QUARTERLY STATISTICAL BULLETIN ON COMMUNICATIONS IN GHANA

Volume 5 Issue 1

NATIONAL COMMUNICATIONS AUTHORITY

FIRST QUARTER

JANUARY - MARCH, 2020

Communications for Development

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LIST OF ABBREVIATIONS

BWA	Broadband Wireless Access
FM	Frequency Modulation
GH₵	Ghana Cedi
GHp	Ghana pesewas
MB	Megabytes
MNO	Mobile Network Operator
MoU	Minutes of Use
NCA	National Communications Authority
SMS	Short Message Service
TV	Television

VISION AND MISSION

Vision

A world-class communications regulator that facilitates innovative, reliable and sustainable communication solutions to meet stakeholders' expectations.

Mission

Regulate the communications industry in a forward-looking and transparent manner that promotes fair and sustainable competition, stimulates innovation, encourages investment, protects stakeholders' interests and facilitates universal access to quality communications services for national development.

Core Values

- Teamwork
- Accountability
- Consistency
- Trust
- Innovation
- Transparency

Tag Line/Slogan – Communications for Development

INTRODUCTION

This Quarterly Statistical Bulletin on Communications is a reference document that entails segregated data, industry trends and analysis of the Ghanaian communications sector. The purpose of this document is to promote open and enriched public discussions on policies for telecom analysts, consumers, academia, policy makers, investors and other stakeholders for decision-making.

This bulletin is prepared from the monthly and quarterly data received from various licensees[1]. It also includes data on internet service providers and broadcasting entities and services providers that was gathered in-house.

The publication of this bulletin is consistent with the National Communications Authority's mandate under section 26 (2) (a) of the Electronic Communications Act 2008, Act 775; "to publish the result of research that it carries out or that is carried out on its behalf on its website and in any other manner that it considers appropriate to bring the results to the attention of the public".

[1] MTN, Vodafone, AirtelTigo, Glo, Surfline, BBH, Telsol and BLU

DEFINITION OF TERMS

Average SMS per subscriptions - This is calculated by dividing the total average volume of SMS for the quarter by the total average mobile subscriptions for that quarter.

BWA Data Usage per Subscriptions - This is calculated by dividing the total average volume of BWA's traffic for the quarter by the total BWA subscriptions for that quarter.

Cellular network or mobile network – refers to a communication network where the last mile connection is wireless. The network is distributed over land areas called cells, each served by at least one fixed-location transceiver, known as a cell site or base station. This base station provides the cell with the network coverage, which can be used for transmission of voice, data and others.

Fixed-line network - The term refers to all of the wired networks that are used for voice and data communications. A fixed-line can be seen as a connection to an end-user, by means of a cable, through which they can make phone calls or connect to the Internet.

Minutes of Use per Subscriptions - It is calculated by dividing the total average volume of traffic for that quarter with the total average subscriptions for that quarter.

Mobile Data-refers to active mobile data subscriptions to GPRS, EDGE, HSPA, UMTS, EV-DO, 3G, and LTE that have generated internet traffic (uploaded and/ or downloaded data) within the last ninety (90) days.

Mobile Data Usage per Subscriptions - It is calculated by dividing the total average volume of data traffic for the quarter with the total average mobile data subscriptions for that quarter.

Mobile Penetration or Teledensity – This represents the total number of mobile subscriptions per every 100 inhabitants in a geographical area.

Net Subscriptions Addition – It refers to the total number of new mobile network subscribers minus customers that terminate a service with the service provider at a given time.

On-net traffic - refers to phone calls made to a recipient on the same network as the caller.

Off-net traffic - refers to phone calls made to a recipient on a different network.

Quarter-on-quarter – This is a comparison of the quarter under review with the preceding quarter.

Q1 – First Quarter (January – March).

Q2 – Second Quarter (April – June).

Q3 – Third Quarter (July – September).

Q4 – Fourth Quarter (October – December).

Year-on-year – This is a comparison of a period under review (month, quarter etc.) with the same period of the preceding year.

THE COMMUNICATIONS INDUSTRY AT A GLANCE

A1. Service Providers Authorised/Licensed to operate

Operator/Service Providers	Number of Authorisation/Licences	Number in Operation
Mobile Network Operators	4	4
Fixed Network Operators	3	3
Broadband Wireless Access	5	5
Television Stations	144	101
FM Stations	543	403

B1. Total Subscriptions

SUBSCRIPTION	QUARTER-ON-QUARTER			YEAR-ON-YEAR			Units
	Q4 2019	Q1 2020	*Growth (%)*	Q1 2019	Q1 2020	*Growth (%)*	
Mobile Voice Subscription	40.86	41.96	*2.69%*	41.60	41.96	*0.87%*	Million
Fixed Voice Subscription	0.29	0.30	*3.45%*	0.28	0.30	*7.14%*	Thousand
Mobile Data Subscription	30.34	28.17	*-7.15%*	28.08	28.17	*0.32%*	Million
Fixed Data Subscription	0.057	0.058	*1.75%*	0.059	0.058	*-1.69%*	Thousand
Broadband Wireless Access	0.046	0.047	*2.17%*	0.054	0.047	*-12.96%*	Thousand

B2. Voice, Data and SMS Traffic

TRAFFIC	QUARTER-ON-QUARTER			YEAR-ON-YEAR			Units
	Q4 2019	Q1 2020	*Growth (%)*	Q1 2019	Q1 2020	*Growth (%)*	
Mobile Voice Traffic	21.51	22.81	*6.04%*	19.45	22.81	*17.28%*	Billion
Fixed Voice Traffic	0.013	0.009	*-30.77%*	0.011	0.009	*-18.18%*	Million
Incoming International Traffic	0.06	0.05	*-16.67%*	0.10	0.050	*-50.00%*	Billion
Outgoing International Traffic	0.121	0.123	*1.65%*	0.14	0.123	*-12.14%*	Billion
Mobile Data Traffic (MB)	129.01	152.85	*18.48%*	76.1	152.85	*100.85%*	Billion MB
BWA Data Traffic (MB)	1.20	1.14	*-5.00%*	1.30	1.14	*-12.31%*	Billion MB
SMS Count	0.628	0.502	*-20.06%*	0.695	0.502	*-27.77%*	Million

B3. Penetration Rate (%)

PENETRATION RATE (%)	QUARTER-ON-QUARTER			YEAR-ON-YEAR		
	Q4 2019	Q1 2020	*Growth (%)*	Q1 2019	Q1 2020	*Growth (%)*
Mobile Voice Subscription	135.30	138.15	*2.11%*	140.30	138.15	*-1.53%*
Fixed Voice Subscription	0.96	0.97	*1.04%*	0.95	0.97	*2.11%*
Mobile Data Subscription	99.24	92.74	*-6.55%*	94.68	92.74	*-2.05%*
Fixed Data Subscription	0.19	0.19	*0.00%*	0.20	0.19	*-5.00%*
Broadband Wireless Access	0.15	0.15	*0.00%*	0.18	0.15	*-16.67%*

C1. Broadcasting Sector

FM/TV AUTHORISATION & OPERATIONS	QUARTER-ON-QUARTER			YEAR-ON-YEAR		
	Q4 2019	Q1 2020	*Growth (%)*	Q1 2019	Q1 2020	*Growth (%)*
FM Authorisation	513	543	*5.85%*	492	543	*10.37%*
FM Station Operating	402	403	*0.25%*	403	403	*0.00%*
TV Authorisations	140	144	*2.86%*	139	144	*3.60%*
TV Stations Operating	96	101	*5.21%*	90	101	*12.22%*

C2. Categories of Authorised FM Radio Stations

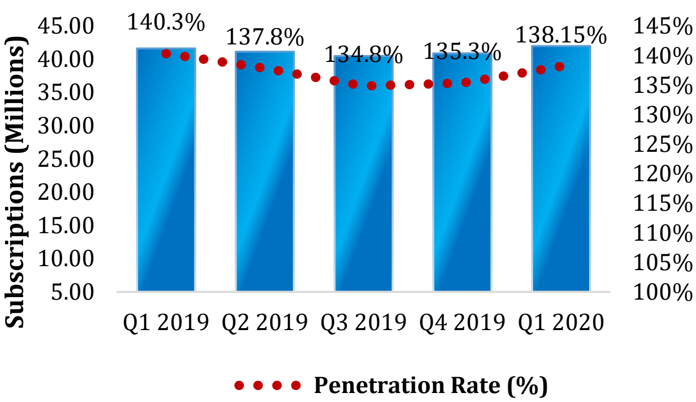
CATEGORIES OF FM RADIO STATIONS	QUARTER-ON-QUARTER			YEAR-ON-YEAR		
	Q4 2019	Q1 2020	*Growth (%)*	Q1 2019	Q1 2020	*Growth (%)*
PUBLIC	31	31	*0.00%*	31	31	*0.00%*
PUBLIC FOREIGN	5	5	*0.00%*	5	5	*0.00%*
CAMPUS	21	21	*0.00%*	21	21	*0.00%*
COMMUNITY	75	79	*5.33%*	63	79	*25.40%*
COMMERCIAL	381	405	*5.77%*	299	405	*34.78%*

1.0 Cellular Mobile Network

This section provides information on the Mobile Network Operators (MNOs) in Ghana by looking at the mobile voice subscriptions, net additions to voice subscriptions, mobile penetration, volume of voice/data traffic and mobile data subscriptions. There are four service providers licensed by the National Communications Authority (NCA) to provide mobile telecoms services in Ghana namely AirtelTigo[2], Glo, MTN and Vodafone.

1.1 Mobile Voice Subscriptions and Penetration Rate[3]

Figure 1: Mobile Voice Subscription and Penetration Rate



Mobile Voice subscriptions increased from 40.86 million at the end of Q4 2019 to 41.96 million at the end of Q1 2020, representing an increase of 2.70%.

Year-on-year subscriptions increased from 41.60 million at the end of Q1 2019 to 41.96 million at the end of Q1 2020, recording a growth of 0.86%.

The penetration rate as at the end of the first quarter of 2020 was 138.15% as compared to 135.30% recorded in the fourth quarter of the previous year, indicating an increase of 2.08% (Figure 1) (Table 1).

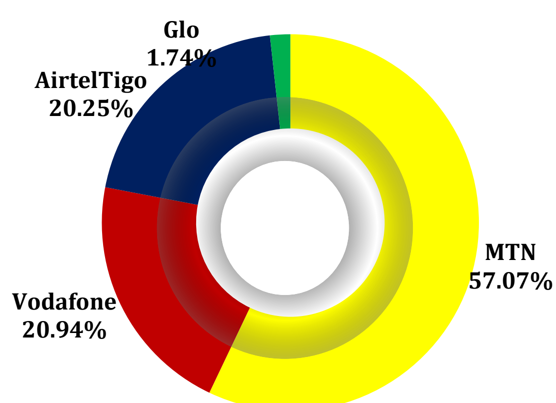
1.1.1 Market Share per Operator

At the end of Q1 2020, MTN had 57.07% of the market with 23.95 million subscriptions, followed by Vodafone with 8.79 million subscriptions (20.94%).

AirtelTigo is the third largest mobile network operator by subscription with a market share of 20.25% and subscriber base of 8.50 million.

Glo recorded 0.73 million subscriptions with a market share of 1.74% (Figure 2) (Table 2).

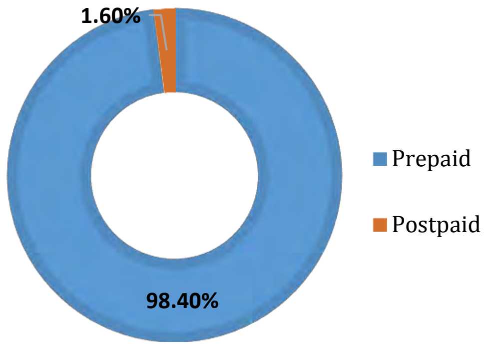
Figure 2: Market Share per Operator



[2] Airtel Ghana and Tigo merged in 2018.
[3] The Penetration Rate is partially attributed to people owning more than one sim.

1.1.2 Prepaid and Postpaid Mobile Voice Subscriptions

Figure 3: Prepaid and Postpaid Mobile Voice Subscriptions



The mobile voice subscription for prepaid subscribers is 41.29 million representing a market share of 98.40% whilst postpaid stood at 1.60% with a subscription of 0.67 million (Figure 3) (Table 3).

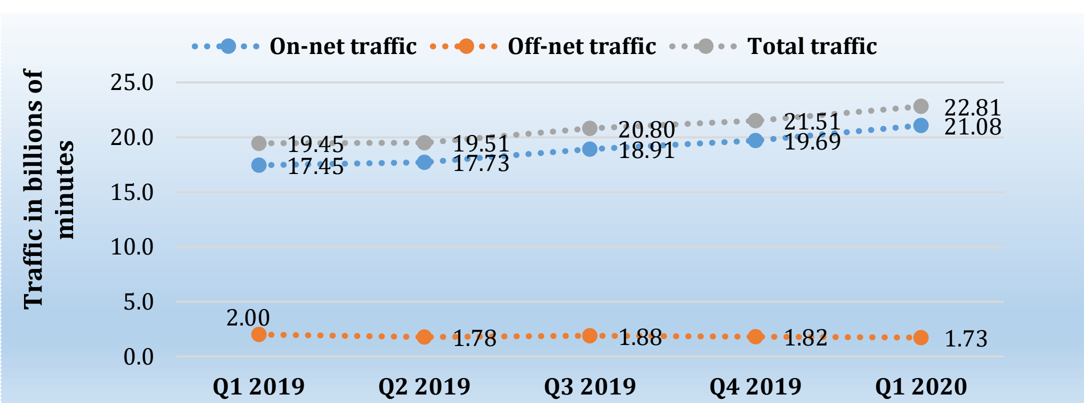
1.2 Mobile Voice Traffic (Domestic)

Off-net traffic decreased from 1.82 billion minutes at the end of Q4 2019 to 1.73 billion minutes at the end of Q1 2020, representing a decline in growth by 5.03%. Year-on-year off-net traffic declined by 13.68%, from 2.00 billion minutes in Q1 2019 to 1.73 billion minutes at the end of Q1 2020.

On-net traffic increased from 19.69 billion minutes in the previous quarter to 21.08 billion minutes in the quarter under review, representing a growth rate of 7.05%. Year-on-year on-net traffic also grew from 17.45 billion minutes in Q1 2019 to 21.08 billion minutes at the end of Q1 2020 representing 20.81% in growth rate.

Total domestic mobile voice traffic recorded a rise from 21.51 billion minutes in the previous quarter to 22.81 billion minutes, in Q1 of 2020 representing 6.03% growth. Year-on-year mobile voice traffic also increased from 19.45 billion minutes at the end of the first quarter of 2019 to 22.81 billion minutes in the first quarter of 2020, representing a growth rate of 17.26% (Figure 4) (Table 4).

Figure 4: Mobile Voice Traffic (Domestic) in Billions of Minutes



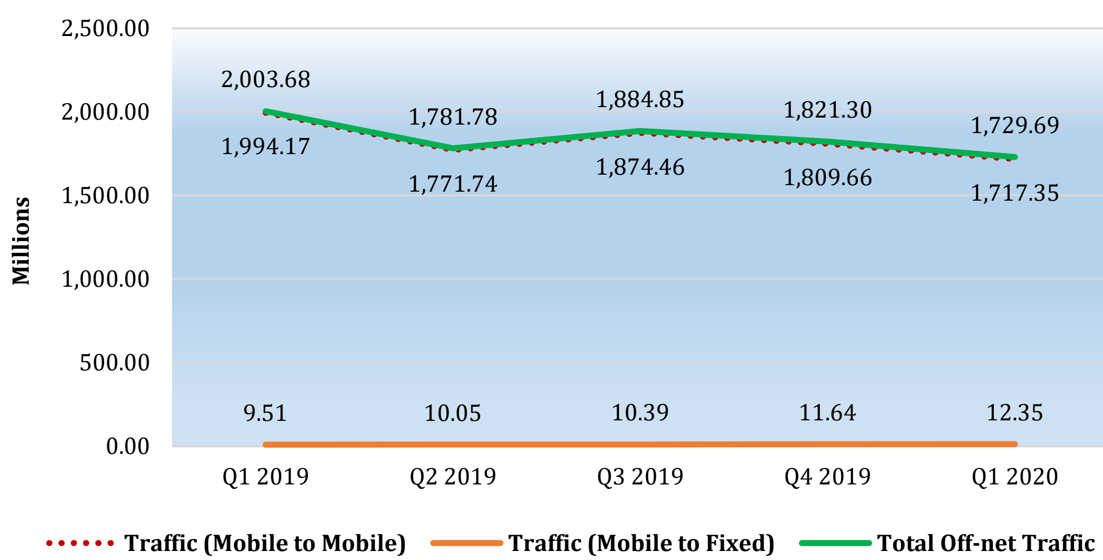
1.2.1 Mobile Off-net Traffic Distribution between Mobile and Fixed Networks

Mobile-to-mobile off-net traffic decreased from 1.81 billion minutes at the end of Q4 2019 to 1.72 billion minutes at the end of Q1 2020 representing a decline of 5.10% in growth.

Year-on-year mobile-to-mobile off-net traffic decreased from 2.00 billion minutes at the end of Q1 2019 to 1.72 billion minutes at the end of Q1 2020, representing a decrease of 13.88% in growth.

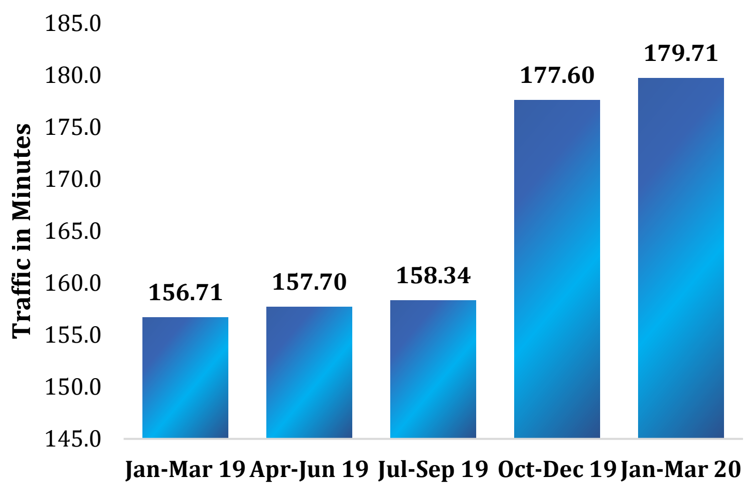
Mobile to fixed off-net traffic rose from 11.64 million minutes to 12.35 million minutes representing 6.05% growth quarter-on-quarter. Year-on-year mobile-to-fixed off-net traffic increased from 9.51 million minutes at the end of Q1 2019 to 12.35 million minutes at the end of Q1 2020, representing 29.78% growth (Figure 5) (Table 5).

Figure 5: Off-net Traffic Distribution between Mobile and Fixed Networks



1.2.2 Minutes of Use (MoU)[4]

Figure 6: Mobile Voice Traffic Minutes of Use (MoU) per subscriptions



Average minutes of use per subscription rose from 177.60 minutes in Q4 2019 to 179.71 minutes (1.19%) in Q1 2020).

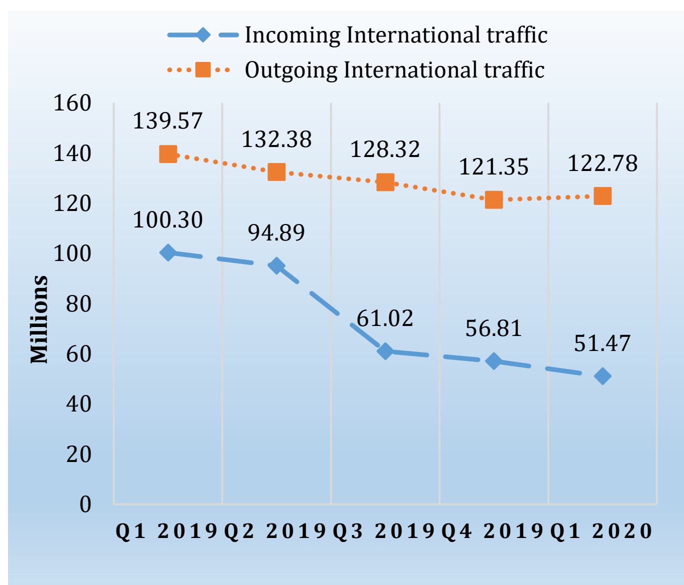
Year-on-year minutes of use per subscription grew from 156.71 minutes in Q1 2019 to 179.71 minutes in Q1 2020, representing 14.68% growth (figure 6) (Table 6).

1.3 International Traffic

During the quarter under review, inbound international traffic dropped from 56.81 million minutes to 51.47 million minutes, representing a decrease of 9.40%. Year-on-year inbound international traffic also declined from 100.30 million minutes to 51.47 million minutes representing a decrease in growth by 48.68%.

Outbound international traffic increased from 121.35 million minutes in Q4 2019 to 122.78 million minutes at the end of Q1 2020, representing an increase of 1.18%. Year- on –year outbound international traffic declined from 139.57 million minutes to 122.78 million minutes, indicating a decrease of 12.03% (Figure 7) (Table 7).

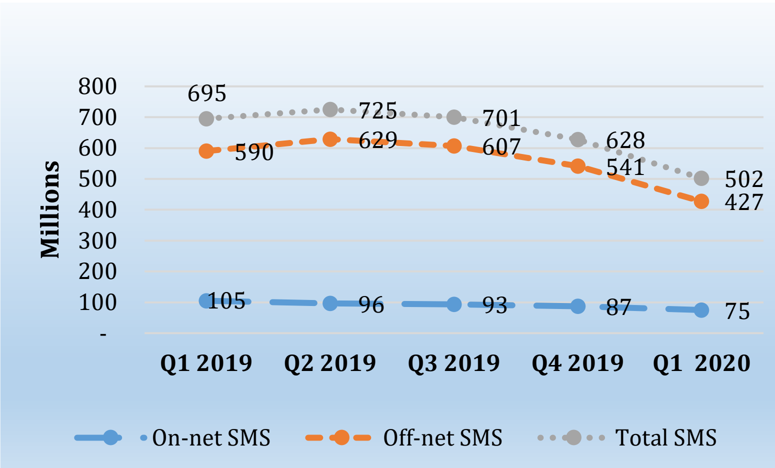
Figure 7: International Traffic in Minutes (Millions)



[4] Minutes of use per subscriptions is calculated by dividing the total average volume of traffic for the quarter with the total average subscriptions for that quarter.

1.4 Short Messages Service (SMS)

Figure 8: Total Number of SMS



The total number of short messages service (SMS) sent at the end of Q1 2020 was 502 million as compared to 628 million in the preceding quarter, recording 20.11% decrease.

Year-on-year SMS counts went down from 695 million in Q1 2019 to 502 million at the end Q1 2020, representing a decrease of 27.79% (figure 8) (Table 8).

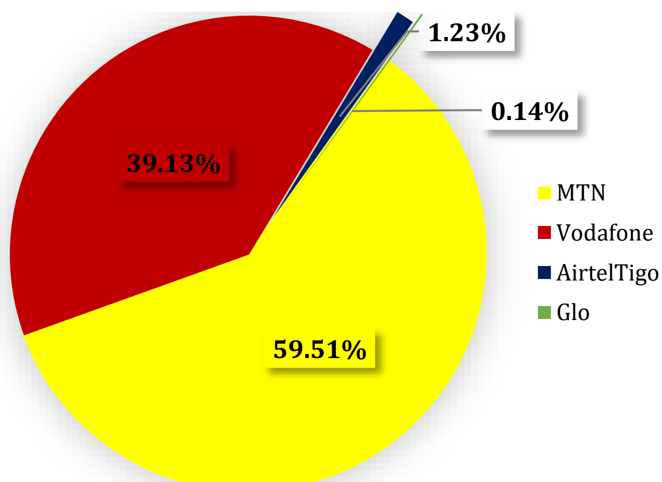
1.4.1 SMS Counts per Operator

The volume of SMS traffic originating from MTN was 298.67 million at the end of Q1 2020; representing a market share of 59.51% of the total, SMS count.

The volume of SMS traffic from Vodafone was 196.37 million, representing a market share of 39.13% of the total SMS count.

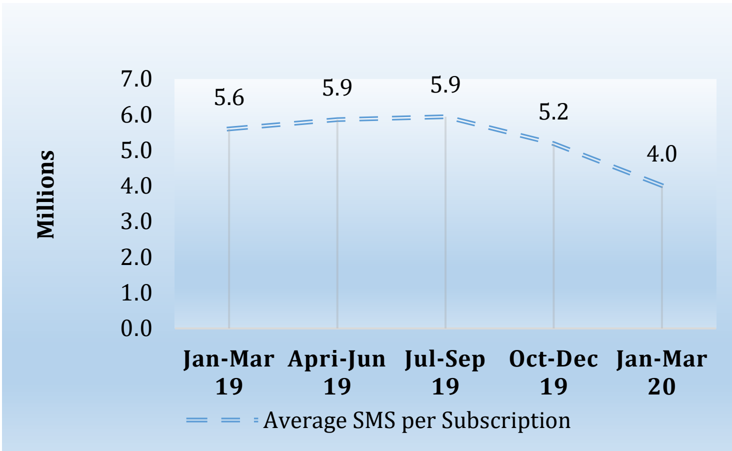
AirtelTigo had an SMS count of 6.17 million, representing 1.23% of the market share of the total SMS count. Glo generated 0.68 million SMS count recording a share of 0.14% (Figure 9) Table 8).

Figure 9: Average SMS per Operator



1.4.2 Average SMS per subscription

Figure 10: Average SMS per Subscription



Average SMS sent per subscription at the end of Q1 2020 was 4.0 SMS, indicating a decrease as compared to the end of Q4 2019, which was 5.2.

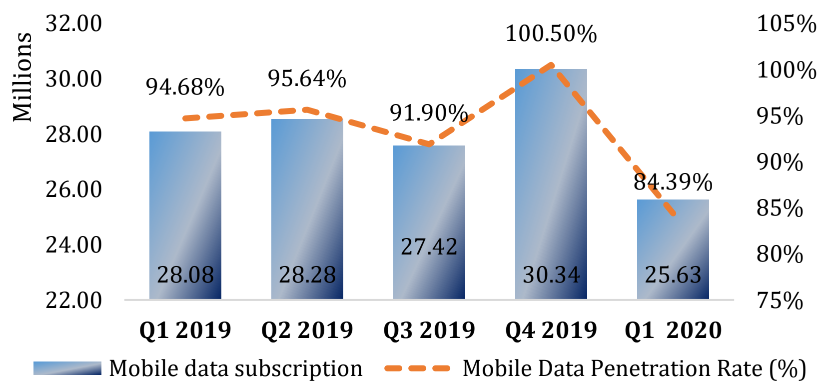
Year-on-year average SMS volume per subscription also decreased from 5.6 at the end of Q1 2019 to 4.0 at the end of Q1 2020, recording a decrease of 28.38% (Figure 10) (Table 9).

1.5 Mobile Data Subscriptions and Penetration Rate (%)

At the end of Q1 2020, mobile data subscriptions decreased by 15.53% from 30.34 million at the end of Q4 2019 to 25.63 million.

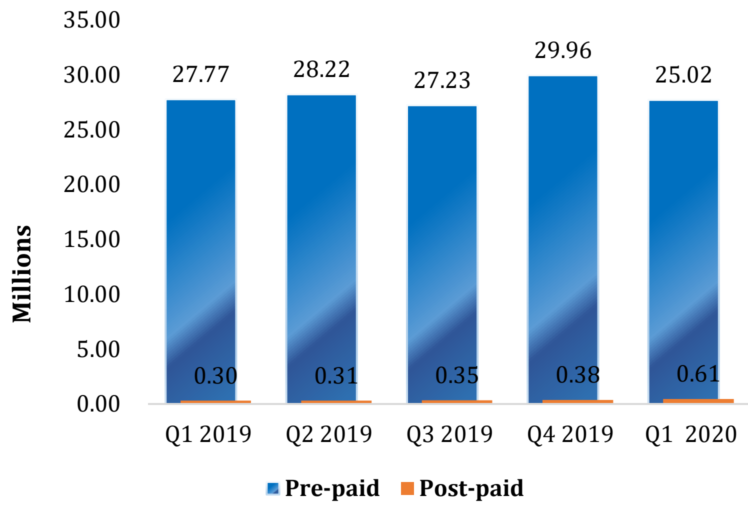
Year-on-year subscriptions recorded a decline in growth by 8.71%, from 28.08 million at the end of Q1 2019 to 25.63 million at the end of Q1 2020 (Figure 11) (Table 10).

Figure 11: Mobile Data Subscriptions and Penetration Rate (%)



1.5.1 Mobile Data Prepaid and Post-paid Subscriptions

Figure 12: Mobile Data Pre-paid and Post-paid Subscriptions

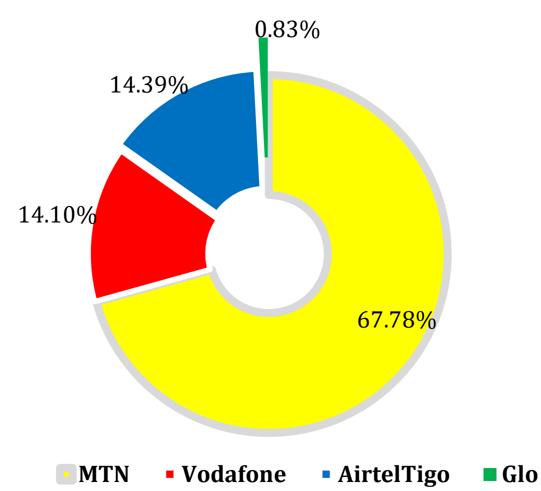


At the end of the first quarter of 2020, mobile data pre-paid subscriptions decreased from 29.96 million to 25.02 million subscriptions, representing 97.63% of the market share.

Post-paid subscriptions recorded a rise from 0.38 million to 0.61 million subscriptions, representing a share of 2.37% at the end of Q1 2020 (Figure: 12) (Table: 10).

1.5.2 Mobile Data Subscriptions per Operator

Figure 13: Mobile Data Subscription per Operator



MTN recorded 17.37 million subscriptions with a market share of 67.78%.

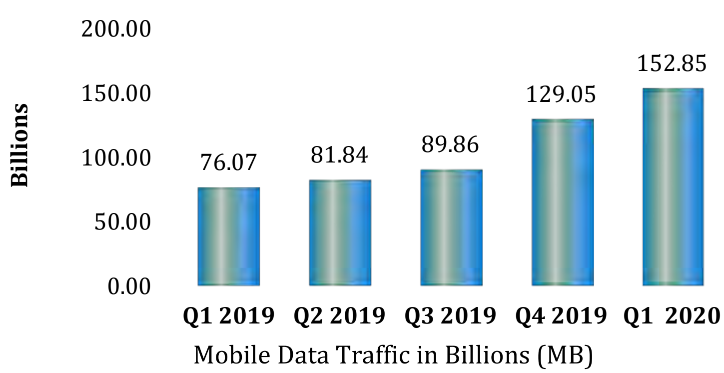
Vodafone also recorded 3.97 million subscriptions with a market share of 15.49%.

AirtelTigo registered 4.05 million in mobile data subscriptions with a market share of 15.81%.

Glo ended the first quarter of 2020 with a total data subscription of 0.23 million and a market share of 0.92% (Figure 13).

1.6 Mobile Data Traffic in Billions of Megabytes (MB)

Figure 14: Mobile Data Traffic in Billions of Megabytes (MB)



At the end of Q1 2020, internet traffic generated by the mobile network operators was 152.85 billion megabytes of data, recording a growth rate of 18.45% as compared to 129.05 at the end Q4 2019.

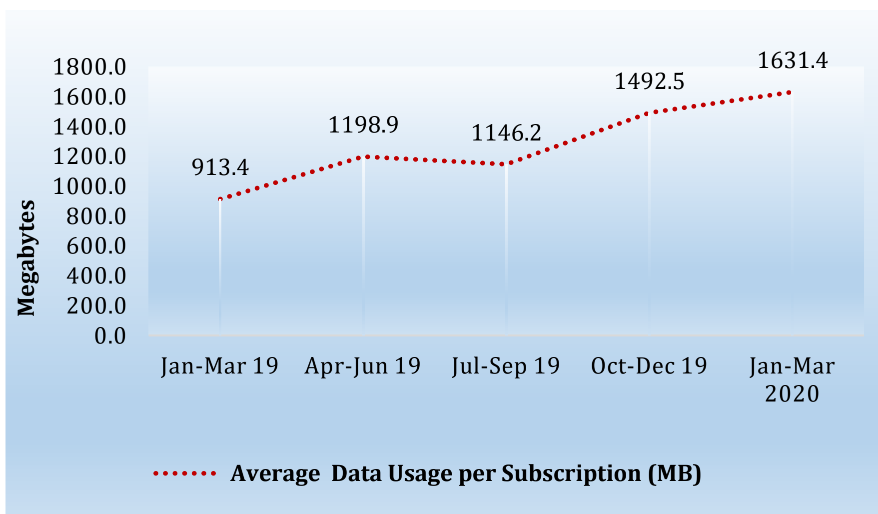
Year-on-year internet traffic increased from 76.07 billion megabytes at the end of Q1 2019 to 152.85 billion megabytes at the end of Q1 2020, representing an increase of 100.93% (Figure 14) (Table 11).

1.6.1 Mobile Internet Usage per Subscription (MB) [5]

The average mobile internet usage per subscription increased from 1492.5 megabytes at the end of Q4 2019 to 2009.9 megabytes at the end of Q1 2020 recording a growth rate of 34.67%.

Year-on- year average data usage per subscription increased from 913.4 at the end of Q1 2019 to 2009.9 at the end of Q1 2020, recording a growth of 120.04% (Figure 15) (Table 12).

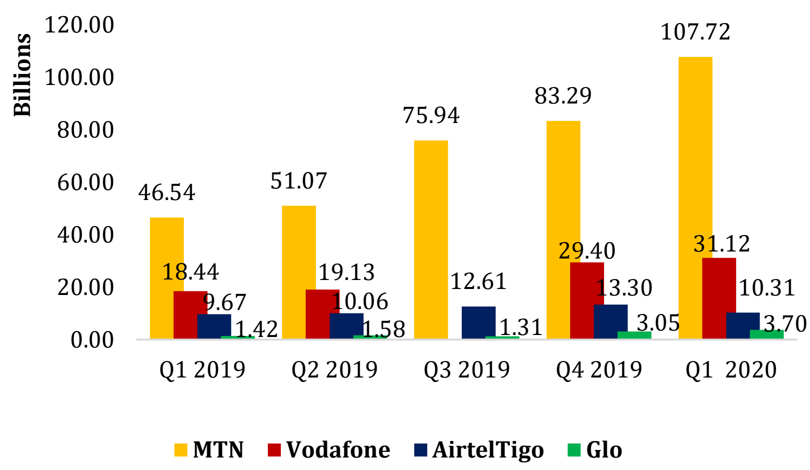
Figure 15:Mobile Data Usage per Subscription (MB)



[5] Mobile Internet usage per subscription is calculated by dividing the total average volume of internet traffic for the quarter with the total average mobile internet subscription for that quarter.

1.6.2 Mobile Internet Traffic (MB) per Operator

Figure 16: Mobile Internet Traffic (MB) per Operator



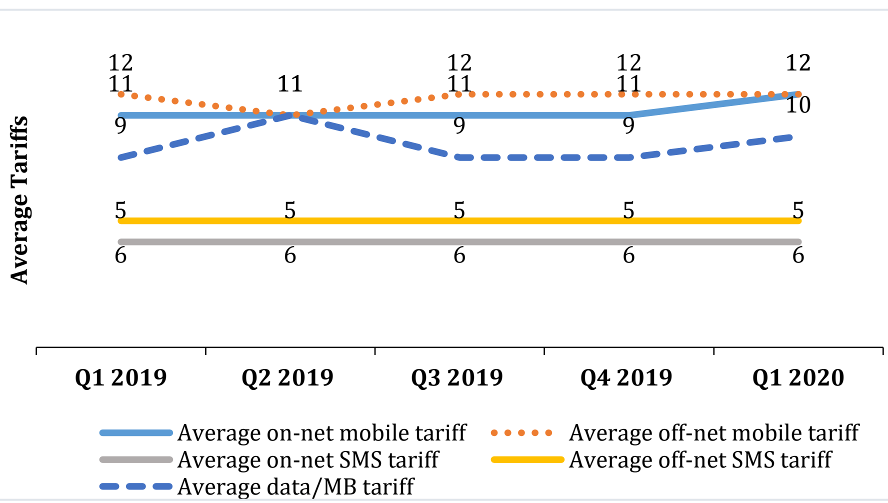
MTN generated the highest volume of internet traffic of 107.72 billion megabytes with a market share of 70.48%, followed by Vodafone with a traffic of 31.12 billion megabytes and a market share of 20.36%.

AirtelTigo also registered 10.31 billion megabytes of data, recording a market share of 6.74%.

Glo recorded the least data usage, generating 3.70 billion megabytes with a market share of 2.42% (Figure 16) Table 13)

1.7 Mobile Telecommunications Service Tariffs

Figure 17: Average Mobile Tariffs per Service



Quarter- on -quarter average tariffs for SMS and off-net mobile have not changed. However, the on-net mobile tariff increased from 0.11 to 0.12 pesewas.

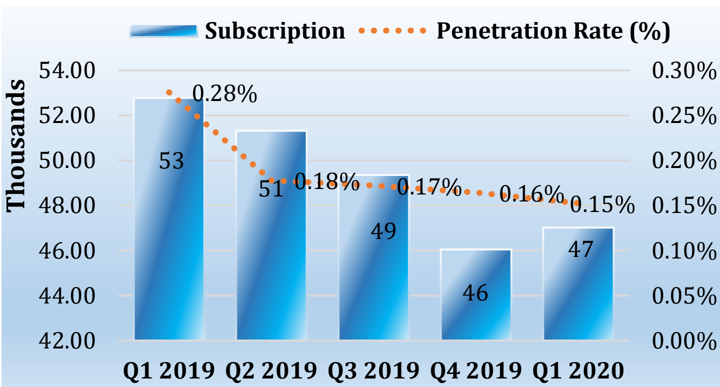
The industry average tariff for year-on-year mobile data increased from 0.09 to 0.10 pesewas per megabyte (Figure 17) (Table 14).

2.0 BROADBAND WIRELESS ACCESS (BWA)

There are five (5) Broadband Wireless Access operators in Ghana namely; BLU Telecommunications, Broadband Home (BBH), Busy Internet, Surfline and Telesol. This quarter's report covers data from BBH, Surfline, Telesol and BLU. It excludes February and March data from BLU.

2.1 BWA Subscriptions and Penetration Rate

Figure 18: BWA Subscription and Penetration Rate



BWA subscriptions increased from 46,050 in the fourth quarter of 2019 to 47,019 in the first quarter of 2020.

Year-on-year subscriptions also decreased from 52,778 in the first quarter of 2019 to 47,019 at the end of the first quarter of 2020, recording a 12.91% decrease.

Penetration rate for broadband wireless access stood at 0.15% (Figure 18) (Table 15).

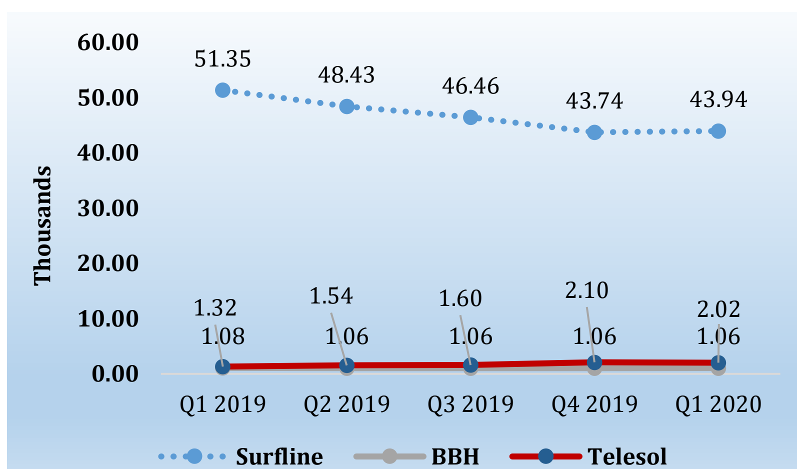
2.1.1 Subscriptions per Broadband Wireless Access (BWA) Operator

Surfline recorded a change in subscriptions from 43,735 at the end of Q4 2019 to 43,939 at the end of the quarter under review, representing an increase of 0.47% and a market share of 93.45%.

Telesol recorded 2,024 subscriptions this quarter with decrease in growth by 3.80% and a market share of 4.30%.

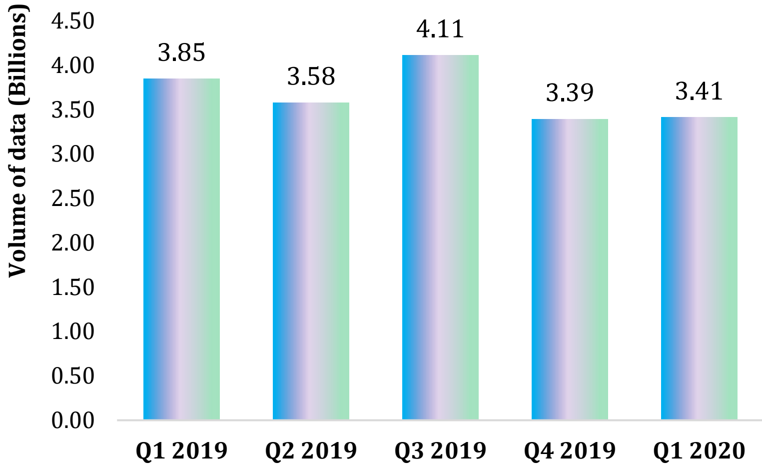
BBH recorded 1,056 subscriptions at the end of Q1 2020 with a market share of 2.25%. (Figure 19) (Table 16).

Figure 19: Subscriptions per Broadband Wireless Access (BWA) Operator



2.2 Broadband Wireless Access (BWA) Volume of Internet Traffic

Figure 20: BWA Internet Traffic in Megabyte (MB)



The total volume of internet traffic generated by the BWAs decreased from 3.39 billion megabytes at the end of Q4 2019 to 3.41 billion megabytes at the end of Q1 2020, indicating a decline in growth of 0.53%.

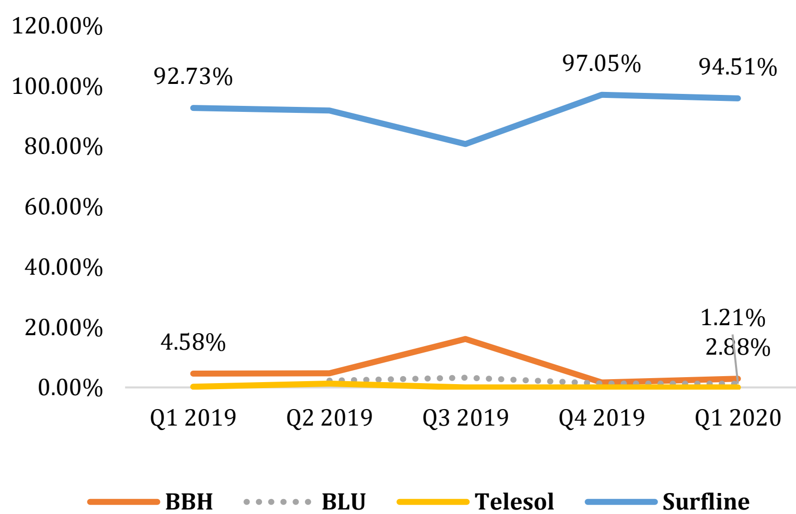
Year-on-year internet traffic also decreased from 3.85 billion megabytes at the end of Q1 2019 to 3.41 billion megabytes at the end of Q1 2020, representing a decrease of 11.32% (Figure 20) (Table 17).

2.2.1 Volume of Broadband Internet Traffic per Operator

Surfline's total volume of internet traffic for the quarter under review was 3.22 billion MB, representing 94.51% of the total volume of traffic.

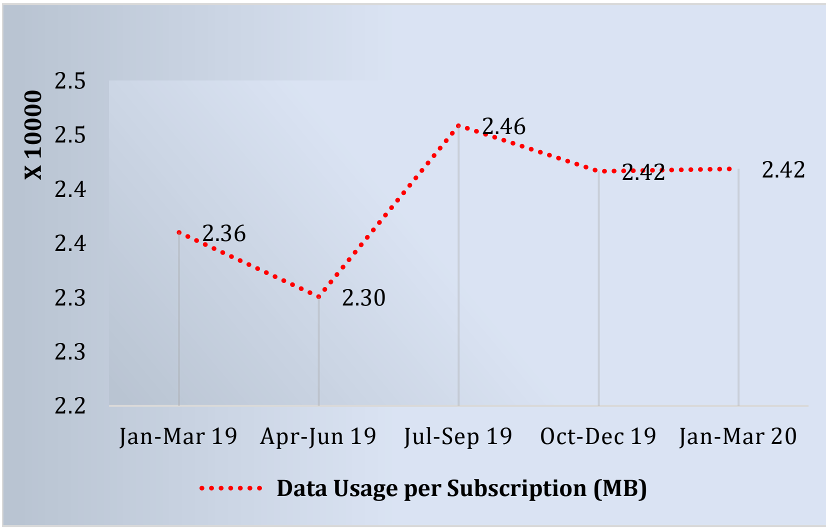
BBH recorded 0.146 billion MB of internet traffic, representing 4.30% of the market. Blu registered 0.040 billion MB with a market share of 1.19% and Telesol recorded 0.002 billion MB and a market share 0.01% (Figure 21) (Table 17).

Figure 21: BWA Internet Traffic per Operator (MB)



2.2.2 Average Monthly Internet Usage per BWA Subscription[6]

Figure 22: Average Internet Usage per BWA Subscription



Average internet usage per BWA subscription increased to 24,189.50 megabytes in the fourth quarter of 2019 from 24,163.90 megabytes in the previous quarter.

Year-on-year internet usage per subscription also increased from 23,602.10 megabytes in the fourth quarter of 2019 to 24,189.50 megabytes at the end of the first quarter of 2020 (Figure 22) (Table 18).

[6] BWA data per subscriptions is calculated by dividing the total average volume of BWA's traffic for the quarter with the total average of BWA subscriptions for that quarter.

3.0 FIXED NETWORK

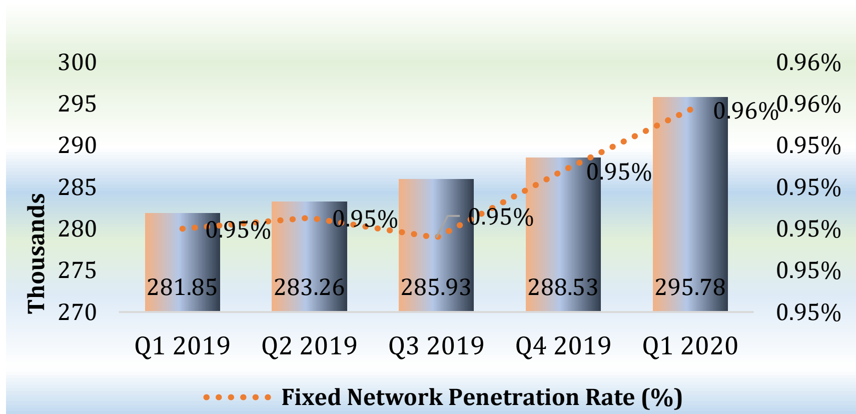
This section analyses the fixed telephone industry in Ghana. Three (3) operators namely Vodafone, AirtelTigo and MTN have been licensed by the NCA to provide this service. However, this report covers Vodafone and AirtelTigo.

3.1Fixed Voice Subscriptions and Penetration Rate

Total number of fixed line subscriptions increased from 288,531 in the fourth quarter of 2019 to 295,775 at the end of the first quarter of 2020. This shows a penetration rate of 0.97% and a growth in subscriptions by 2.51%.

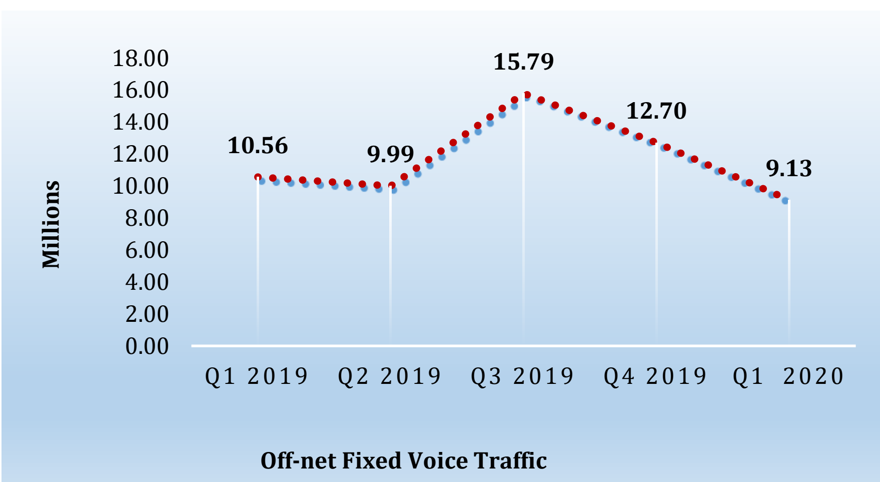
Year-on-year subscription changed from 281,849 in the first quarter of 2019 to 295,775 at the end of the first quarter of 2020, representing a growth of 4.94% (Figure 23) (Table 19).

Figure 23: Fixed Network Voice Subscription and Penetration Rate



3.2 Fixed Voice Network Traffic

Figure 24: Off-net Fixed Voice Traffic



Total volume of off-net traffic decreased by 28.14% during the quarter under review, from 12.70 million minutes to 9.13 million minutes.

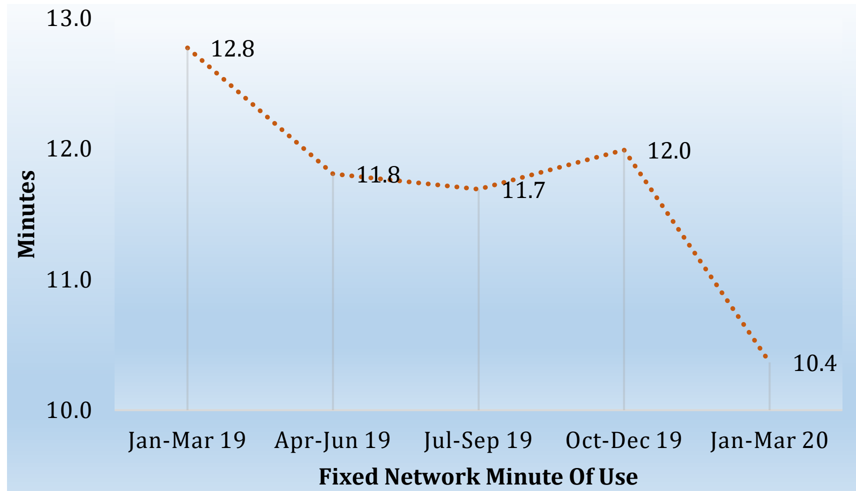
Year-on-year total volume of off-net traffic also decreased by 13.55%, from 10.56 million minutes to 9.13 million minutes (Figure 24) (Table 20).

3.3 Fixed Voice Average Minute of Use[7]

Average fixed voice traffic per subscription decreased from 12.0 to 10.4 minutes at the end of the first quarter of 2020 (13.57%).

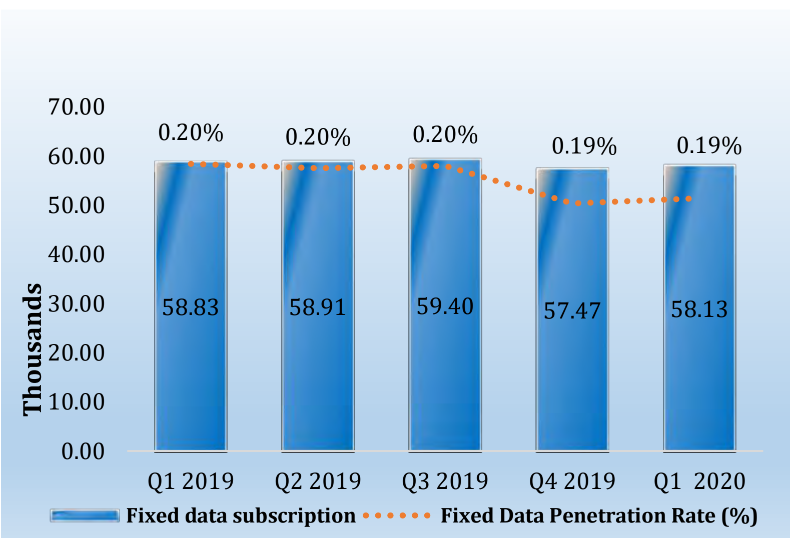
Year-on-year minutes of use per subscription declined from 12.8 minutes in the first quarter of 2019 to 10.4 minutes at the end of the first quarter of 2020 (18.85%) (Figure 25) (Table 21).

Figure 25: Fixed Network Minute of Use



3.4 Fixed Broadband Internet Subscriptions and Penetration

Figure 26: Fixed Broadband Data Subscriptions and Penetration



Fixed Broadband Internet subscriptions increased from 57,465 in the previous quarter to 58,131 in the quarter under review recording an increase of 1.16%.

However, the year-on-year fixed data subscriptions decreased from 58,826 in the preceding year to 58,131 at the end of the first quarter of 2020, recording a fall of 1.18%.

Fixed data penetration rate stood at 0.19% at the end of the first quarter of 2020 (Figure 26) (Table 22).

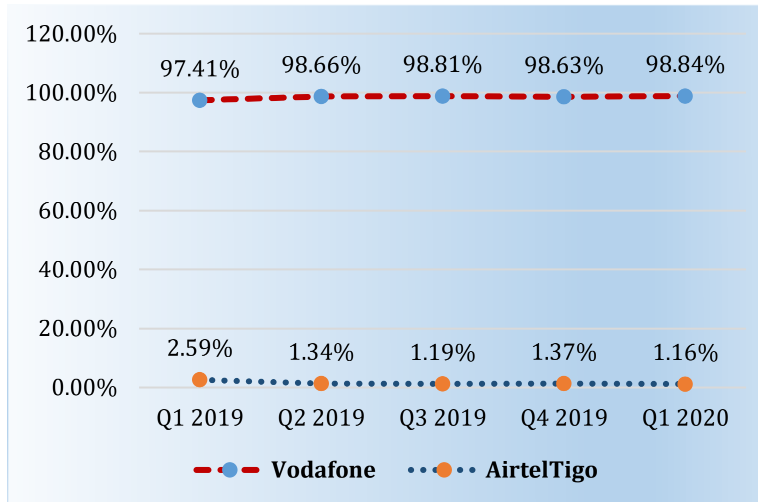
[7] Fixed Network Minutes of use per subscriptions is calculated by dividing the total average volume of traffic for the quarter with the total average fixed subscriptions for that quarter.

3.5 Fixed Broadband Data Subscriptions per Operator

Vodafone's subscriptions at the end of the first quarter of 2020 was 57,458 representing 98.84% of the market share. Its quarter-on-quarter subscriptions increased by 1.38% whilst the year-on-year subscriptions increased by 0.27%.

AirtelTigo recorded 673 at the end of Q1 2020 showing a decrease of 14.59. Year-on-year subscriptions also declined by 57.73% from 1,521 to 673 (Figure 27) (Table 23).

Figure 27: Fixed Broadband Data Market Share per Operator



4.0 BROADCASTING

4.1 Authorised Frequency Modulation (FM) Radio Station

The total number of authorised FM stations in Ghana as at the end of the first quarter of 2020 was 543, indicating an increase from 513 in the previous quarter. The total number of operational FM stations increased from 402 to 403 in the quarter under review.

The Ashanti Region had the highest number of FM stations (73), representing 18.11% of the total number of operational FM stations in the country. The North East on the other hand, recorded the least number of operational FM Stations, with 7 stations, representing 1.73% (Figure 28) (Table 24).

Figure 28: Regional distribution of authorised FM stations as at end of Q1 2020

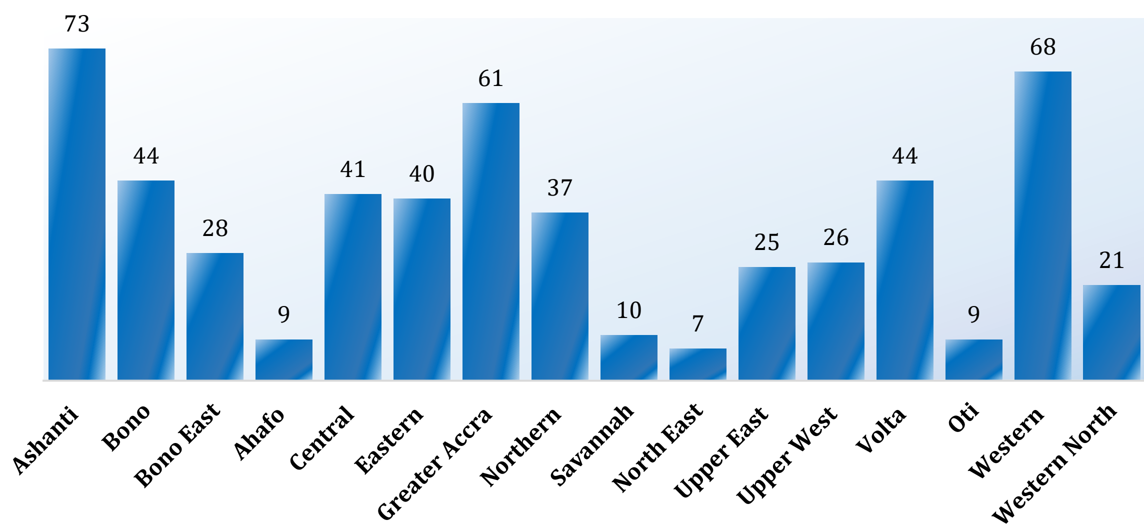


Figure 29: Regional distribution of On-air and Off-air FM stations as at end of Q1 2020

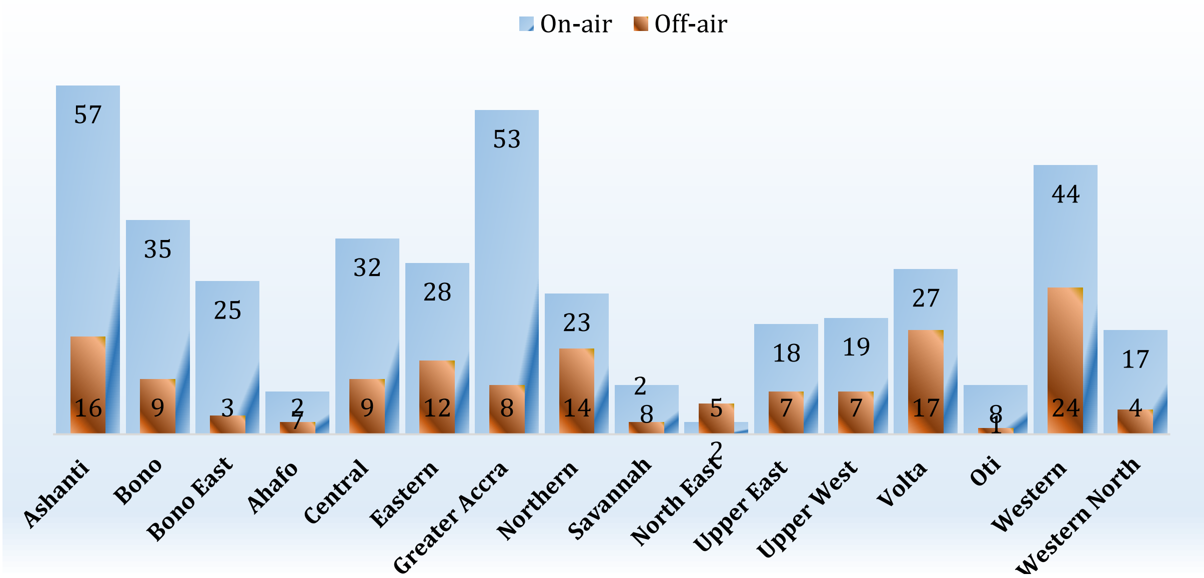
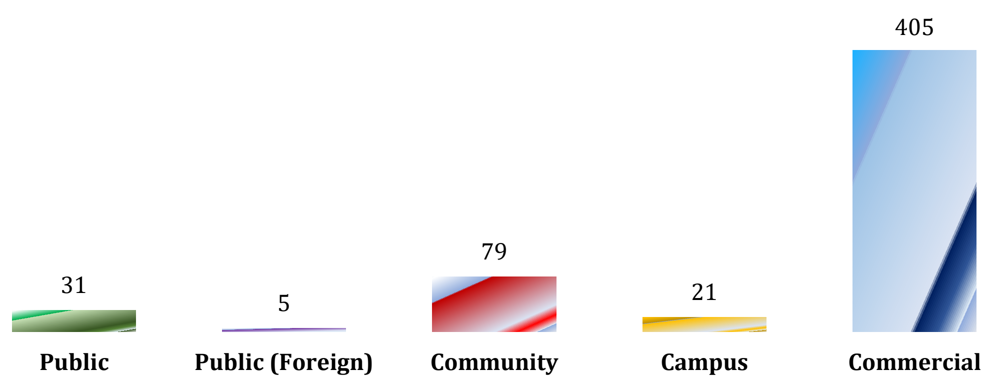


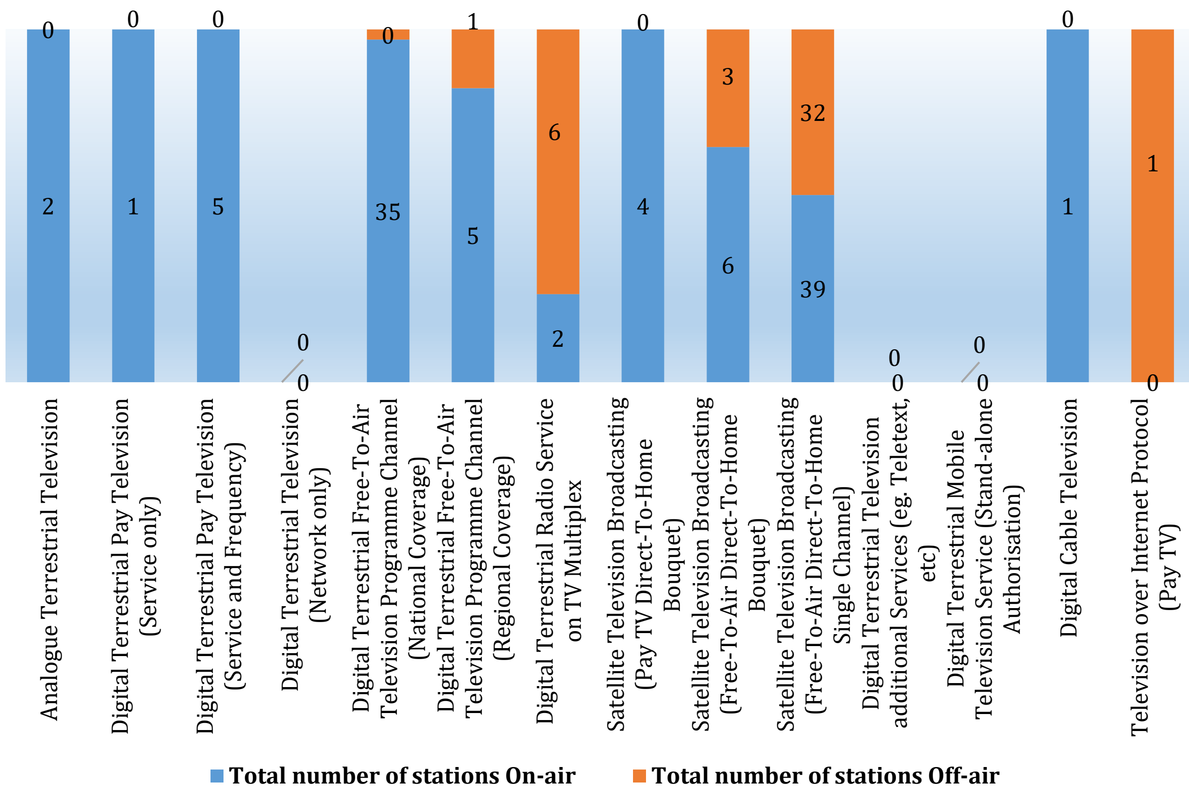
Figure 30: Purpose of Authorised Radio Stations as at Q1 2020



4.2 Authorised Television Stations

The total number of authorised TV stations in Ghana at the end of first quarter was 144, out of which 101 were operational (Figure 31) (Table 26).

Figure 31: Distribution of On-Air and Off-Air TV Stations as at end of Q1 2020



Appendix A (List of Tables)

Table 1: Mobile Voice Subscriptions and Penetration Rate

Subscription	Q1 2019	Q2 2019	Q3 2019	Q4 2019	Q1 2020
Mobile Subscription	41,602,324	41,113,131	40,460,203	40,857,077	41,959,298
Mobile Subscription Growth rate (%)	1.63%	-1.18%	-1.59%	0.98%	2.70%
Net additions	667,449	- 489,193	-652,928	396,874	1,102,221
Net additions Growth Rate (%)	-24.86%	-173.29%	-33.47%	-160.78%	177.73%
Population[8]	29,652,054	29,830,322	30,009,663	30,190,081	30,371,584
Penetration Rate (%)	140.30%	137.80%	134.80%	135.30%	138.15%

Table 2: Mobile Voice Subscriptions and Market Share per Operator

Mobile Network Operator		Q1 2019	Q2 2019	Q3 2019	Q4 2019	Q1 2020
MTN	Subscriptions	20,776,731	21,342,887	21,569,033	22,555,848	23,945,672
	Market Share (%)	49.94%	51.91%	53.31%	55.21%	57.07%
Vodafone	Subscriptions	10,302,566	9,974,337	9,407,144	9,122,403	8,787,464
	Market Share (%)	24.76%	24.26%	23.25%	22.33%	20.94%
AirtelTigo	Subscriptions	9,799,138	9,074,284	8,764,093	8,453,053	8,498,008
	Market Share (%)	23.55%	22.07%	21.66%	20.69%	20.25%
Glo	Subscriptions	723,889	721,623	719,933	725,773	728,154
	Market Share (%)	1.74%	1.76%	1.78%	1.78%	1.74%
Total Industry Subscription		41,602,324	41,113,131	40,460,203	40,857,077	41,959,298

Table 3: Prepaid and Post-paid Voice Subscriptions and Market Share

Subscription	Q1 2019	Q2 2019	Q3 2019	Q4 2019	Q1 2020
Prepaid	41,052,360	40,573,825	39,861,332	40,216,604	41,287,248
Market Share	98.68%	98.69%	98.52%	98.43%	98.40%
Post-paid	549,964	539,306	598,871	640,473	672,050
Market Share	1.32%	1.31%	1.48%	1.57%	1.60%
Total mobile subscription	41,602,324	41,113,131	40,460,203	40,857,077	41,919,298

Table 4: Mobile Voice Traffic (Domestic) in Billions of Minutes

[8] Population of Ghana was estimated based on the 2010 Population Census figure 24,658,823 published by Ghana Statistical Service (GSS) with 0.2% projected monthly growth rate.

Traffic	Q1 2019	Q2 2019	Q3 2019	Q4 2019	Q1 2020
Traffic(Off-net)	2,003,832,344	1,781,783,125	1,884,872,036	1,821,302,871	1,729,692,075
Share (%)	10.30%	9.13%	9.06%	8.47%	7.58%
Growth (%)	-7.67%	-11.08%	5.79%	-3.37%	-5.03%
Traffic(On-net)	17,445,962,884	17,726,139,301	18,913,483,330	19,689,209,019	21,077,054,513
Share (%)	89.70%	90.87%	90.94%	91.53%	92.42%
Growth (%)	3.30%	1.61%	6.70%	4.10%	7.05%
Total traffic	19,449,795,228	19,507,922,426	20,798,355,366	21,510,511,890	22,806,746,588

Table 5: Mobile Off-net Traffic Distribution between Mobile and Fixed Network

Breakdown of Off-net Traffic	Q1 2019	Q2 2019	Q3 2019	Q4 2019	*Q1 2020*
Mobile to Mobile					
Traffic	1,994,167,300	1,771,736,664	1,874,456,752	1,809,660,639	1,717,345,900
Share (%)	99.53%	99.44%	99.45%	99.36%	99.29%
Growth (%)	-7.73%	-11.15%	5.80%	-3.46%	-5.10%
Mobile to Fixed					
Traffic	9,512,847	10,046,461	10,393,342	11,642,232	12,346,175
Share (%)	0.47%	0.56%	0.55%	0.64%	0.71%
Growth (%)	4.99%	5.61%	3.45%	12.02%	6.05%
Total Off-net Traffic	2,003,680,147	1,781,783,125	1,884,850,094	1,821,302,871	1,729,692,075

Table 6: Mobile Voice Traffic Minutes of Use (MoU) per Subscriptions

Traffic	Jan-Mar 19	Apr-Jun 19	Jul-Sep 19	Oct-Dec 19	Jan-Mar 20
Total mobile voice traffic	6,483,265,076	6,502,640,809	6,655,447,392	7,170,170,630	7,497,739,785
Mobile voice subscription	41,370,572	41,222,786	41,133,345	40,372,522	41,713,382
Minutes of Use (MoU) per Subscription	156.71	157.70	158.34	177.60	179.71
MoU growth rate (%)	0.21%	0.63%	0.41%	12.16%	1.19%

Table 7: International Traffic

Traffic	Q1 2019	Q2 2019	Q3 2019	Q4 2019	Q1 2020
Incoming International Traffic	100,300,254	94,897,262	61,018,472	56,814,366	51,473,267
Growth (%)	-10.69%	-5.39%	-35.70%	-6.89%	-9.40%
Outgoing International Traffic	139,577,839	132,383,628	128,321,232	121,347,629	122,784,014
Growth (%)	-5.41%	-5.15%	-3.07%	-5.43%	0.01%

Mobile Operators	Q1 2019	Q2 2019	Q3 2019	Q4 2019	*Q1 2020*
Off- net SMS					
MTN	39,555,977	32,640,281.0	37,306,986	32,595,204	*26,738,362*
Vodafone	61,060,118	59,623,032	51,763,218	51,687,036	*46,047,085*
AirtelTigo	3,309,986	3,035,708	3,119,560	2,260,095	*1,876,349*
Glo	973,572	1,063,280	920,272	231,790	*654,659*
Total	**104,899,653**	**96,362,301**	**93,110,036**	**86,774,125**	***75,316,455***
On-net SMS					
MTN	309,840,024	313,244,554.0	330,421,743	305,060,095	*271,939,193*
Vodafone	264,511,026	302,909,431	265,778,541	228,752,668	*150,323,428*
AirtelTigo	15,685,847	12,408,355	11,121,701	7,655,834	*4,296,095*
Glo	89,345	106,512	118,848	12,461	*26,331*
Total	**590,126,242**	**628,668,852**	**607,440,833**	**541,481,058**	***426,585,047***
Total					
MTN	349,396,001	345,884,835	367,728,729	337,655,299	*298,677,555*
Vodafone	325,571,144	362,532,463	317,541,759	280,439,704	*196,370,513*
AirtelTigo	18,995,833	15,444,063	14,241,261	9,915,929	*6,172,444*
Glo	1,062,917	1,169,792	1,039,120	244,251	*680,990*
Total	**695,025,895**	**725,031,153**	**700,550,869**	**628,255,183**	***501,901,502***

Table 8: Total Number of SMS per Mobile Network Operator in Millions

Table 9: Average SMS per Subscription

	Jan-Mar 19	Apr-Jun 19	Jul-Sep 19	Oct-Dec 19	Jan-Mar 20
Total SMS	231,675,298	241,677,051	242,015,054	209,418,394	167,300,501
Mobile Subscription	41,370,572	41,222,786	41,133,345	40,372,522	41,713,382
Average SMS per Subscription	5.6	5.9	5.9	5.2	4.0

Table 10: Mobile Data Subscriptions (Prepaid/Postpaid)

Mobile Data Subscriptions		**Q1 2019**	**Q2 2019**	**Q3 2019**	**Q4 2019**	**Q1 2020**
Prepaid	Subscriptions	27,773,900	28,223,237	27,228,060	29,960,572	25,021,986
	Market Share (%)	98.93	98.93	98.73	98.75	97.63
Post-paid	Subscriptions	301,336	305,230	350,604	380,721	608,454
	Market Share (%)	1.07	1.07	1.27	1.25	2.37
Total mobile data subscriptions		**28,075,236**	**28,528,467**	**27,578,664**	**30,341,293**	**25,630,440**

Table 11: Mobile Data Traffic in Billions of Megabytes (MB)

Mobile Operator	**Q1 2019**	**Q2 2019**	**Q3 2019**	**Q4 2019**	**Q1 2020**
Mobile data usage (MB)	76,070,215,470	81,835,188,472	89,863,150,227	129,046,495,642	152,849,184,693

Table 12: Mobile Internet Usage per Subscription (MB)

Mobile Operator	Jan-Mar 19	Apr-Jun 19	Jul-Sep 19	Oct-Dec 19	***Jan-Mar 2020***
Mobile data usage (MB)	25,356,738,490	32,978,998,942	*31,861,047,810*	*43,015,498,547*	*50,949,728,231*
Total Subscription	27,759,351	27,507,363	27,798,219	28,820,282	25,348,558
Average Data Usage per Subscription (MB)	913.4	1198.9	1146.2	1492.5	2009.9

Table 13: Mobile Data Traffic (MB) per Operator

Mobile Operator	***Q1 2019***	***Q2 2019***	***Q3 2019***	***Q4 2019***	***Q1 2020***
MTN	*46,540,643,000*	*51,065,520,052*	*75,944,166,843*	*83,293,912,024*	*107,722,838,772*
	61.18%	*62.40%*	*84.51%*	*64.55%*	*70.48%*
Vodafone	*18,435,292,768*	*19,125,129,557*	-	*29,399,350,038*	*31,118,840,152*
	24.23%	*23.37%*	-	*22.78%*	*20.46%*
AirtelTigo	*9,670,376,838*	*10,059,886,695*	*12,605,850,897*	*13,302,050,366*	*10,309,353,208*
	12.71%	*12.29%*	*14.03%*	*10.31%*	*6.74%*
Glo	*1,423,902,864*	*1,584,652,168*	*1,313,132,487*	*3,051,183,214*	*3,698,152,561*
	1.87%	*1.94%*	*1.46%*	*2.36%*	*2.42%*
Total Industry Traffic (MB)	*76,070,215,470*	*81,835,188,472*	*89,863,150,227*	*129,046,495,642*	*152,849,184,693*

Table 14: Average Mobile Tariff per Service (GHp)

Tariff	Q1 2019	Q2 2019	Q3 2019	Q4 2019	Q1 2020
Average on-net mobile tariff	0.11	0.11	0.11	0.11	0.12
Average off-net mobile tariff	0.12	0.12	0.12	0.12	0.12
Average on-net SMS tariff	0.05	0.05	0.05	0.05	0.05
Average off-net SMS tariff	0.06	0.06	0.06	0.06	0.06
Average data/Mb tariff	0.09	0.11	0.09	0.09	0.10

Table 15: BWA Data Subscriptions and Penetration

BWA Operator	Q1 2019	Q2 2019	Q3 2019	Q4 2019	Q1 2020
Subscription	52,778	51,319	49,355	46,050	47,019
Growth rate (%)	-34.50%	-2.76%	-3.83%	-6.70%	2.10%
Net Additions	-27,803	-1,459	-1,964	-3,305	969
Population	29,652,054	29,830,322	30,009,663	30,190,081	30,371,584
Penetration Rate (%)	0.18%	0.17%	0.16%	0.15%	0.15%

Table 16: Subscriptions per Broadband Wireless Access (BWA) Operator

BWA operator	Subscription/Market Share	Q1 2019	Q2 2019	Q3 2019	Q4 2019	Q1 2020
Surfline	Subscription	51,350	48,432	46,462	43,735	43,939
	Market share (%)	94.92%	94.37%	94.14%	94.97%	93.45%
Telesol	Subscription	1,323	1,543	1,600	2,104	2,024
	Market share (%)	2.45%	3.01%	3.24%	4.57%	4.30%
BBH	Subscription	1,083	1,060	1,058	1,058	1,056
	Market share (%)	2.00%	2.07%	2.14%	2.30%	2.25%
BLU	Subscription	345	284	235	211	-
	Market share (%)	0.64%	0.55%	0.48%	0.46%	-
Industry Total		**54,101**	**51,319**	**49,355**	**46,050**	**47,019**

Table 17: Data Traffic (MB) per Broadband Wireless Access (BWA) Operator

BWA operator		Q1 2019	Q2 2019	Q3 2019	Q4 2019	Q1 2020
Surfline	Data usage (MB)	3,568,114,190	3,286,417,500	3,320,389,950	3,294,049,738	3,224,680,819
	Market share (%)	92.73%	91.82%	80.71%	97.05%	94.51%
BBH	Data usage (MB)	176,264,864	166,853,980	660,855,380	55,572,920	146,550,970
	Market share (%)	4.58%	4.66%	16.06%	1.64%	4.30%
BLU	Data usage (MB)	96,217,583	80,785,806	132,424,093	44,302,566	40,655,523
	Market share (%)	-	2.26%	3.22%	1.31%	1.19%
Telesol	Data usage (MB)	7,193,006	45,093,461	183,264	213,833	217,302
	Market share (%)	0.19%	1.26%	0.004%	0.006%	0.01%
Industry Total (MB)		**3,847,789,643**	**3,579,150,748**	**4,113,852,687**	**3,394,139,057**	**3,412,104,614**

Table 18: Internet Usage per BWA Subscriptions (MB)

BWA Operator	Jan-Mar 19	Apr-Jun 19	Jul-Sep 19	Oct-Dec 19	Jan-Mar 20
Volume of data traffic	1,280,198,879	1,192,833,362	1,236,648,960	1,193,050,112	1,137,368,205
Subscription	54,241	51,845	50,294	49,373	47,019
Data Usage per Subscription (MB)	23,602.10	23,007.70	24,588.40	24,163.90	24,189.54

Table 19: Fixed Network Voice Subscriptions and penetration

Fixed Operator	Q1 2019	Q2 2019	Q3 2019	Q4 2019	Q1 2020
Vodafone	272,661	273,398	279,247	280,321	289,106
	96.74%	96.52%	97.66%	97.15%	97.75%
AirtelTigo	9,188	9,863	6,684	8,210	6,669
	3.26%	3.48%	2.34%	2.85%	2.25%
Total industry subscription	281,849	283,261	285,931	288,531	295,775
Population	29,652,054	29,830,322	30,009,663	30,190,081	30,371,584
Fixed Network Penetration Rate (%)	0.95%	0.95%	0.95%	0.96%	0.97%

Table 20: Fixed Network Volume of Traffic in Minutes

Traffic	Q1 2019	Q2 2019	Q3 2019	Q4 2019	Q1 2020
On-net Fixed voice traffic	-	-	-	-	-
Off-net fixed voice traffic	10,558,609	9,994,343	15,786,823	12,702,490	9,127,979
Total Fixed Voice Traffic	10,558,609	9,994,343	15,786,823	12,702,490	9,127,979

Table 21: Fixed Network Minute of Use per Subscriptions

Traffic	Jan-Mar 19	Apr-Jun 19	Jul-Sep 19	Oct-Dec 19	Jan-Mar 2020
Total Fixed Voice Traffic	3,519,536	3,331,448	3,312,569	3,446,917	3,042,660
Subscription	275,512	282,091	283,366	285,429	293,511
Minutes of Use per Subscription (MoU)	12.8	11.8	11.7	12.1	10.4
Growth Rate	8.17%	1.01%	-1.00%	3.29%	-13.57%

Table 22 : Fixed Broadband Data Subscriptions and Penetration

Fixed network operator	Q1 2019	Q2 2019	Q3 2019	Q4 2019	Q1 2020
Vodafone	57,305	58,123	58,697	56,677	57,458
	97.41%	98.66%	98.81%	98.63%	99%
Airtel	1,521	788	704	788	673
	2.59%	1.34%	1.19%	1.37%	1%
Total fixed data subscription	58,826	58,911	59,401	57,465	58,131
Population	29,652,054	29,830,322	30,009,663	30,190,081	30,371,584
Fixed Data penetration rate (%)	0.20%	0.20%	0.20%	0.19%	0.19%

Table 23: Fixed Network Data Subscriptions per Operator

Fixed network operator	Q1 2019	Q2 2019	Q3 2019	Q4 2019	Q1 2020
Vodafone	57,305	58,123	58,697	56,677	57,458
	97.41%	98.66%	98.81%	98.63%	98.84%
AirtelTigo	1,521	788	704	788	673
	2.59%	1.34%	1.19%	1.37%	1.16%

Table 24: Regional Distribution of FM Stations by Purpose (Q1 2020)

Name of Regions	Public	Public (Foreign)	Community	Campus	Commercial
Ashanti	2	1	8	3	59
Bono	1	-	3	2	38
Bono East	2	-	4	-	22
Ahafo	-	-	1	-	8
Central	2	-	9	3	27
Eastern	2	-	7	1	30
Greater Accra	2	3	4	4	46
Northern	3	-	8	2	24
Savannah	3	-	4	-	3
North East	1	-	4	-	2
Upper East	2	-	8	1	14
Upper West	2	-	7	2	15
Volta	3	-	4	1	36
Oti	1	-	2	-	6

Western	2	1	4	2	57
Western North	3	-	-	-	18
Total	**31**	**5**	**79**	**21**	**403**

Table 25: Regional Distribution of FM Stations as at the end of Q1 2020

Name Of Regions	Authorised FM Stations (End Of Q1 2020)	FM Stations In Operation (Q1 2020)
Ashanti	73	57
Bono	44	35
Bono East	28	25
Ahafo	9	7
Central	41	32
Eastern	40	28
Greater Accra	61	53
Northern	37	23
Savannah	10	8
North East	7	2
Upper East	25	18
Upper West	26	19
Volta	44	27
Oti	9	8
Western	68	44
Western North	21	17
Total	**543**	**403**

Table 26: Authorised TV Services in Ghana as at end of Q1 2020

Types of TV stations	Authorised TV Stations (Q4 2019)	Authorised TV Stations (Q1 2020)	No. of TV Stations in Operation (Q1 2020)	No. of TV Stations not in Operation (Q1 2020)
Analogue Terrestrial Television	2	2	2	0
Digital Terrestrial Pay Television (Service only)	1	1	1	0
Digital Terrestrial Pay Television (Service and Frequency)	5	5	5	0
Digital Terrestrial Television (Network only)	0	0	0	0
Digital Terrestrial Free-To-Air Television Programme Channel (National Coverage)	35	35	35	0

Digital Terrestrial Free-To-Air Television Programme Channel (Regional Coverage)	6	6	5	1
Digital Terrestrial Radio Service on TV Multiplex	8	8	2	6
Satellite Television Broadcasting (Pay TV Direct-To-Home Bouquet)	5	4	4	0
Satellite Television Broadcasting (Free-To-Air Direct-To-Home Bouquet)	9	9	6	3
Satellite Television Broadcasting (Free-To-Air Direct-To-Home Single Channel)	66	71	39	32
Digital Terrestrial Television additional Services (eg. Teletext, etc)	0	0	0	0
Digital Terrestrial Mobile Television Service (Stand-alone Authorisation)	0	0	0	0
Digital Cable Television	1	1	1	0
Television over Internet Protocol (Pay TV)	1	1	0	1
Subscription Management Service for a Satellite Television Broadcasting (Pay TV Direct-To-Home Bouquet)	1	1	1	0
Total	**140**	**144**	**101**	**43**

Source: NCA, 2019

Disclaimer:

The National Communications Authority has been diligent to ensure the data in this bulletin are accurate. However, the Authority is not liable for inconsistencies, errors, and gaps in any data or information contained in this bulletin, which is dependent upon the various licensees data submissions to the Authority.

NCA CONTACTS AND PRESENCE COUNTRYWIDE

The Authority currently has eight (8) regional offices to support its operations. Their addresses are listed below

- ### Accra, Head Office

National Communications Authority,
NCA Tower, No 6 Airport City
Close to the Marina Mall
P. O. Box CT 1568, Cantonments, Accra
Tel: +233 (0) 302 776621, 771701
Fax: +233 (0) 302 763449
E-mail: info@nca.org.gh
Complaints: +233 (0) 30 701 1419
complaints@nca.org.gh
Website: www.nca.org.gh

- ### Accra Office

National Communications Authority
1st Rangoon Close,
Switchback Road, Cantonment, Accra
P. O. Box CT 1568,
Cantonment, Accra
Tel: +233 (0) 553 369862, (0) 553 432215
E-mail: complaints.accra@nca.org.gh

- ### Bolgatanga Office

National Communications Authority,
H/No ZB 70, Zorbisi Estates
Bolgatanga, Upper East Region
Tel: +233 (0) 3820 21141
E-mail: complaints.bolgatanga@nca.org.gh

- ### Ho Office

National Communications Authority,
H/No A6/29, Stadium Road
P. O. Box HP1576, Ho, Volta Region
Tel: +233 (0) 3620 26339
E-Mail: complaints.ho@nca.org.gh

- ### Koforidua Office

National Communications Authority,
Residency Road
Behind New Juabeng Municipal Library
Private Mail Bag, Koforidua, Eastern Region
Tel: +233 (0) 3420 28378, 28380, 28382
E-Mail: complaints.koforidua@nca.org.gh

- ### Kumasi Office

National Communications Authority,
Danyame, Kumasi
P. O. Box KS 10768, Kumasi,
Ashanti Region, Ghana
Tel: + 233 (0) 32 202 0014 / 32 202 0018 / 32 202 0019
Fax: (+233) 32 002 0064
E-Mail: complaints.kumasi@nca.org.gh

- ### Sunyani Office

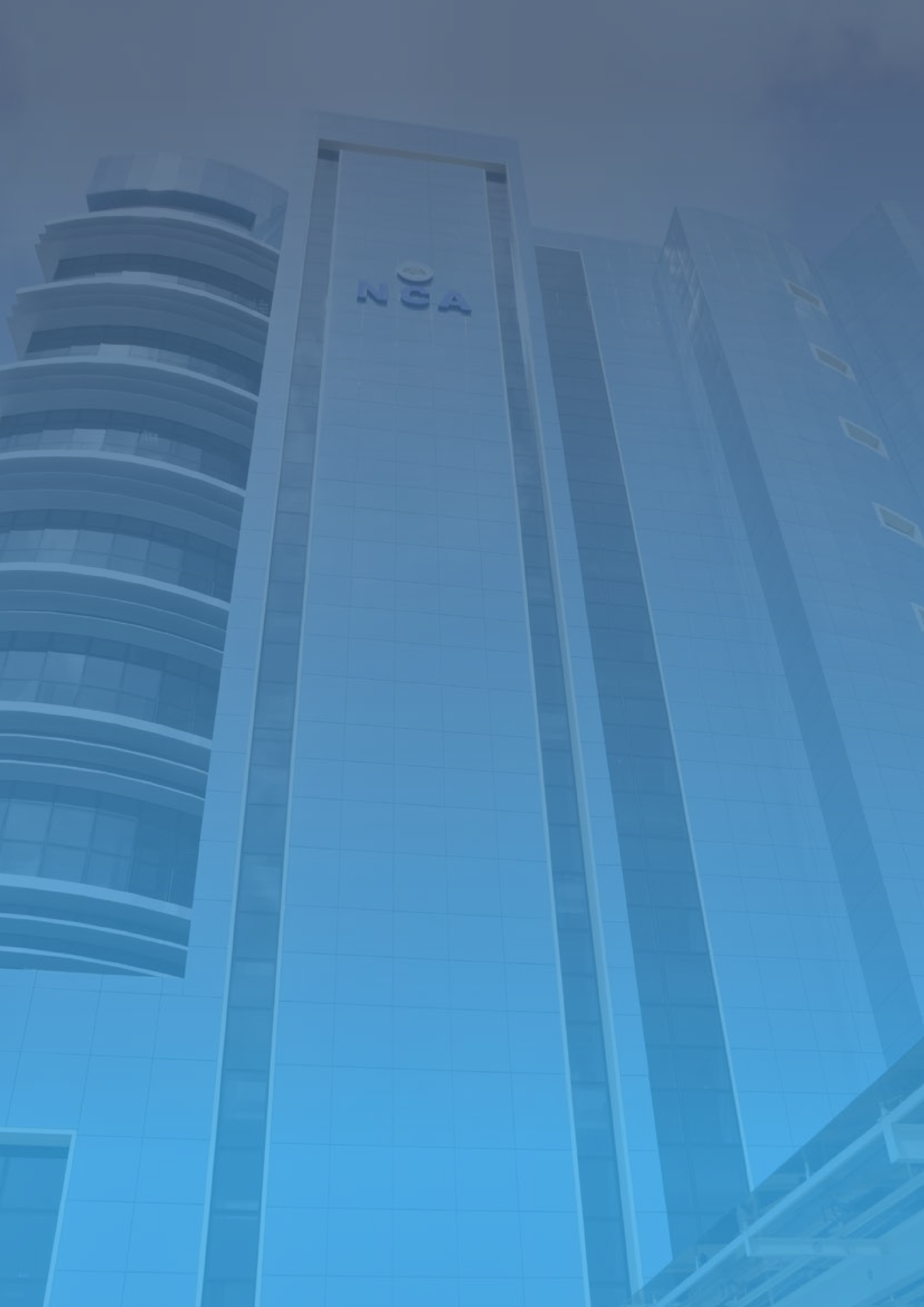
National Communications Authority,
Plot No 83/D Peakwase
P. O. Box SY125, Sunyani, Brong Ahafo Region
Tel: +233 (0) 3520 27564
E-Mail: complaints.sunyani@nca.org.gh

- ### Takoradi Office

National Communications Authority,
Bakado, 1.2kms away from the Female Prisons
P. O. Box SL 409, Sekondi,
Western Region, Ghana
Tel: +233 (0) 31 202 8073 / 31 202 8049
Fax: +233 (0) 31 202 8063
E-Mail: complaints.takoradi@nca.org.gh

- ### Tamale Office

National Communications Authority,
Watherson Residential Area
P. O. Box TL 1590, Tamale,
Northern Region, Ghana
Tel: + 233 (0) 37 202 8105 / 37 020 8104
Fax: +233 (0) 37 202 8104
E-Mail: complaints.tamale@nca.org.gh


NCA