319.60	76,459,551.21	38,866,248.78	

⁵ Negative implies internal movement in the product which could be due to transfers or consumption.

⁶ This includes Low Sulphur Gasoil

Table 25: National Monthly Consumption of Jet A-1 for January-June 2018, 2019 & 2020

Month/Product	Jet A-1 (Litres)				
Monthly Product	2018	2019	2020		
January	2,637,972.00	3,041,016.00	2,667,177.00		
February	1,965,133.00	1,756,666.00	2,484,892.00		
March	2,784,184.00	3,176,970.00	2,143,094.00		
April	3,300,512.00	3,288,450.00	889,282.00		
May	3,637,423.00	2,832,142.00	920,669.00		
June	3,051,749.00	2,926,782.00	1,486,558.00		
Grand Total	17,376,973.00	17,022,026.00	10,591,672.00		

Table 26: National Monthly Consumption of Kerosene for January-June 2018, 2019 & 2020

Month/Droduct	Kerosene(Litres)			
Month/Product	2018	2019	2020	
January	1,844,450.81	1,000,645.89	734,935.57	
February	1,425,995.66	1,062,341.27	654,224.31	
March	1,291,283.74	1,045,201.95	705,880.07	
April	1,511,226.43	1,063,575.90	887,359.32	
May	1,821,149.96	1,015,085.69	961,145.86	
June	1,662,018.63	1,254,440.02	734,020.66	
Grand Total	9,556,125.23	6,441,290.72	4,677,565.79	

Table 27: National Monthly Consumption of LPG for January-June 2018, 2019 & 2020

Month/Product	LPG (Kgs)				
Month/Product	2018	2019	2020		
January	419,718.53	626,507.35	670,642.91		
February	592,036.96	478,151.30	642,348.34		
March	525,367.57	485,328.29	724,061.68		
April	671,345.64	630,483.68	557,669.11		
May	741,352.49	654,898.57	590,083.58		
June	882,219.12	804,727.44	740,689.67		
Grand Total	3,832,040.31	3,680,096.63	3,925,495.29		

Table 28: National Monthly Consumption of Unleaded Petrol for January-June 2018, 2019 & 2020

Month/Product	Unleaded Petrol (Litres)			
Monthly Product	2018	2019	2020	
January	34,683,288.22	35,334,720.18	37,410,183.14	
February	32,339,551.54	31,563,200.62	34,270,069.12	
March	36,142,807.60	35,318,993.65	33,158,367.08	
April	34,952,444.01	35,579,038.67	30,886,274.97	
May	37,684,455.28	42,894,671.07	33,384,844.35	
June	37,314,221.22	38,033,536.20	35,556,001.64	
Grand Total	213,116,767.87	218,724,160.39	204,665,740.31	

DAILY NATIONAL AVERAGE CONSUMPTION OF PETROLEUM PRODUCTS 4.8

Table 29: Daily National Consumption of Gasoil January-June for 2018, 2019 & 2020

Month/Product	Gasoil (Litres)				
Month/Product	2018	2019	2020		
January	2,417,501.84	2,394,101.03	2,619,996.20		
February	2,344,918.32	2,464,527.00	2,543,592.55		
March	2,362,225.37	2,330,894.32	2,563,186.02		
April	2,577,609.27	2,628,076.25	2,668,296.22		
May	2,753,477.65	3,001,274.72	2,966,508.24		
June	2,881,033.86	2,913,306.33	2,992,693.70		
Grand Total	2,557,714.68	2,622,997.82	2,726,562.01		

Table 30: Daily National Consumption of Heavy Fuel Oil for January-June 2018, 2019 & 2020

Month/Product	Heavy Fuel Oil (Kgs)			
Month, Product	2018	2019	2020	
January	507,178.73	271,574.97	572,634.74	
February	580,561.95	354,443.01	134,939.32	
March	498,605.31	113,070.06	403,662.31	
April	110,202.90	662,338.24	67,732.00	
May	159,009.25	713,244.39	7,261.94	
June	93,630.20	421,014.25	81,024.00	
Grand Total	323,090.16	422,428.46	213,550.82	

Table 31: Daily National Consumption of Jet A-1 for January-June 2018, 2019 & 2020

-	•	-	•		
Month/Product	Jet A-1 (Litres)				
Month/Product	2018	2019	2020		
January	85,095.87	98,097.29	86,037.97		
February	70,183.32	62,738.07	85,685.93		
March	89,812.39	102,482.90	69,132.06		
April	110,017.07	109,615.00	29,642.73		
May	117,336.23	91,359.42	29,699.00		
June	101,724.97	97,559.40	49,551.93		
Grand Total	96,005.38	94,044.34	58,196.00		

Table 32: Daily National Consumption of Kerosene for January-June 2018, 2019 & 2020

Month/Product	Kerosene (Litres)			
Monthly Product	2018	2019	2020	
January	59,498.41	32,278.90	23,707.60	
February	50,928.42	37,940.76	22,559.46	
March	41,654.31	33,716.19	22,770.32	
April	50,374.21	35,452.53	29,578.64	
May	58,746.77	32,744.70	31,004.71	
June	55,400.62	41,814.67	24,467.36	
Grand Total	52,796.27	35,587.24	25,700.91	

Table 33: Daily National Consumption of LPG for January-June 2018, 2019 & 2020

Month/Product	LPG (Kgs)			
	2018	2019	2020	
January	13,539.31	20,209.91	21,633.64	
February	21,144.18	17,076.83	22,149.94	
March	16,947.34	15,655.75	23,356.83	
April	22,378.19	21,016.12	18,588.97	
May	23,914.60	21,125.76	19,034.95	
June	29,407.30	26,824.25	24,689.66	
Grand Total	21,171.49	20,332.03	21,568.66	

Table 34: Daily National Consumption of Unleaded for Petrol January-June 2018, 2019 & 2020

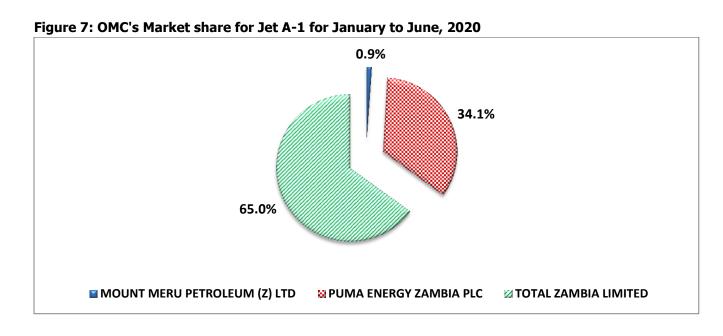
Month/Product	Unleaded Petrol (Litres)			
	2018	2019	2020	
January	1,118,815.75	1,139,829.68	1,206,780.10	
February	1,154,983.98	1,127,257.17	1,181,726.52	
March	1,165,897.02	1,139,322.38	1,069,624.74	
April	1,165,081.47	1,185,967.96	1,029,542.50	
May	1,215,627.59	1,383,699.07	1,076,930.46	
June	1,243,807.37	1,267,784.54	1,185,200.05	
Grand Total	1,177,440.71	1,208,420.78	1,124,537.03	

4.9 MARKET SHARE FOR WHITE PETROLEUM PRODUCTS⁷



Figure 6: OMC's Market share for white petroleum products for January to June, 2020

4.10 MARKET SHARE FOR JET A-1

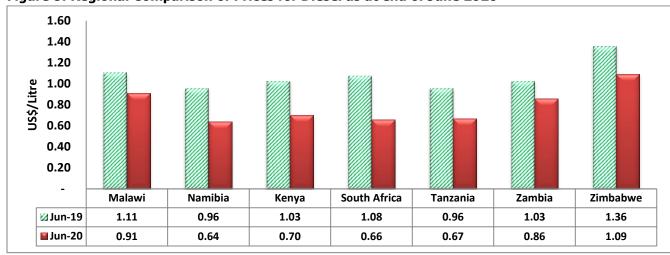


⁷ White products refers to Unleaded Petrol, Diesel (Including Low Sulphur gasoil) and Kerosene

4.11 REGIONAL FUEL PRICES COMPARISON

4.11.1 REGIONAL DIESEL PRICES COMPARISON

Figure 8: Regional Comparison of Prices for Diesel as at end of June 2020



4.11.2 REGIONAL PETROL PRICES COMPARISON

Figure 9: Regional Comparison of Prices for Petrol as at end of June 2020

