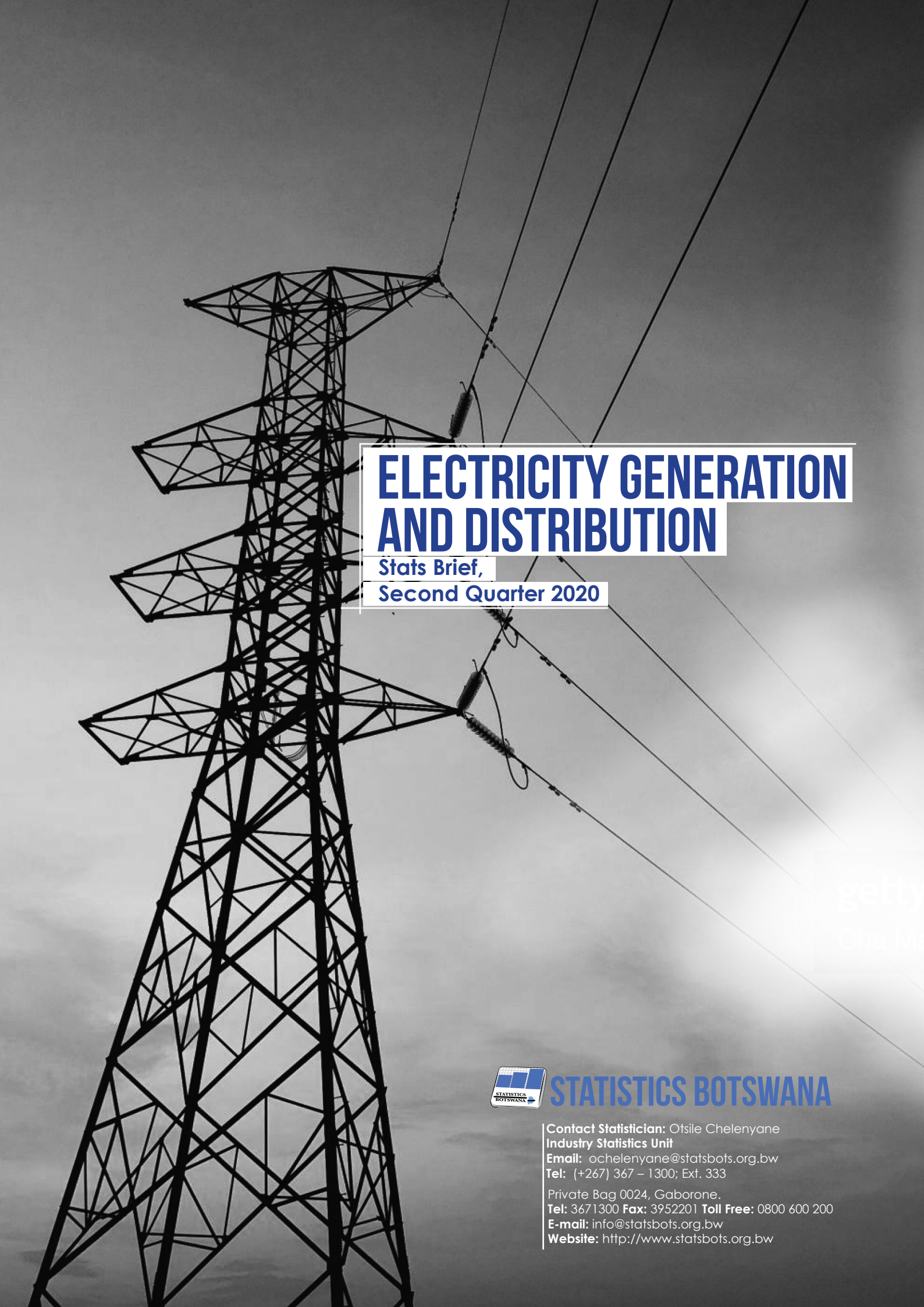

ELECTRICITY GENERATION AND DISTRIBUTION

Stats Brief, Second Quarter 2020

STATISTICS BOTSWANA

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Table of Contents

List of Tables

List of Figures

Preface

Statistics Botswana is mandated to compile data on industrial production in Botswana, hence electricity indices are only confined to electricity generated locally, however, importation and distribution volumes, and their percentage changes are included as well. This is intended to indicate Botswana's progress over time, towards generating adequate electricity to meet her demand. The data used in this brief is sourced from the Botswana Power Corporation.

This statistical brief is intended to apprise on Electricity Generation, Importation and Distribution by presenting Monthly, Quarterly and Yearly Volumes as well as Indices for Electricity Generation in Botswana. Also included are Year-on-Year and Quarter-on-Quarter Percentage Changes in Indices of Electricity Generation from 2010 to the second quarter of 2020. In subsequent sections of this report, emphasis will be on the second quarter of 2020, compared to the first quarter in 2020, and the corresponding quarter in 2019.

The Index of Electricity Generation (IEG) stood at **95.1** during the second quarter of 2020, reflecting a year-on-year decrease of 0.9 percent compared to 96.0 recorded during the corresponding quarter in 2019. The quarter-on-quarter comparison shows a drop of 17.0 percent, from 114.7 during the first quarter of 2020 to 95.1 during the current quarter.

The release further shows changes in the volume of electricity generation in a given period against the base year (2013), and hence provides a reflection of the trend in the local electricity sector.

For more information, contact the Directorate of Stakeholder Relations at 3671300. All Statistics Botswana outputs/publications are available on the website at www.statsbots.org.bw and also at Statistics Botswana Information Resource Centre (Head-Office, Gaborone).

I sincerely thank all stakeholders involved in the formulation of this brief for their continued support, as we strive to better serve users of our products and services.

Dr. Burton Mguni
Statistician General
October 2020

1.0 Summary of Findings of the Index of Electricity Generation (IEG)

All figures in this report are not seasonally adjusted.

Key indicators of Electricity Generation from the first quarter of 2013 to the second quarter of 2020 are presented on **Table 1**.

The Index of Electricity Generation (IEG) stood at **95.1**, reflecting a decrease 0.9 percent compared to 96.0 recorded during the same period in 2019. The quarter-on-quarter comparison reflects a decrease of 17.0 percent, from the index of 114.7 during the first quarter of 2020 to the current index of 95.1.

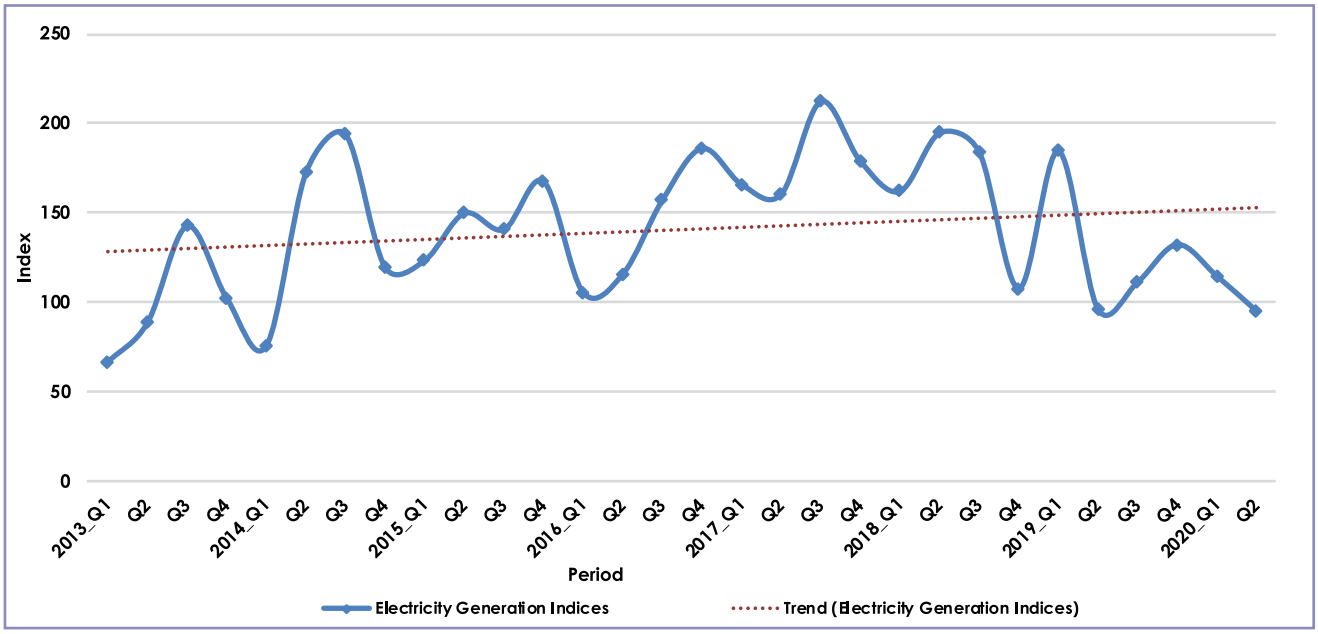
Table 1: Selected Key Indicators of Electricity Generation: 2013 First Quarter to 2020 Second Quarter

Period	Index of the Physical Volume of Electricity Generation	Year-on-Year Percentage Change	Quarter-on-Quarter Percentage Change
2013_Q1	66.5	151.4	0.0
Q2	88.5	202.8	32.9
Q3	142.7	216.7	61.3
Q4	102.3	53.8	(28.3)
2014_Q1	75.5	13.4	(26.2)
Q2	172.6	95.1	128.6
Q3	194.2	36.1	12.6
Q4	119.6	16.9	(38.4)
2015_Q1	123.4	63.5	3.2
Q2	149.9	(13.2)	21.4
Q3	140.8	(27.5)	(6.0)
Q4	167.8	40.2	19.2
2016_Q1	105.5	(14.5)	(37.1)
Q2	115.7	(22.8)	9.7
Q3	157.3	11.7	36.0
Q4	186.3	11.1	18.4
2017_Q1	166.1	57.4	(10.8)
Q2	160.6	38.8	(3.4)
Q3	212.6	35.2	32.4
Q4	179.1	(3.9)	(15.8)
2018_Q1	162.3	(2.3)	(9.4)
Q2	195.0	21.4	20.1
Q3	184.3	(13.3)	(5.5)
Q4	107.7	(39.8)	(41.5)
2019_Q1	184.8	13.8	71.5
Q2	96.0	(50.8)	(48.0)
Q3	111.3	(39.6)	16.0
Q4	132.4	22.9	18.9
2020_Q1	114.7	(37.9)	(13.4)
Q2	95.1	(0.9)	(17.0)

Note: 1. () Indicates negative figures

Figure 1 presents the trend of the Index of Electricity Generation from the first quarter of 2013 to the second quarter of 2020. Although the trend fluctuates, there has been an improvement in the local generation as evidenced by the upward trend. The index reached its highest point during the third quarter of 2017, and then showed a significant decline in the subsequent periods, falling to the current 95.1 observed during the period under review.

Figure 1: Index of Electricity Generation: 2013 First Quarter to 2020 Second Quarter



1.1 Electricity Generation

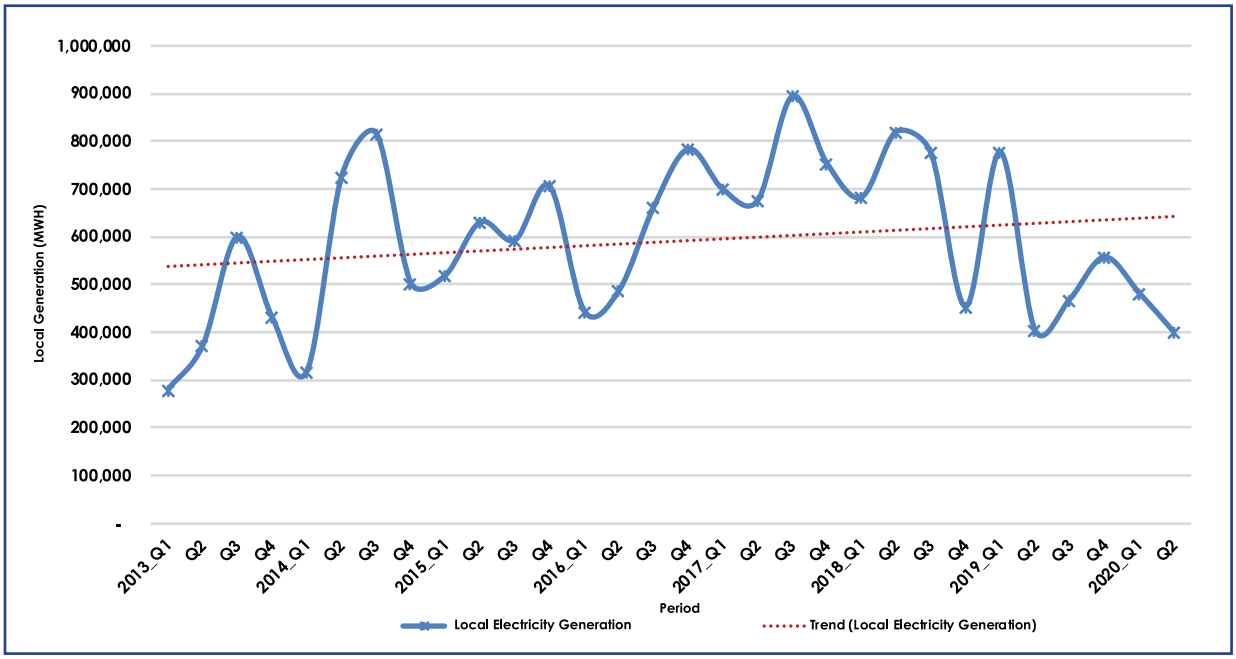
This Sub-Section discusses the physical volume of electricity generated locally as presented in **Table 2**. The table forms the basis for the computation of indices of electricity generation in **Table 3**. The Year-on-Year and Quarter-on-Quarter percentage changes in the volume of electricity generated are presented in Table 4 and Table 5, covering the period 2010 to 2020 second quarter.

The physical volume of electricity generated went down by 0.9 percent, from 403,576 MWH during the second quarter of 2019 to 399,903 MWH during the current quarter.

The quarter-on-quarter perspective shows a decrease of 17.0 percent, from 481,984 MWH during the first quarter of 2020 to 399,903 MWH during the period under review. These decreases were counterbalanced by deployment of emergency power plants (Matshelagabedi and Orapa) to augment the national output so as to meet domestic demand.

During the quarter under review, Morupule B accounted for the largest share of electricity generation at 52.7 percent, while 44.9 percent was sourced from Morupule A. The remaining 1.3 and 1.1 percent were contributed by Matshelagabedi and Orapa emergency power plants respectively.

Figure 2: Physical Volume of Generated Electricity (MWH): 2013 First Quarter to 2020 Second Quarter



1.2 Imported Electricity

The discussions in this section are based on **Table 6**, and **Table 7** as well as **Figure 3**.

During the second quarter of 2020, the physical volume of imported electricity decreased by 13.1 percent (68,289 MWH), from 522,021 MWH during the second quarter of 2019 to 453,733 MWH during the current quarter.

Compared to the previous quarter, imported electricity during the second quarter of 2020 shows a drop of 14.3 percent (75,619 MWH), from 529,352 MWH during the first quarter of 2020 to 453,733 MWH during the quarter under review.

Figure 3: Physical Volume of Imported Electricity (MWH): 2013 First Quarter to 2020 Second Quarter

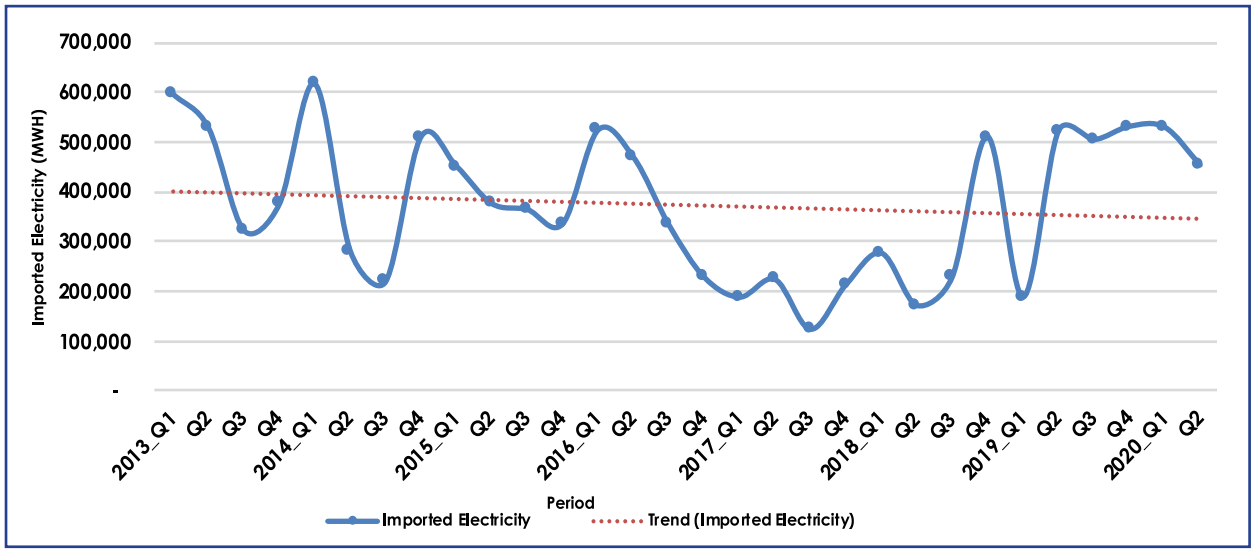


Figure 3 shows that even though there are fluctuations in the physical volume of imported electricity, generally importation of electricity shows a downward trend. This indicates the country's continued efforts to generate adequate electricity to meet demand, hence the reduced reliance on electricity imports.

Botswana imported 53.2 percent of the total electricity distributed during the second quarter of 2020. Nampower was the main source of imported electricity at 42.6 percent of the total electricity imports. Eskom accounted for 32.3 percent while 20.7 percent and 4.4 percent were sourced from the Southern African Power Pool (SAPP) and Cross-border markets respectively.

1.3 Distribution of Electricity

The section combines the local generation and imported electricity to come up with electricity that is available for distribution in Botswana. This does not take into account electricity used for auxiliary services, pumping, network losses as well as production of electricity through incineration of waste. The computation of electricity distribution is guided by the International Recommendations for Industrial Statistics (IRIS) 2008. **Tables 8, 9** and **10** form the basis for discussion under this subsection.

Table 8 shows the physical volume of electricity distributed from 2010 to the second quarter of 2020, while **Table 9** presents annual percentage changes in the volume of electricity distributed from 2010 to the second quarter of 2020. These tables can also be used as guidance with regard to whether electricity there is improvement to electricity distribution over time, thereby indicating that there are ongoing efforts to meet the domestic demand.

The year-on-year perspective, shows that the amount of distributed electricity decreased by 7.8 percent (71,962 MWH), from 925,597 MWH during the second quarter of 2019 to 853,636 MWH during the review quarter.

The quarter-on-quarter comparison shows a reduction of 15.6 percent (157,700 MWH), from 1,011,335 MWH during the first quarter of 2020 to 853,636 MWH during the period under review.

1.3.1 Contribution of Electricity Generation to Distribution

Electricity generation given as a percentage of electricity distributed is of paramount importance in assessing whether local generation is improving overtime to reduce reliance on imported electricity. This information is displayed in **Table 10**.

It can be observed from **Table 10** that electricity generated locally contributed 46.8 percent to electricity distributed during the second quarter of 2020, compared to a contribution of 43.6 percent during the same quarter in 2019. This gives an increase of 3.2 percentage points.

The quarter-on-quarter comparison shows that the contribution of electricity generated locally to electricity distributed during the current quarter, decreased by 0.9 of a percentage point, compared to the 47.7 percent contribution of locally generated electricity during the first quarter of 2020.

Table 2: Physical Volume of Electricity Generation (MWH): January 2010 – June 2020

Period	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020*
January	44,442	39,195	26,574	110,960	137,802	158,907	206,381	245,598	209,333	272,140	148,376
February	38,641	32,847	16,938	80,410	77,067	180,520	127,975	216,264	227,955	235,908	187,925
March	55,401	20,079	67,761	88,358	102,377	179,400	109,272	236,589	245,092	268,605	145,683
April	40,872	29,593	34,069	94,011	151,675	195,568	112,765	195,703	210,965	163,206	102,898
May	41,943	15,762	39,826	140,454	252,235	206,905	179,837	205,705	310,500	125,266	98,692
June	30,676	23,045	48,928	137,414	321,453	227,503	193,586	273,639	298,291	115,104	198,314
July	33,156	27,814	81,013	158,120	318,627	240,314	213,841	311,655	293,739	125,091	-
August	39,594	24,536	11,205	223,420	296,036	177,052	219,402	315,552	289,885	152,822	-
September	35,177	21,063	97,177	218,222	201,802	174,617	228,002	266,623	191,199	190,061	-
October	37,746	27,166	77,236	32,183	71,243	301,913	299,945	234,090	73,018	195,637	-
November	20,894	23,044	113,384	203,228	244,723	213,798	213,303	296,547	121,910	208,940	-
December	38,430	19,231	89,101	194,717	186,915	189,490	269,893	222,240	258,009	151,998	-
Q1	138,485	92,120	111,274	279,728	317,245	518,828	443,628	698,451	682,380	776,653	481,984
Q2	113,491	68,400	122,823	371,879	725,363	629,976	486,188	675,047	819,755	403,576	399,903
Q3	107,927	73,413	189,395	599,762	816,465	591,983	661,245	893,831	774,822	467,974	-
Q4	97,070	69,441	279,721	430,128	502,881	705,201	783,141	752,877	452,938	556,576	-
TOTAL	**456,972**	**303,374**	**703,213**	**1,681,497**	**2,361,954**	**2,445,988**	**2,374,202**	**3,020,206**	**2,729,895**	**2,204,779**	**881,887**

Note:
1. – Indicates data is not available
2. 2020* Data is up to the second quarter only

Table 3: Indices of Physical Volume of Electricity Generation: January 2010 – June 2020

Period	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020*
Jan	31.7	28.0	19.0	79.2	98.3	113.4	147.3	175.3	149.4	194.2	105.9
Feb	27.6	23.4	12.1	57.4	55.0	128.8	91.3	154.3	162.7	168.4	134.1
March	39.5	14.3	48.4	63.1	73.1	128.0	78.0	168.8	174.9	191.7	104.0
April	29.2	21.1	24.3	67.1	108.2	139.6	80.5	139.7	150.6	116.5	73.4
May	29.9	11.2	28.4	100.2	180.0	147.7	128.3	146.8	221.6	89.4	70.4
June	21.9	16.4	34.9	98.1	229.4	162.4	138.2	195.3	212.9	82.1	141.5
July	23.7	19.8	57.8	112.8	227.4	171.5	152.6	222.4	209.6	89.3	-
August	28.3	17.5	8.0	159.4	211.3	126.4	156.6	225.2	206.9	109.1	-
September	25.1	15.0	69.4	155.7	144.0	124.6	162.7	190.3	136.4	135.6	-
October	26.9	19.4	55.1	23.0	50.8	215.5	214.1	167.1	52.1	139.6	-
November	14.9	16.4	80.9	145.0	174.6	152.6	152.2	211.6	87.0	149.1	-
December	27.4	13.7	63.6	139.0	133.4	135.2	192.6	158.6	184.1	108.5	-
Q1	32.9	21.9	26.5	66.5	75.5	123.4	105.5	166.1	162.3	184.8	114.7
Q2	27.0	16.3	29.2	88.5	172.6	149.9	115.7	160.6	195.0	96.0	95.1
Q3	25.7	17.5	45.1	142.7	194.2	140.8	157.3	212.6	184.3	111.3	-
Q4	23.1	16.5	66.5	102.3	119.6	167.8	186.3	179.1	107.7	132.4	-
TOTAL	27.2	18.0	41.8	100.0	140.5	145.5	141.2	179.6	162.3	131.1	-

Note:
1. – Indicates data is not available
2. 2020* Data is up to the second quarter only

Table 4: Annual Percentage Changes in the Indices of the Physical Volume of Electricity Generation: January 2010 – June 2020

Period	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020*
Jan	31.0	(11.8)	(32.2)	317.5	24.2	15.3	29.9	19.0	(14.8)	30.0	(45.5)
Feb	2.0	(15.0)	(48.4)	374.7	(4.2)	134.2	(29.1)	69.0	5.4	3.5	(20.3)
March	19.4	(63.8)	237.5	30.4	15.9	75.2	(39.1)	116.5	3.6	9.6	(45.8)
April	4.8	(27.6)	15.1	175.9	61.3	28.9	(42.3)	73.5	7.8	(22.6)	(37.0)
May	(15.2)	(62.4)	152.7	252.7	79.6	(18.0)	(13.1)	14.4	50.9	(59.7)	(21.2)
June	52.4	(24.9)	112.3	180.9	133.9	(29.2)	(14.9)	41.4	9.0	(61.4)	72.3
July	(13.0)	(16.1)	191.3	95.2	101.5	(24.6)	(11.0)	45.7	(5.7)	(57.4)	-
August	(18.9)	(38.0)	(54.3)	1,893.9	32.5	(40.2)	23.9	43.8	(8.1)	(47.3)	-
September	(3.7)	(40.1)	361.4	124.6	(7.5)	(13.5)	30.6	16.9	(28.3)	(0.6)	-
October	16.6	(28.0)	184.3	(58.3)	121.4	323.8	(0.7)	(22.0)	(68.8)	167.9	-
November	(21.0)	10.3	392.0	79.2	20.4	(12.6)	(0.2)	39.0	(58.9)	71.4	-
December	10.2	(50.0)	363.3	118.5	(4.0)	1.4	42.4	(17.7)	16.1	(41.1)	-
Q1	17.1	(33.5)	20.8	151.4	13.4	63.5	(14.5)	57.4	(2.3)	13.8	(37.9)
Q2	4.5	(39.7)	79.6	202.8	95.1	(13.2)	(22.8)	38.8	21.4	(50.8)	(0.9)
Q3	(12.6)	(32.0)	158.0	216.7	36.1	(27.5)	11.7	35.2	(13.3)	(39.6)	-
Q4	3.6	(28.5)	302.8	53.8	16.9	40.2	11.1	(3.9)	(39.8)	22.9	-
TOTAL	2.9	(33.6)	131.8	139.1	40.5	3.6	(2.9)	27.2	(9.6)	(19.2)	-

Note:
1. ( ) Denotes negative numbers
2. – Indicates data is not available
3. 2020* Data is up to the second quarter only

Table 5: Quarter-on-Quarter Percentage Changes: 2010 – June 2020

Period	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020*
Q1	47.8	(5.1)	60.2	0.0	(26.2)	3.2	(37.1)	(10.8)	(9.4)	71.5	(13.4)
Q2	(18.0)	(25.7)	10.4	32.9	128.6	21.4	9.6	(3.4)	20.1	(48.0)	(17.0)
Q3	(4.9)	7.3	54.2	61.3	12.6	(6.0)	36.0	32.4	(5.5)	16.0	-
Q4	(10.1)	(5.4)	47.7	(28.3)	(38.4)	19.1	18.4	(15.8)	(41.5)	18.9	-

Note:
1. ( ) Denotes negative numbers
2. – Indicates data is not available
3. 2020* Data is up to the second quarter only

Table 6: Physical Volume of Imported Electricity (MWH): January 2010 – June 2020

Period	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020*
Jan	236,110	243,795	272,338	193,786	192,251	184,564	140,172	57,679	124,148	54,922	196,457
Feb	219,836	229,027	274,079	185,022	216,031	113,430	166,303	56,951	77,257	66,228	138,489
March	250,756	269,723	249,777	216,621	207,923	153,098	217,261	74,422	75,865	67,915	194,406
April	234,466	256,694	253,390	206,965	162,767	129,605	196,075	88,783	94,226	139,549	156,520
May	280,917	277,975	271,135	169,159	85,246	129,487	138,677	92,379	39,052	188,760	174,404
June	275,405	279,130	275,063	151,442	33,474	117,155	134,100	43,156	39,179	193,713	122,808
July	276,165	275,387	245,151	161,866	39,365	99,695	110,932	34,746	55,772	196,021	-
August	259,190	268,187	296,226	82,084	48,497	132,541	119,340	35,332	45,131	187,294	-
September	248,636	256,871	200,082	78,365	132,060	132,191	103,083	54,534	128,524	120,800	-
October	266,963	264,952	240,631	123,785	266,785	59,516	57,653	83,734	249,015	174,433	-
November	271,584	274,539	209,811	123,785	96,415	115,763	116,517	36,094	200,025	159,650	-
December	268,052	272,789	212,114	128,060	147,112	160,652	54,373	94,307	61,258	196,953	-
Q1	706,702	742,544	796,194	595,429	616,206	451,092	523,736	189,052	277,270	189,065	529,352
Q2	790,788	813,799	799,587	527,566	281,487	376,248	468,852	224,318	172,457	522,021	453,733
Q3	783,991	800,444	741,459	322,315	219,922	364,427	333,355	124,612	229,427	504,115	-
Q4	806,599	812,281	662,556	375,630	510,311	335,931	228,543	214,135	510,298	531,036	-
TOTAL	3,088,080	3,169,068	2,999,797	1,820,940	1,627,926	1,527,697	1,554,486	752,117	1,189,452	1,746,238	983,084

Note:
1. – Indicates data is not available
2. 2020* Data is up to the second quarter only

Table 7: Annual Percentage Changes in the Physical Volume of Imported Electricity: January 2010 – June 2020

Period	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020*
Jan	16.9	3.3	11.7	(28.8)	(0.8)	(4.0)	(24.1)	(58.9)	115.2	(55.8)	257.7
Feb	16.8	4.2	19.7	(32.5)	16.8	(47.5)	46.6	(65.8)	35.7	(14.3)	109.1
March	23.5	7.6	(7.4)	(13.3)	(4.0)	(26.4)	41.9	(65.7)	1.9	(10.5)	186.2
April	14.0	9.5	(1.3)	(18.3)	(21.4)	(20.4)	51.3	(54.7)	6.1	48.1	12.2
May	25.9	(1.0)	(2.5)	(37.6)	(49.6)	51.9	7.1	(33.4)	(57.7)	383.4	(7.6)
June	3.0	1.4	(1.5)	(44.9)	(77.9)	250.0	14.5	(67.8)	(9.2)	394.4	(36.6)
July	2.3	(0.3)	(11.0)	(34.0)	(75.7)	153.3	11.3	(68.7)	60.5	251.5	-
August	17.7	3.5	10.5	(72.3)	(40.9)	173.3	(10.0)	(70.4)	27.7	315.0	-
September	0.3	3.3	(22.1)	(60.8)	68.5	0.1	(22.0)	(47.1)	135.7	(6.0)	-
October	1.2	(0.8)	(9.2)	(48.6)	115.5	(77.7)	(3.1)	45.2	197.4	(30.0)	-
November	3.4	1.1	(23.6)	(41.0)	(22.1)	20.1	0.7	(69.0)	454.2	(20.2)	-
December	12.4	1.8	(22.2)	(39.6)	14.9	9.2	(66.2)	73.4	(35.0)	221.5	-
Q1	19.1	5.1	7.2	(25.2)	3.5	(26.8)	16.1	(63.9)	46.7	(31.8)	180.0
Q2	13.6	2.9	(1.7)	(34.0)	(46.6)	33.7	24.6	(52.2)	(23.1)	202.7	(13.1)
Q3	6.2	2.1	(7.4)	(56.5)	(31.8)	65.7	(8.5)	(62.6)	84.1	119.7	-
Q4	5.4	0.7	(18.4)	(43.3)	35.9	(34.2)	(32.0)	(6.3)	138.3	4.1	-
TOTAL	10.6	2.6	(5.3)	(39.3)	(10.6)	(6.2)	1.8	(51.6)	58.1	46.8	-

Note:
1. ( ) Denotes negative numbers
2. – Indicates data is not available
3. 2020* Data is up to the second quarter only

Table 8: Physical Volume of Electricity Distribution (MWH): January 2010 – June 2020

Period	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020*
January	280,552	282,990	298,912	304,746	330,053	343,471	346,553	303,277	333,481	327,062	344,833
February	258,477	261,873	291,017	265,432	293,098	293,950	294,278	273,215	305,212	302,136	326,413
March	306,157	289,801	317,538	304,979	310,300	332,498	326,533	311,011	320,957	336,520	340,090
April	275,338	286,287	287,459	300,976	314,442	325,173	308,840	284,486	305,191	302,755	259,418
May	322,860	293,737	310,961	309,613	337,481	336,392	318,514	298,084	349,552	314,026	273,096
June	306,081	302,176	323,990	288,856	354,927	344,658	327,686	316,795	337,470	308,817	321,122
July	309,321	303,201	326,165	319,986	357,992	340,009	324,773	346,401	349,511	321,112	-
August	298,784	292,723	307,431	305,504	344,533	309,593	338,742	350,884	335,016	340,116	-
September	283,813	277,934	297,258	296,587	333,861	306,808	331,085	321,157	319,722	310,861	-
October	304,709	292,118	317,867	155,968	338,027	361,429	357,598	317,824	322,033	370,071	-
November	292,478	297,584	323,195	327,013	341,138	329,561	329,820	332,641	321,935	368,591	-
December	306,482	292,020	301,215	322,777	334,027	350,142	324,266	316,547	319,267	348.951	-
Q1	845,186	834,665	907,468	875,157	933,451	969,920	967,364	887,503	959,650	965,718	1,011,335
Q2	904,279	882,199	922,411	899,445	1,006,850	1,006,224	955,040	899,365	992,212	925,597	853,636
Q3	891,918	873,857	930,854	922,077	1,036,387	956,410	994,600	1,018,442	1,004,249	927,090	-
Q4	903,669	881,721	942,277	805,758	1,013,192	1,041,132	1,011,684	967,012	963,235	1,087,612	-
Year	3,545,052	3,472,442	3,703,010	3,502,437	3,989,880	3,973,685	3,928,688	3,772,322	3,919,347	3,951,017	1,864,971

Note:
1. – Indicates data is not available
2. 2020* Data is up to the second quarter only

Table 9: Annual Percentage Changes for the Physical Volume of Electricity Distribution: January 2010 – June 2020

Period	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020*
January	18.9	0.9	5.6	2.0	8.3	4.1	0.9	(12.5)	10.0	(1.9)	5.4
February	14.3	1.3	11.1	(8.8)	10.4	0.3	0.11	(7.2)	11.7	(1.0)	8.0
March	22.7	(5.3)	9.6	(4.0)	1.7	7.2	(1.8)	(4.8)	3.2	4.8	1.1
April	12.5	4.0	0.4	4.7	4.5	3.4	(5.0)	(7.9)	7.3	(0.8)	(14.3)
May	18.5	(9.0)	5.9	(0.4)	9.0	(0.3)	(5.3)	(6.4)	17.3	(10.2)	(13.0)
June	6.5	(1.3)	7.2	(10.8)	22.9	(2.9)	(4.9)	(3.3)	6.5	(8.5)	10.1
July	0.4	(2.0)	7.6	(1.9)	11.9	(5.0)	(4.5)	6.7	0.9	(8.1)	-
August	11.1	(2.0)	5.0	(0.6)	12.8	(10.1)	9.4	3.6	(4.5)	1.5	-
September	(0.2)	(2.1)	7.0	(0.2)	12.6	(8.1)	7.9	(3.0)	(0.4)	(2.8)	-
October	2.9	(4.1)	8.8	(50.9)	116.7	6.9	(1.1)	(11.1)	1.3	14.9	-
November	1.1	1.7	8.6	1.2	4.3	(3.4)	0.1	0.9	(3.2)	14.5	-
December	12.1	(4.7)	3.1	7.2	3.5	4.8	(7.4)	(2.4)	0.9	9.3	-
Q1	18.8	(1.2)	8.7	(3.6)	6.7	3.9	(0.3)	(8.3)	8.1	0.6	4.7
Q2	12.4	(2.4)	4.6	(2.5)	11.9	(0.1)	(5.1)	(5.8)	10.3	(6.7)	(7.8)
Q3	3.5	(2.0)	6.5	(0.9)	12.4	(7.7)	4.0	2.4	(1.4)	(3.2)	-
Q4	5.2	(2.4)	6.9	(14.5)	25.7	2.8	(2.8)	(4.4)	(0.4)	12.9	-
Year	**9.5**	**(2.0)**	**6.6**	**(5.4)**	**13.9**	**(0.4)**	**(1.1)**	**(4.0)**	**3.9**	**0.8**	**-**

Note:
1. ( ) Denotes negative numbers
2. – Indicates data is not available
3. 2020* Data is up to the second quarter only

Table 10: Generation of Electricity (MWH) as a Percentage of Distribution January 2010 – June 2020

Year\ Utility	Electricity Generation	Imported Electricity	Electricity Distribution	% Contribution of Generated Electricity to Distributed
2010	456,972	3,088,080	3,545,052	12.9
2011	303,374	3,169,068	3,472,442	8.7
2012	703,213	2,999,797	3,703,010	19.0
2013	1,681,497	1,820,940	3,502,437	48.0
2014	2,361,954	1,627,925	3,989,879	59.2
2015	2,445,988	1,527,697	3,973,685	61.6
2016	2,374,202	1,554,486	3,928,688	60.4
2017	3,020,206	752,117	3,772,322	80.1
2018	2,729,895	1,189,452	3,919,347	69.7
2019	2,204,779	1,746,238	3,951,017	55.8
2020*	881,887	983,084	1,864,971	47.3
2013_Q1	279,728	595,429	875,157	32.0
Q2	371,879	527,566	899,445	41.3
Q3	599,762	322,315	922,077	65.0
Q4	430,128	375,630	805,758	53.4
2014_Q1	317,245	616,206	933,451	34.0
Q2	725,363	281,487	1,006,850	72.0
Q3	816,465	219,922	1,036,387	78.8
Q4	502,881	510,311	1,013,192	49.6
2015_Q1	518,828	451,092	969,920	53.5
Q2	629,976	376,248	1,006,224	62.6
Q3	591,983	364,427	956,410	61.9
Q4	705,201	335,931	1,041,132	67.7
2016_Q1	443,628	523,736	967,364	45.9
Q2	486,188	468,852	955,040	50.9
Q3	661,245	333,355	994,600	66.5
Q4	783,141	228,543	1,011,684	77.4
2017_Q1	698,451	189,052	887,503	78.7
Q2	675,047	224,318	899,365	75.1
Q3	893,831	124,612	1,018,442	87.8
Q4	752,877	214,135	967,012	77.9
2018_Q1	682,380	277,270	959,650	71.1
Q2	819,755	172,457	992,212	82.6
Q3	774,882	229,427	1,004,249	77.2
Q4	452,938	510,298	963,235	47.0
2019_Q1	776,653	189,065	965,718	80.4
Q2	403,576	522,021	925,597	43.6
Q3	467,974	504,115	972,090	48.1
Q4	556,576	531,036	1,087,612	51.2
2020_Q1	481,984	529,352	1,011,335	47.7
Q2	399,903	453,733	853,636	46.8

Note:
1. 2020* Data is up to the second quarter only

3.0 Technical Notes

3.1 Background

The generation of electricity in Botswana started in 1985 with a coal fired thermal power station at Morupule operating at a capacity of 132 MWH. Prior to this period, most of Botswana's electricity was imported from South Africa's power utility, Eskom. In 2008 South Africa's electricity demand started to exceed its supply, resulting in the South African government restricting power exports. As a result, Botswana and the entire Southern African region experienced massive power shortages because of the reduced electricity exports from South Africa (http://en.wikipedia.org/wiki/Energy_in_Botswana).

To avert the situation, Botswana Government opted for alternative ways of sourcing electricity for the country; hence the plan to increase local generation of electricity at Morupule Power Station. The Morupule Power A plant of capacity 132 MWH was augmented with Morupule Power B which is to have a capacity of 600 MWH upon completion (BPC Annual Report, 2010).

3.2 Concepts and formula of the Index of Electricity Generation, Importation and Distribution

The Index of Electricity Generation is a Laspeyres index. The weighted average for electricity generation equals one because there are no various electricity products. The index is thus calculated using the formula;

$$I = \frac{\sum R_i * W_i}{\sum W_i}$$

Where;

I is the index
R is the electricity generation relative
W is the weight

The electricity generation relative for the quarter has been calculated by using the formula:

$$R_i = \frac{P_{ic}}{P_{i0}} * 100$$

Where P_{ic} is the electricity generation of the current quarter and P_{i0} is the generation of electricity of the base year.

The calculation of the monthly generation indices is based on the volume of electricity units produced.

3.3 Base Year

The base year, also referred to as **reference period** used in this brief is 2013, which is set at 100. The selection of the reference period was informed by the availability of relevant data and synchronization of data with other sectors within the industry.

STATISTICS BOTSWANA

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