



Public Utilities  
Regulatory Authority  
*Equity in development*

# PURA ANNUAL REPORT 2011

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# Table of Contents

ACRONYMS	3
INTRODUCTION	4
CHAIRPERSON'S MESSAGE	5
BOARD OF DIRECTORS	7
HEADS OF DEPARTMENT	8
Part I: CORPORATE GOVERNANCE & HUMAN RESOURCE REVIEW	9
Part ii: FINANCIAL REVIEW	13
Part III: MARKET DEVELOPMENT REVIEW	14
PART IV: CONSUMER AFFAIRS REVIEW	29
PART V: LEGAL AND COMPLIANCE REVIEW	38
PART VI: REGULATORY ACTIVITIES	40
PART VII: OUTLOOK for 2012 and BEYOND	70
APPENDIX: 2011 AUDITED FINANCIAL STATEMENTS	71

## List of Figures

Figure 1: PURA Organisational Chart	9
Figure 2: Growth rates in the transport and communication sector 2009 - 2011	14
Figure 3: Investments in the Telecoms sector 2008 - 2011.	15
Figure 4: Five year employment figures for all operators in the telecoms sectors, 2007-2011.	16
Figure 5: Total telephone subscribers in The Gambia	16
Figure 6: Market share by operator.	17
Figure 7: Penetration levels of mobile and fixed telecom services	17
Figure 8: Shares of difference services in the total traffic registered.	18
Figure 9: Shows the % of calls generated by operator.	18
Figure 10: Average tariffs for fixed line (local calls), mobile as well as international calls	19
Figure 11: Local Call Charges per Operator and Average Zonal Tariffs.	20
Figure 12: Investment by ISP in 2011	20
Figure 13: Subscribers by ISP in 2011.	21
Figure 14: Volume of water produced, sold and revenue collected.	27
Figure 15: A cross section of Operator Representatives at the Parliament.	31
Figure 16: Operators taking in the light side of the event	31
Figure 17: A snapshot of consumer Parliamentarians keeping track of proceedings	32
Figure 18: Parliamentarians Taking keen interest in the proceedings	32
Figure 19: Elderly Parliamentarian contributing and sharing wisdom expressing as well as concerns to the Panel	33
Figure 20: PURA DG, Mr. Abdoulie Jobe and Mayor Samba Faal look on as the first bulb is changed	34
Figure 21: Active participation by the PURA Chairman, Mr. Dodou B.Jagne and DG Jobe	34
Figure 22: Capturing it all on tape during the Opening Ceremony	34
Figure 23: Visual Energy saving Demonstration by EE (PURA)	35
Figure 24: Visual demonstration by the DG PURA and the 1 <sup>st</sup> bulb being changed by the Mayor of Banjul	36
Figure 25: Samples of interference on television screens	40
Figure 26: Typical FM sound radio station studios	40
Figure 27: Private Mobile Radio (PMR) base station and handsets	41

Figure 28: Top part of the mast painted red and lighted part of the mast painted white showing lights	42
Figure 29: The opening ceremony of the Digital Migration and Spectrum Policy Summit	44
Figure 30: Current Configuration of ACE submarine Cable stations	45
Figure 31: New Fire extinguishers	52
Figure 32: Evolution loads for provincial stations since 2008	53
Figure 33: refurbishment works at Kotu Power station following the fire in 2010.	54
Figure 34: Tobacco Road: Wole Coker Street, bordering the target area of the CFL project.	56
Figure 35: Graph illustrating the water demand in relation to plant capacity and peak demand for the GBA.	63
Figure 36: Graph illustrating the historical plant capacity and water usage for the GBA	64
Figure 37: chart showing daily production and distribution volumes of water	64
Figure 38: Chart illustrating 2011 water usage in the GBA per customer category	65
Figure 39: volumetric water consumption by customer class in 2011.	66
Figure 40: Residential usage of water	66
Figure 41: Volumetric non revenue and unaccounted for water, GBA	67
Figure 42: Graph showing the percentage non revenue and unaccounted for water, GBA	67

## List of Tables

Table 1: List of Training courses PURA staff participating in during 2011	12
Table 2: Budgeted vs. Actual Income in Dalasi (2011)	13
Table 3: Subscriber growth in the telecommunications sector	17
Table 4: Evolution of Tariffs for electricity services from 2008 2011	22
Table 5: List of engines at Kotu Power Station.	23
Table 6: List of engines of at Brikama Power station owned by NAWEC	23
Table 7: List of engines of at Brikama Power station owned by the IPP	24
Table 8: List of Power station in the Provinces owned by NAWEC	24
Table 9: Number of customers per customer category (2007 - 20011)	25
Table 10: Status of the electricity market.	25
Table 11: List of various well fields and the number of boreholes in each well field.	26
Table 12: list of provincial boreholes and their operating status.	27
Table 13: Sewage facilities in the GBA	27
Table 14: Amount of water produced, sold and revenue generated.	27
Table 15: Maritime call signs of ships issued frequencies	43
Table 16: Lists of equipment issues with Type Approval Certificates by PURA.	43
Table 17: National Numbering Plan Assignments	49
Table 18: Current short code structure	50
Table 19: Proposed harmonized short codes	50
Table 20: Water test results for the GBA, 2011	58
Table 21: Water test results for the Provinces, 2011	59
Table 22: Minimum Quality of Service Guideline standards adopted from AFUR for the various water test parameters.	60
Table 23: The water balance from 2000 to 2011 showing consumption by different consumer classes.	62
Table 24: Historical plant capacity data in the GBA	63
Table 25: Storage tank capacities in each provincial town	68
Table 26: Annual water produced	68

# ACRONYMS

ACE	African Coast to Europe
AFUR	African Forum for Utility Regulation
ATU	African Telecommunications Union
C&MA	Construction and Maintenance Agreement
CTO	Commonwealth Telecommunications Organisation
CFL	Compact Fluorescent Lamp
DWR	Director of Water Resources
ECOWAS	Economic Community of West Africa States
ECOWAN	ECOWAS Regional backbone Wide Area Network
FCC	Federal communications commission of the USA
GAMCEL	Gambia Cellular Company
GAMTEL	Gambia Telecommunications Company
GEG	Global Electric Group
GMA	Gambia Maritime Agency
GOTG	Government of The Gambia
GPPA	Gambia Public Procurement Authority
GRA	Gambia Revenue Authority
GRTS	Gambia Radio and Television Services
GSM	Global System for Mobile Communications
IEC	International Electrotechnical Committee
FM	Frequency Modulation
ICT	Information Communication Technologies
IDA	International Development Association
IDB	Islamic Development Bank
IP	Internet Protocol
IPP	Independent Power Producers
ISP	Internet Service Providers
IT	Information Technology
ITU	International Telecommunications Union
kV	KiloVolts
kWh	Kilowatt Hour
MOE	Department of State for Energy
MOFEA	Department of State for Finance & Economic Affairs
MOICI	Ministry of information and communications infrastructure
NAWEC	National Water and Electricity Company
NEA	National Environment Agency
PMR	Private Mobile Radio
POI	Point of Interconnection
PPA	Power Purchase Agreement
PPIAF	Public Private Infrastructure Advisory Facility
PURA	Gambia Public Utilities Regulatory Authority
STL	Studio transmission link
SVP	Special purpose vehicle
VHF	Very high frequency
WAPP	West African Power Pool
WARCIP	West African Regional Communication Infrastructure Project
WATRA	West African Telecommunications Regulatory Assembly
WDM	wavelength division multiplexing
WIWAX	Worldwide Interoperability for microwave access

# INTRODUCTION

The Annual Report for 2011 is produced in line with PURA's obligation under the PURA Act 2001 to report on its activities annually for the preceding year. Following this convention this report charts the achievements of the Authority as well as documenting several challenges it faced as it executed its mandate during the year 2011.

**Part I - The Corporate Governance and Human Resources Review** - provides an overview of the organisational structure of PURA and identifies the regulatory capacity and capability building activities focusing on staff training relevant for the sustained and long term development of the Authority as embarked upon during the year in review. This part of the report also identifies the challenges that need to be addressed in terms of governance and human resource development to facilitate the effective implementation of PURA's regulatory mandate as required under the 2001 Act.

**Part II - The Financial Review** - looks at the financial status of the Authority during 2011. It highlights the incomes received against budgeted income and overall performance as regards PURA's financial operations during the year in review.

**Part III - The Market Development Review** - provides a detailed update on the activities of regulated utilities as well as providing an overview of their status during the course of the year. This year's review also provides more insights into the work of the Authority in developing its capacity to regulate the Water sector in particular whilst strengthening its work in the Electricity and Telecommunications sectors.

**Part IV - Consumer Affairs** focuses on cross-cutting regulatory interventions used by PURA to engage its domestic and external stakeholders. This year's review saw the directorate engage in myriad of our usual advocacy and educational activities, chief

amongst this for the year under review, we have been engaged with our stakeholders in developing the legal framework that will enhance the roles and functions of consumer advocacy groups, by a way of taking part in the development of a consumer bill of rights.

**Part V- Legal and Compliance Review** - highlights the impact and status of existing and impending legislation that empowers PURA by providing it with its legal basis to discharge its regulatory mandate. This part of the review also looks at the status of compliance of the regulated utilities in terms of their obligations under the regulatory process.

**Part VI - Key regulatory activities embarked on by the Authority** during the course of the year. This section highlights the main activities of the technical Department including monitoring activities in the electricity, telecommunication and water sectors.

**Part VII** and final part of the report provides an outlook for 2011 and beyond vis-a-vis the sectors being regulated.

# CHAIRMAN'S MESSAGE



“ Going confidently forward in the pursuit of its vision to become a world class regulator. ”

The year 2011 has seen tremendous improvement as PURA consolidates its position as the country's multi-sector regulatory institution and most of our activities scaling new heights this year.

We believe that delivering quality services combined with timely addressing of stakeholder concerns gives us the unique ability to capitalize on the opportunities for developing the sectors that we regulate and implementing earmarked projects successfully. We are at an inflection point in the expansion of our country's infrastructure in both Electricity and Telecoms as Africa Coast to Europe) ACE cable landed on our soil and PURA is well-positioned to lead the development. The telecom sector continues to be a feather in the Government's infrastructure cap. After a long wait and several bottlenecks in the last few years, ACE Cable has landed on the soil of the Gambia. This will enable the communications services providers deploy fast high internet and broadband services using various technologies such as WiMAX, 3G and 4G. . As I write, some operators are working on the provision of 4G and PURA is working with them to ensure that consumer have what they actually paid for (value for money).

While broadband enables inclusive growth by improving connectivity to rural areas, PURA is

consolidating on its regulatory instruments relating to spectrum management and the licensing framework which may indicate changes in the rules of the game as the use of Ace Cable comes into full force in the coming years. Because ex-post or retroactive changes in the policy and regulatory framework could send wrong signals to investors, who look for a level playing field as well as certainty and predictability in the regulatory regime.

This year stands out in terms of the progress made in addressing Consumers complaints, as mandated by PURA Act; the institution receives complaints from unsatisfied consumers of the regulated services and process it through the laid down procedures meant to address such complaints; took them up with the service providers to provide amicable solutions.

We know that achieving this planned growth will be no easy task. Therefore, we spent sometime in 2011, taking stock and evaluating our organizational capabilities in terms of the preparedness for this growth. We gave special emphasis to nurturing and developing talent, so as to create a strong team of empowered professionals who can steer our diverse developmental objectives in these sectors. We undertook a platform-wide initiative to create a common culture based on the pillars of

knowledge expertise, teamwork and stewardship. It is this culture that helped us create a better aligned and synergized platform that not only delivers growth, but also helped us distinguish PURA's role and effectiveness in the regulated industries for the year 2011.

The year under review also saw the receipt and successful processing of NAWEC's Tariff Review Application; this was received and went through various phases of the process and a Consultant devised approved model which gave positive steps that have been taken to facilitate the process by improving the regulatory framework, particularly for open access to power across the country.

A welcome development is the government's increasing focus towards Renewable Energy, which holds the potential to sustain the country's increasing power demand and encourage innovation in technology. If we succeed in developing cost-effective technology, we will have a long-term sustainable solution for meeting the country's energy needs, far beyond our targets. The regulatory framework is creating a market for renewable energy and efforts such as this will boost investment in clean energy.

The biggest challenge ahead lies in urbanization and our ability to cope with it. The provision of urban services in some areas remains unsatisfactory.

The situation is very grim in some areas. There is a huge deficiency in the availability of affordable electricity in some places which offer poor connectivity to work places and shabby infrastructure. All of this is a matter of concern to the Authority.

We also need to find new avenues of financing our development objectives which currently relies on a limited pool of regulatory fees. The alternative sources needs to be vigorously explored. This has already been tried by some Regulatory Authorities in the Region and there is no reason why we can't use this option.

#### **LOOKING FORWARD:**

To remain successful, the Board recognizes that

the company must be transformed to improve delivery services across all media and to continue to deliver real value to all its customers operators and consumers alike.

Management and the Board will continue to work closely together to ensure that these important investments are made prudently and that the ensuing benefits to employees, customers and operators are realized.

PURA's operations can have far-reaching effect on communities, the environment and the economy. As such, the Board recognizes that the Authority must take a serious approach to its corporate social responsibility and, as a result, the Authority has been assisting some other institutions, individuals and national courses on development related activities during the year under review.

It's clear that 2012 will be equally as challenging as 2011, if not more. The threat of recession could exacerbate the declining investments in the regulated industries. We must however, continue the evolution into a dynamic, forward-thinking organization if we are to prevail over the new and ongoing challenges that 2012 will bring. As New Chairman of the Board, I'm aware that I joined the Authority at a challenging time. On behalf of the Board of Directors, however, I would like to say that I am convinced that we have the committed management team and dedicated employees needed to continue to operate successfully. The Board is committed to working with staff to transform PURA into a highly efficient regulatory body in the sub-region that's prepared and able to meet the needs of The Gambia and all Gambians today and tomorrow.

Before I conclude, I would like to express my appreciation to my colleagues and all employees at PURA for their unswerving commitment to their work. It is because of their unrelenting hard work that we have won admiration and recognition, not just within the country but internationally. I assure you that we are well positioned to build on these successes in the coming years. And I thank you for your continued support.

# BOARD OF DIRECTORS



**DODOU BAMMY JAGNE**  
Chairman



**ABDOULIE JOBE**  
Director General  
March 2011 - Present



**AMIE JOOF**  
Non-Executive Board Member  
February 2008 - Present



**EBRIMA CHAM**  
Non-Executive Board Member  
March 2011 - Present



**MOD K SECKA**  
Permanent Secretary MoFEA  
(Ex-officio Member)



# HEADS OF DEPARTMENT



**ABDOULIE JOBE**  
Director General  
March 2011 - Present



**MALEH SAINE**  
Director of Technical Regulations  
March 2007 - Present



**ANSUMANA SANNEH**  
Director of Economic Regulation & Finance  
May 2010 - Present



**KELEPHA SAMBA**  
Director of Administration &  
Human Resources/Board Secretary  
May 2010 - Present



**SOLO SIMA**  
Director of Consumer Affairs  
January 2011 - Present

# PART I:

## CORPORATE GOVERNANCE & HUMAN RESOURCE REVIEW

PURA has a governing Board of Directors appointed by the President of the Republic of The Gambia on the recommendation of the Minister of Finance and Economic Affairs.

The Board currently comprises of a Chairperson, three other members, including an Ex-Officio member, and the Director General. The Director of Administration and Human Resources is the Secretary to the Board.

The year 2011 saw the appointment of Mr. Ebrima Cham, Managing Director of GAMWORKS, and the re-appointment of Justice Amie Joof as members of the PURA Board of Directors.

2011 also saw the appointment of a new Director General (DG), Mr. Abdoulie Jobe in March, following the departure of the former DG, Mr. Alagi B. Gaye at the end of 2010.

Mr. Jobe, prior to joining PURA, was the Energy Adviser to office of The President .

The year under review saw PURA continue its strategic transition to enhance its performance and better serve the general public.

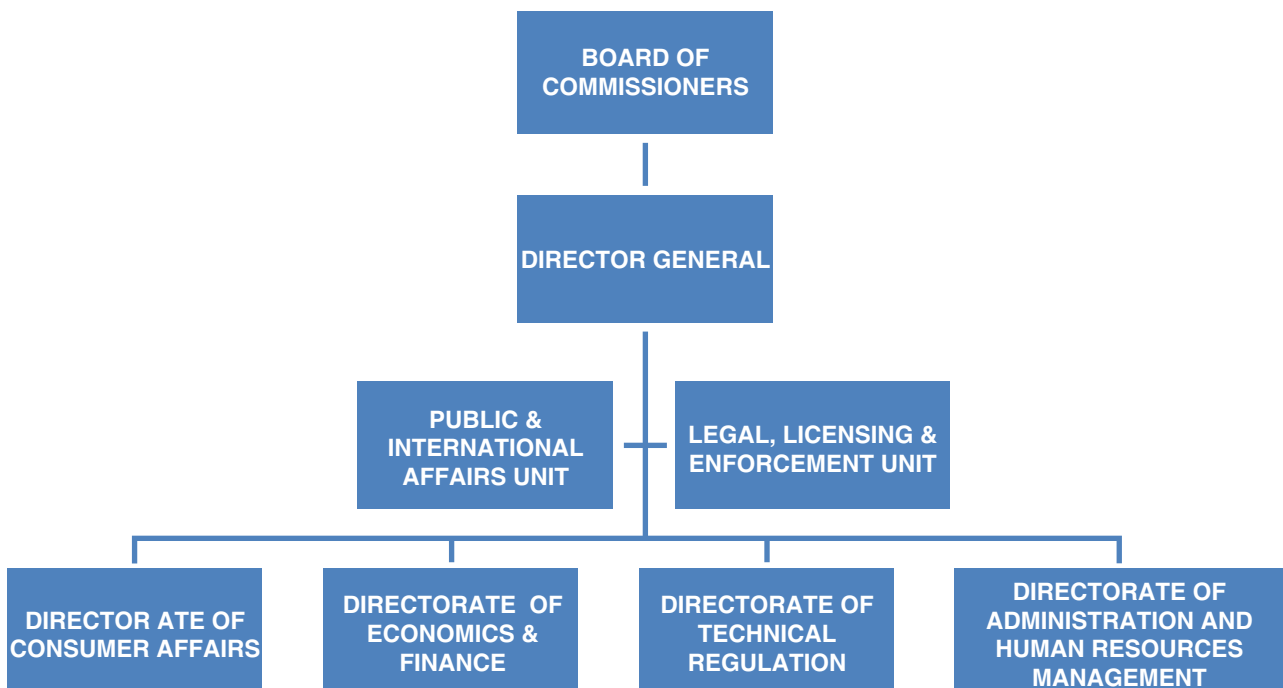
The year 2011 saw the recruitment of a Telecoms Engineer, Finance Assistant and Executive Assistant, after successful stints as interns, to further build the capacity of the institution in order to carry out its duties more efficiently and effectively.

Staff promotions took place in 2011 following performance appraisals and approvals from the PURA Board of Directors and Management

The staff strength was very stable in 2011 with a turnover rate of 0%.

Various training courses, workshops and conferences were attended by staff, which built tremendous capacity and has enabled the Authority to be able to regulate the sectors better, thus benefiting both the consumers and the operators.

Figure 1: PURA Organisational Chart



**Director General** - Responsible for the day-to-day management of PURA with the objective of improving the efficiency with which public utility services are provided and increasing the percentage of Gambia residents having access to our regulated services. He advises the Board on the appropriate framework for regulation of public utilities in the country in accordance with relevant legislations.

**Technical Regulation Directorate** - Advises the Board (through the Director General) on issues relevant to regulation of the telecommunications, electricity and water sectors. It also monitors compliance with regulations and service quality.

**Economics & Finance Directorate** - Advises the Board (through the Director General) on rates and tariffs; performs economic and financial analyses; conducts research and develops special studies and forecasts. It monitors investment programs as well as oversees and manages the budget and funds of the institution as well as drawing of the monthly management accounts and giving the necessary financial advice. The Directorate is also responsible for issuing invoices for regulatory fees and follow-up on payments.

**Administration and Human Resource Directorate** - Oversees the personnel functions of the PURA; coordinates administrative activities, including procurement, staff welfare and motivation. It also handles the staff health insurance and social security schemes.

**Consumer Affairs Directorate** - Handles consumer complaints of utility services and reviews these with the relevant service providers. It monitors the level of consumer satisfaction with services provided by utilities and PURA itself. It evaluates the performance of the utilities against the respective quality of service standards and assists the management in publishing information relating to PURA's functions and activities.

**Public & International Affairs Unit** - Responsible for External Communications,

public and corporate affairs; and liaises with International Partners through collaborations with other directorates and units. It conducts public forums like radio programs. Also advises the Management of the public perception of PURA's performance, and, where appropriate, suggests actions to improve PURA's image.

**Legal, Licensing and Enforcement Unit** - Advises the Board (through the Director General) and management on all legal matters affecting the Authority. Draft all legal instruments such as licenses, contracts and regulations of the Authority.

## TRAINING AND DEVELOPMENT

During the year in review, most of the professional staff attended training courses, study tours, workshops, seminars and conferences relating to their core operational areas in order to further build their capacity.

In addition to the above, professional staff attended key meetings, workshops and conferences relating to the regulated sectors to address emerging trends and technologies, as well as share best practices.

Key programs attended by staff are shown in Table 1.

DEPARTMENT / UNIT	CAPACITY BUILDING & TRAINING	FUNDED BY	VENUE
Licensing & Enforcement Unit	Spectrum Management in the Civil Sector, USTTI	USTTI/PURA	Washington, U.S.A
	Study Tour at National Communications Authority - Ghana	PURA	Accra, Ghana
	Executive Seminar & Leisure Retreat	PURA	Saly, Mbour, Senegal
Department of HR & Administration	Strategic HRM in a Converged environment	PURA	Nairobi, Kenya
	PURC/World Bank International Training Program on Utility Regulation and Strategy	PURA	Florida, U.S.A
	Workshop on Human Performance Improvement: Strategies for measuring return on investment in training	PURA	Livingstone, Zambia
	Cost Modelling / ITU CoE	PURA	Nairobi, Kenya
Department of Economics & Finance	ITU Study group 3 Meeting	ITU/PURA	Geneva, Switzerland
	ITU Regional Seminar	ITU/PURA	Botswana
	ISAR 28th Session of UNCTAD's Intergovernmental Working Group of Experts on International Standards of Accounting & Reporting (ISAR)	PURA	Geneva, Switzerland
	PURC/World Bank International Training Program on Utility Regulation and Strategy	PURA	Florida, U.S.A
	Comparison of Electricity Tariff Level and Structure and Supply Cost and Associated Training Sessions	AFUR/PURA	Nairobi, Kenya
	Workshop on Foundations of Market-Based Regulation	PURA	Accra, Ghana
	Workshop on Taxation & Telecommunications Services & Related Products	PURA	Geneva, Switzerland
Department of Consumer Affairs	Study Tour at National Communications Authority - Ghana	PURA	Accra, Ghana
	2nd Telecommunication Information Management System (SIGTEL) Training Workshop for National Correspondents for Indicators (NCIs)	ECOWAS	Lome, Togo
	USAID/ NARUC	USAID	Kenya
Department of Technical Regulation	Workshop on Foundations of Market-Based Regulation	PURA	Accra, Ghana
	NARUC Renewable Energy Internship & Workshop	USAID	Washington, USA
	Second Workshop on foundation of Market-Based Regulation (ERERA)	PURA	Abuja, Nigeria
	Second Forum on ECOWAS Regional Electricity Regulation	ERERA	Abidjan, Ivory Coast
	QOS & QOE study group 12 meeting	ITU/PURA	Geneva, Switzerland
	WARCIP Negotiations Meeting	World Bank	Dakar, Senegal
	ITU Regional Seminar on Conformance & Interoperability	ITU	Accra, Ghana
	ITU Study Group 12 meeting	ITU/PURA	Geneva, Switzerland

	Telecom Consultation Development West Africa	PURA	Togo
	2nd Telecommunication Information Management System (SIGTEL) Training Workshop for National Correspondents for Indicators (NCIs)	PURA	Lome, Togo
	Comparison of Electricity Tariff Level and Structure and Supply Cost and Associated Training Sessions	PURA	Nairobi, Kenya
	Training on renewable energy	German Government (Bavaria)	Germany
	Executive Seminar & Leisure Retreat	PURA	Saly, Mbour, Senegal
	Workshop on Regulatory Aspects Concerning Quality of Service	AFUR/PURA	Jo'Burg, South Africa
	Effective use of industrial waste water and re-use of waste water	JICA (Japanese Gov't)	Tokyo, Japan
	Workshop on Cyber security	PURA	Kampala, Uganda

*Table 1: List of Training courses PURA staff participating in during 2011*

## PART II:

### FINANCIAL REVIEW

PURA's main source of income is regulatory fees charged to regulated utilities. The amount invoiced and collected from operators as regulatory fees is based on the annual budget of PURA, which is approved by the Board of Directors. The amount collectible as regulatory fees is pegged at a maximum of 1.5% of the operators' turnover, which is one of the lowest rates charged by regulatory authorities in Africa. The ceiling was determined to ensure that operators do not incur exorbitant regulatory charges which are passed on to consumers.

non-compliance by GAMTEL, NAWEC and GEG has continued to hamper the implementation of some of PURA's regulatory activities in the energy sector. The status of regulatory fees payment is depicted in Table 2 below.

Most of the GSM operators and some of the ISPs have fully paid their regulatory fees for 2011, except **GAMTEL, AFRICELL, CONNECXION SOLUTIONS and LINUX** as illustrated below.

SOURCE OF FUNDS	BUDGET	ACTUAL PAID	AMOUNT OUTSTANDING
GAMTEL	15,805,615	2,192,785	13,612,830
AFRICELL	13,684,140	11,000,000	2,684,140
GAMCEL	5,355,072	5,355,072	0
COMIUM	2,437,584	2,437,584	0
QCELL	881,296	881,296	0
G.E.G	<b>2,500,000</b>	<b>0</b>	<b>2,500,000</b>
NETPAGE	50,000	50,000	0
NAWEC	4,000,000	2,000,000	2,000,000
UNIQUE SOLUTIONS	50,000	50,000	0
CONNECXION SOLUTIONS	50,000	0	50,000
LINUX	50,000	25,000	25,000
<b>TOTAL</b>	<b>44,863,707</b>	<b>23,991,737</b>	<b>20,871,970</b>

Table 2: Budgeted vs. Actual Income in Dalasi (2011)

In the year 2011, 1.2% of operators' turnover was invoiced. Despite this consideration, the payment of regulatory fees by NAWEC and GEG has not been encouraging. Out of the amount of **D44.864million** budgeted as regulatory fees income, only **D23.992 million** was collected, as shown in Table 2 above. Undoubtedly, the

**NAWEC** only paid **D2,000,000.00** leaving an outstanding balance of **D2,000,000.00** and **GEG** did not pay the **D 2, 500,000** invoiced for 2011 regulatory fees.

## PART III:

### MARKET DEVELOPMENT REVIEW

#### MACROECONOMIC PERFORMANCE

The Gambia's economic growth continues to be robust despite the recent global economic and financial crisis. This growth has been attributed mainly to the consistent and the solid growth realized in agriculture and one of the regulated sectors of telecommunication services among others.

Real Gross Domestic Product (GDP) for the year 2011, (at 2004 constant market Prices) grew by about 5.4 percent in 2011 compared to the 5.5 percent growth realized in 2010 as well as the 5.6 percent growth in 2009.

The industrial sector comprising of mining and quarrying, manufacturing, electricity, and water is estimated to have grown by 1.3 percent

compared to 5.1 percent and 2.1 in 2010 and 2009 respectively. This decline in the growth rate of the industrial sector is as a result of the decline in productivity in construction activities. However, the regulated sectors of Electricity, Gas & Water supply registered a growth of 1.4 percent as against the growth of 7.7 percent recorded in 2010.

The services sector consisting of amongst others the regulated communication sector registered real growth of 8.5 percent for the year 2011. Transport and communications subsector has over the years witness a tremendous growth, growing by 5 percent in 2009, and then by about 7 percent and 10.2 percent in 2010 and 2011 respectively.

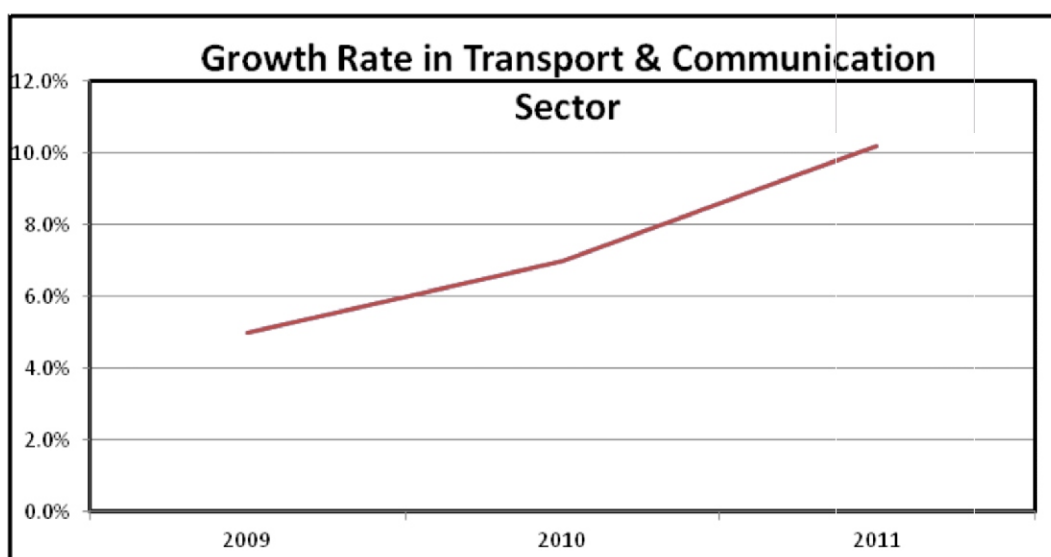


Figure 2: Growth rates in the transport and communication sector 2009 - 2011

## THE COMMUNICATIONS MARKET STRUCTURE

The Gambia's Communications industry comprises of the telecommunications and internet service markets. The Telecommunications market consists of five operators. GAMTEL serves as the fixed network operator coupled with four mobile operators, GAMCEL, AFRICELL, COMIUM and QCELL. The fixed network operator offers telephone, and Internet services whilst the mobile operators provide GSM cellular voice and data services. The Internet market comprises of five Internet Service Providers (ISP's), these are; GAMTEL's ISP, UNIQUE SOLUTIONS, LANIX, NETPAGE and QCELL.

## INVESTMENTS

Annual Investments reported in the sector amounted to D 92.90 million dalasi. This shows a decline of 79% from the investment figures reported in 2010. Africell reported the largest investment figures during the given period attributable to the imminent launch of their new 3G internet facilities. Observing trends over the past couple of years, investments in the telecommunications sector have been on a steady decline. GAMTEL, GAMCEL and QCELL recorded modest investments figures during the period.

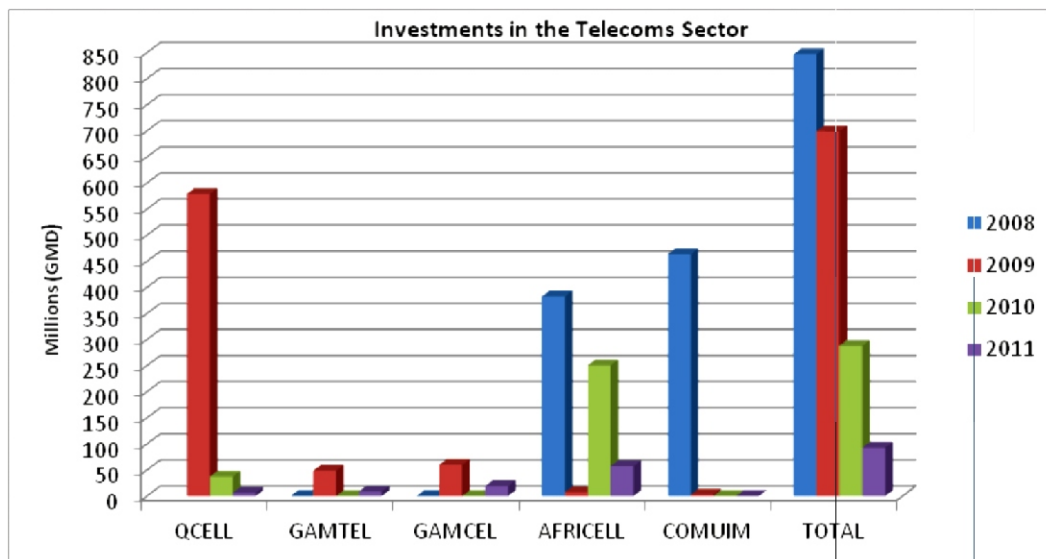


Figure 3: Investments in the Telecoms sector 2008 2011.

## EMPLOYMENT

Reports from the sector indicate that 2,323 people were directly employed in 2011, compared to 2384 people who were employed in the sector in 2010. This shows a 2.6% decrease in the amount of employees enrolled in the sector. GAMTEL continues to be the highest employer in the telecoms sector with over 1,000 employees accounting for over 48% of total sector employees.



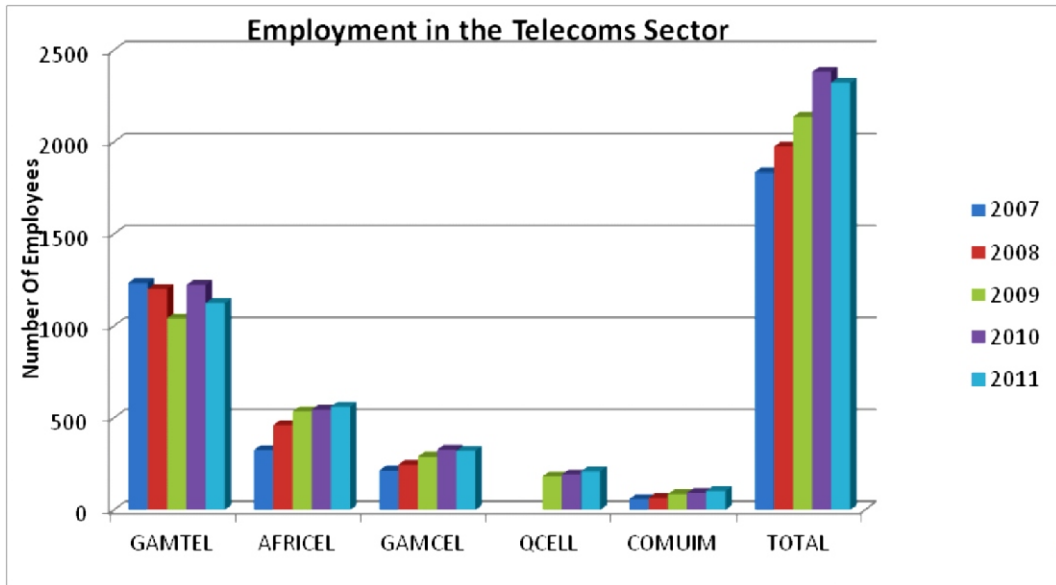


Figure 4: Five year employment figures for all operators in the telecoms sectors, 2007-2011.

## SUBSCRIBERS

The reported voice subscribers for the 4<sup>th</sup> quarter of 2011 stood at 1,729,237 as against the 2010 figures of 1,527,126. This represents a growth of about 13%. Continuing with the trends observed in previous years, well over 90% of the total subscribers in the market are mobile subscribers

whilst the remaining few are fixed line subscribers. This year with the 13% growth rate, we witnessed a reversal of that trend. Of this amount of subscribers, AFRICELL continues to have the largest share of the market with about 49% of total subscribers, followed by GAMCEL and COMIUM who have 27% and 21% of the market respectively whilst QCELL has about 3% market share in terms of subscribers.

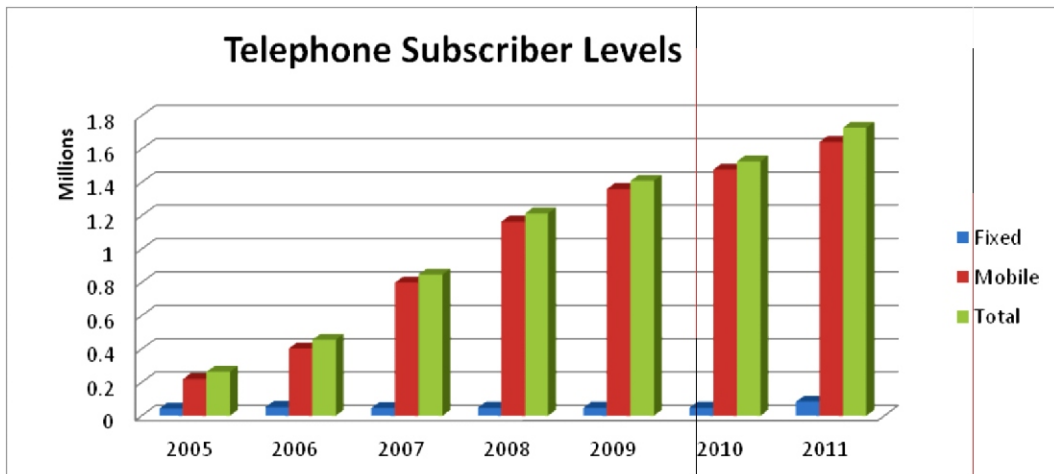


Figure 5: Total telephone subscribers in The Gambia

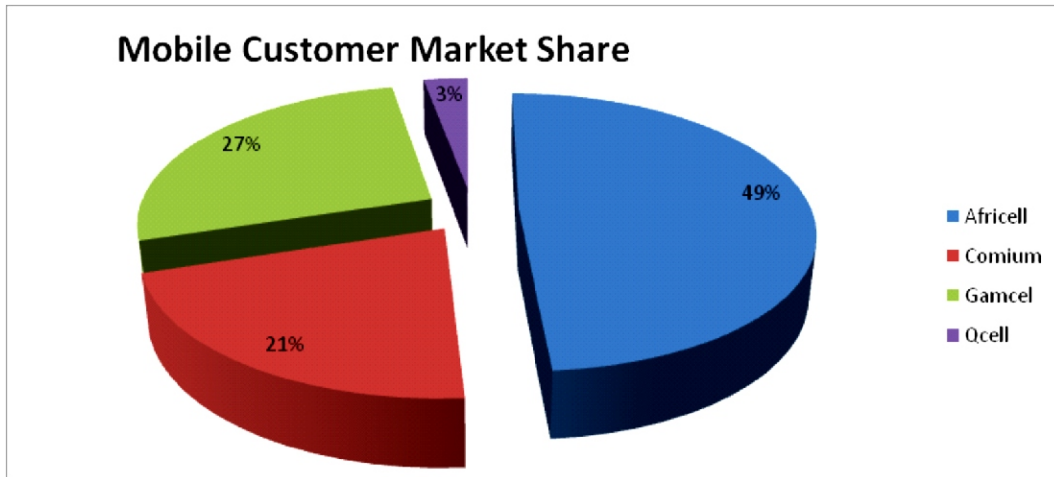


Figure 6: Market share by operator.

OPERATOR	NUMBER OF SUBSCRIBERS			
	2008	2009	2010	2011
GAMTEL	48,560	48,451	48,777	50,450
GAMCEL	285,761	339,946	365,385	433,440
AFRICEL	579,969	662,279	730,919	803,312
COMIUM	249,000	275,000	350,000	350,000
QCELL	N/A	35,649	32,045	47,540

Table 3: Subscriber growth in the telecommunications sector

### Telephone Penetration Levels

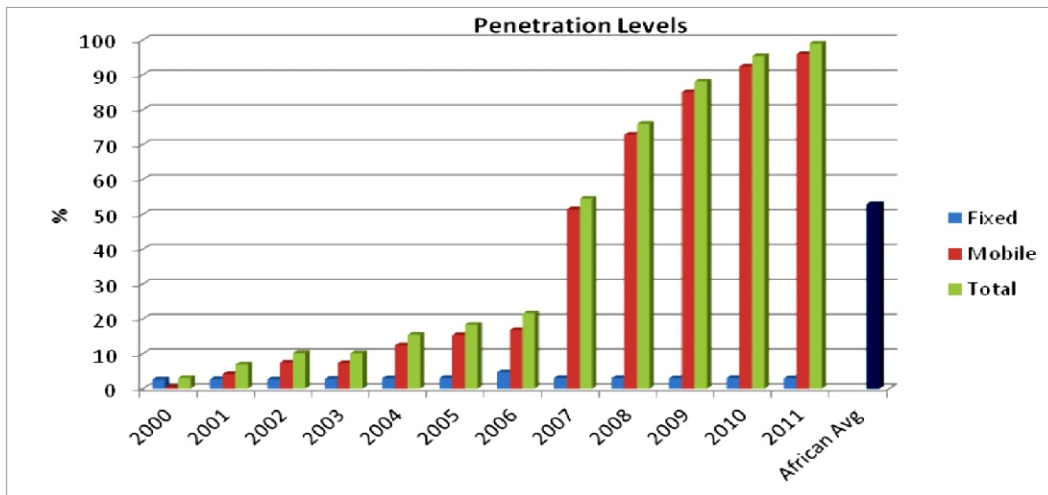


Figure 7: Penetration levels of mobile and fixed telecom services compared to the African average

Telephone penetration levels (teledensity) measured as the percentage of the population owning a fixed and or mobile service continues to increase steadfastly. Compared to the first half of the decade whereby penetration levels were below 20%, there has been a steady increase in penetration rates in the mobile sector. This trend has been the same in 2011 whereby total penetration rates in the sector stood close to 99%.

When compared to average penetration levels in Africa which is at 53%, penetration rates in Gambia continue to be on the high side and this is testament to the continued embrace of mobile technology by the populace.

## TRAFFIC VOLUMES

Total traffic volumes in 2011 were equivalent to 1,738,067,794 minutes. Of this amount, 79% represented local calls, 11% were interconnections, 3% was international and the rest constituted of roaming and SMS messages as shown in the Figure 8.

Of total traffic generated, AFRICELL with the largest subscriber base constituted about 39% of all calls. COMIUM, GAMCEL, QCELL AND GAMTEL recorded 29%, 20%, 11% and 1% respectively.

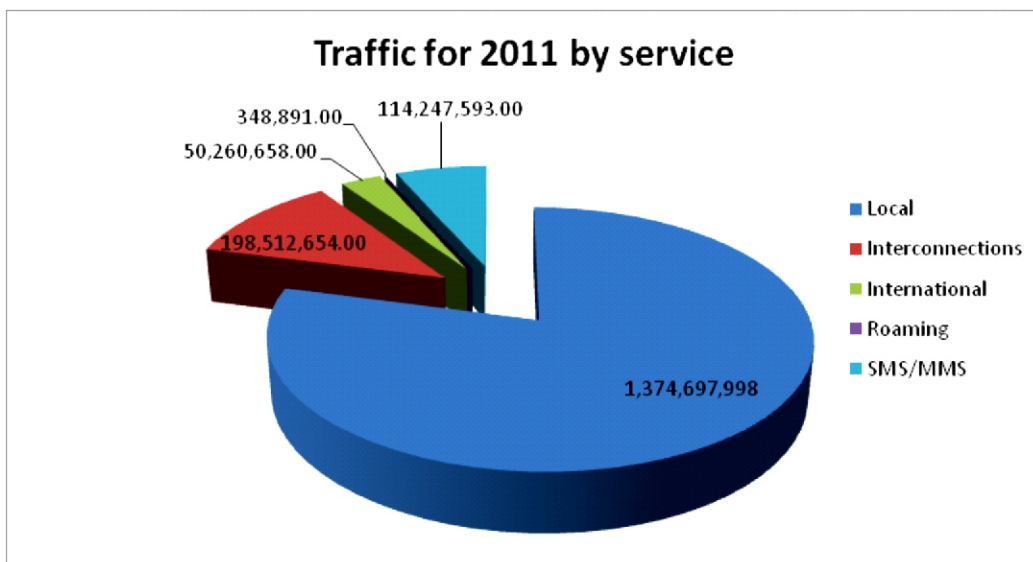


Figure 8: Shares of different services in the total traffic registered.

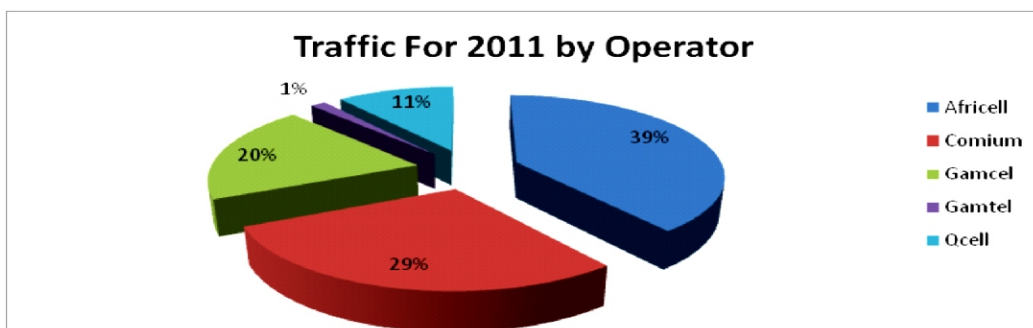


Figure 9: Shows the % of calls generated by operator.

## TARIFFS

The telecommunications market in The Gambia continues to be very competitive. The highly competitive nature of the industry is very much reflective in the tariffs charged by operators for local calls. The average on-net peak call charges were at D 2.77/min and the average off-net peak call charges were at D 2.88/min.

It should be noted that PURA only sets the minimum call charge for international calls taking into account the termination charges and the various taxes and levies. In that vein, the operators are at liberty to implement tariffs that are not below the minimum call charge set. This is to avoid anti-competitive practices. The average International call prices for Zone 2 and 3 were D 14.45 and D 16.40 per minute respectively.

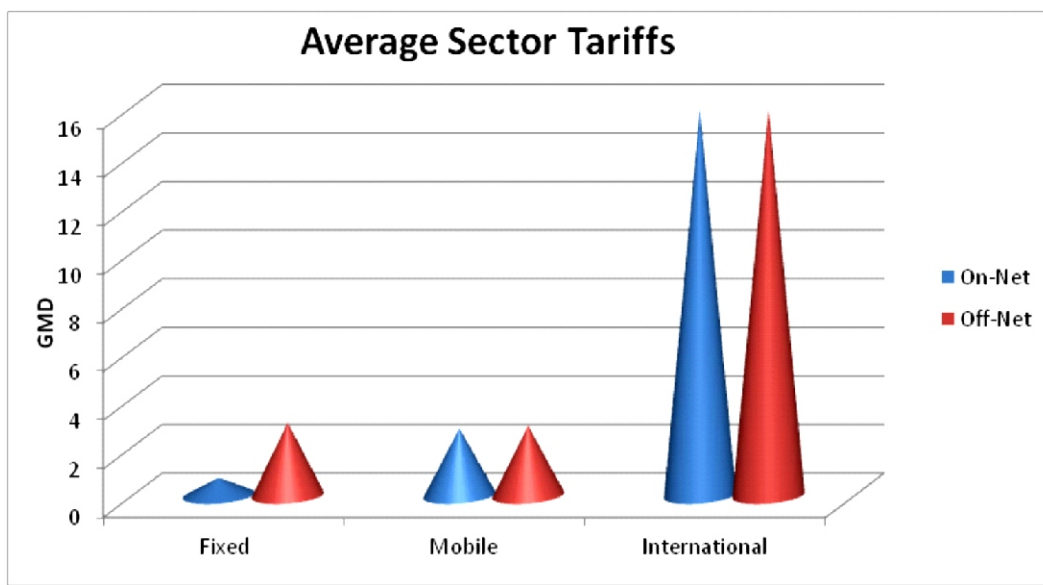


Figure 10: Average tariffs for fixed line (local calls), mobile as well as international calls

Compared to the tariff averages seen in the previous years, we have not witnessed much change in local call charges. With the Short Messaging Services (SMS) the on-net average tariff is D 0.46 and D1.00 off net, while the international rate on SMS remains at D 3.00.

On the international front, new charges were effected in Zone 1 (Senegal) calls. This was as a result of call charges to Senegal being increased by SONATEL, the national service provider there. Consequently, there was a rise in the minimum call charges to Senegal from D 8.10 to D 14.02 per minute.

A similar development occurred in 2010 when termination rates into Senegal were increased by the Senegalese government, that decision was however rescinded a few months after implementation.

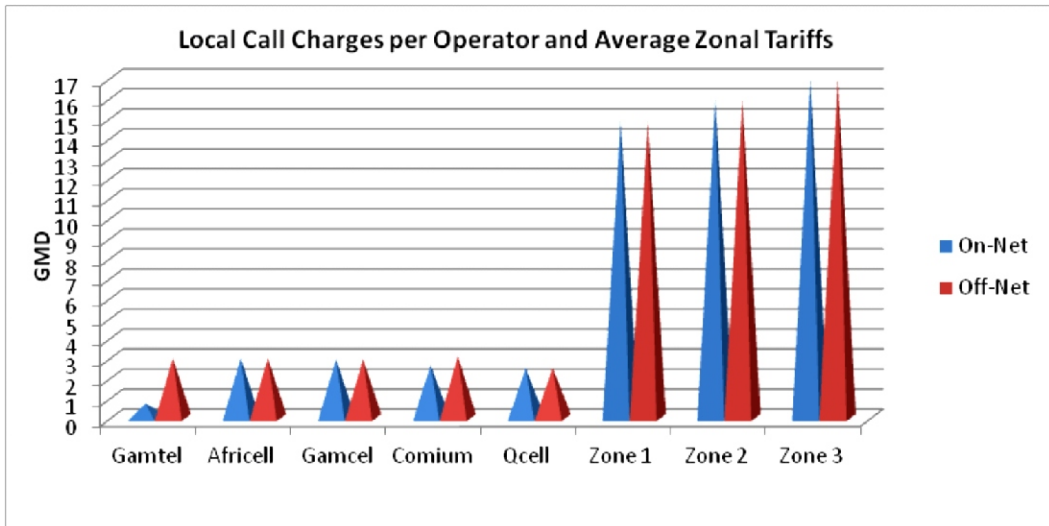


Figure 11: Local Call Charges per Operator and Average Zonal Tariffs.

## THE INTERNET MARKET

Annual investments reported in 2011 amounted to 65.38 million dalasi. Compared to figures from 2010, a 69% reduction in investments was

recorded. 46% of investment in the sector during the year was reported by NETPAGE with GAMTEL, QCELL and Unique Solutions contributing about 26%, 15% and 13% towards total investment in the sector during the calendar year.

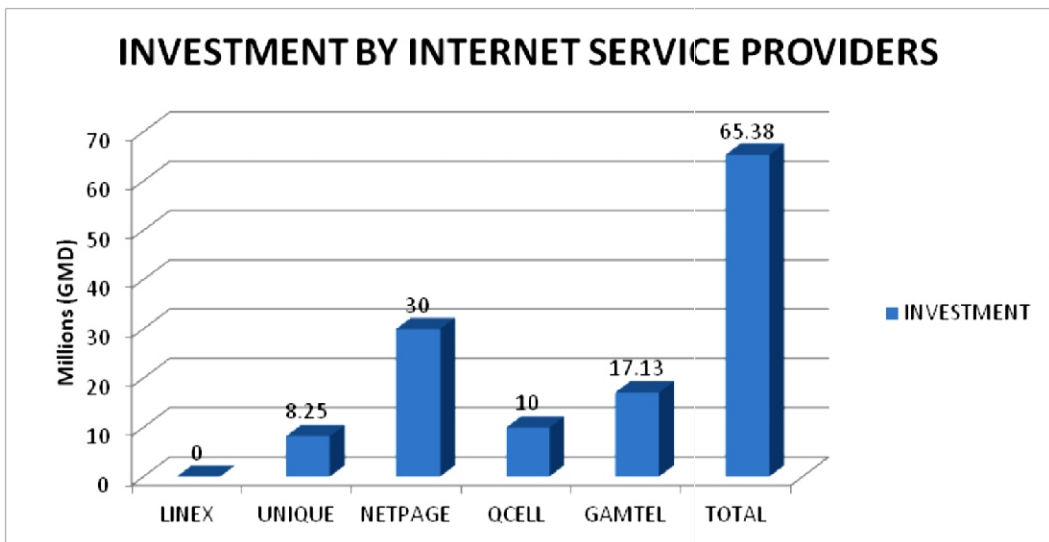


Figure 12: Investment by ISP in 2011

## SUBSCRIBERS

GAMTEL, continuing with the trends observed in previous years reported the largest numbers of internet subscribers with 1433 customers' equivalent to 58% of the whole market base.

made possible by the provisions of the electricity Act of 2005 which calls for the deregulation of the generation segment with a view to supplementing the Company in its quest in meeting the energy needs of the country.

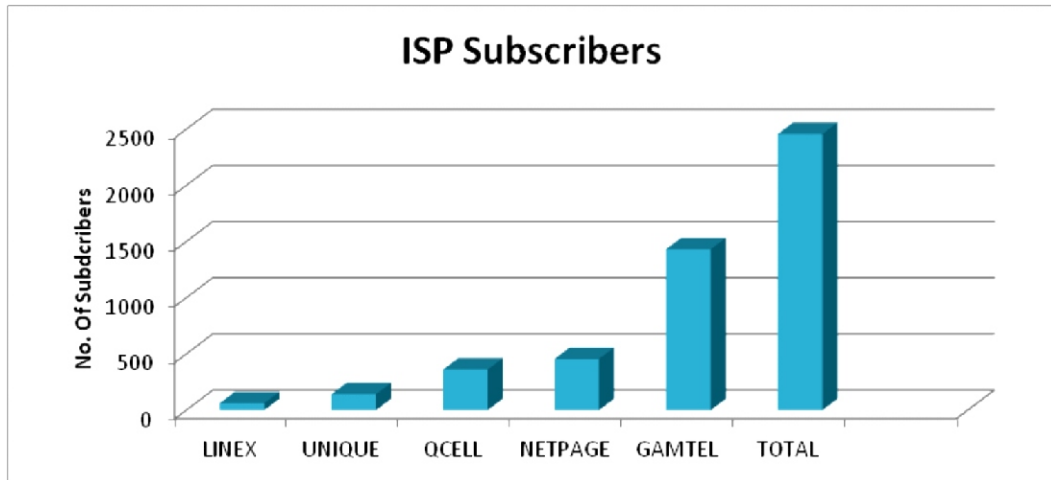


Figure 13: Subscribers by ISP in 2011.

NETPAGE and QCELL reported 457 and 362 subscribers equalling 18% and 15% of reported subscribers. Unique Solutions and LANIX Ltd accounted for 6% and 3% of the total market with 143 and 63 subscribers correspondingly.

## THE ELECTRICITY, WATER AND SEWERAGE MARKETS

The Gambia just like many African Countries in the sub-region continues to rely on a government owned vertically integrated company for the provision of electricity. The company (NAWEC) owns and operates the generation, transmission and generation facilities across the length and breadth of the country via an extensive grid in the Greater Banjul Area and a series of isolated mini grids in the provincial towns and villages.

Even though the company is still vertically integrated in its operations, the Sector has witnessed development in the generation segment where the company is allowed to buy energy from an IPP in Brikama and a wind power plant in Batukunku. This arrangement is

The coming of the IPP was a welcome development and PURA through a series of public consultations and seminars has advocated for the strengthening of the opportunities inherent in such projects. The Authority has also over the years been clamouring for the company to diversify its generation mode by taking advantage the opportunities in wind and solar potential in the country with a view to addressing the high tariffs currently being charged.

This is the position of the authority which strongly believes that NAWEC can only fulfil its mandate in our quest for middle income status as a country by becoming more efficient in the generation and transmission. Under the current structure where the source of generation is entirely dependent on fossil fuels, we believe that aspiration is unrealistic as evidenced by the annual tariff application forwarded by the company to PURA. The table below shows the tariff structures approved over the years.

The water sector unlike the Electricity has not enjoyed the liberalisation that led to the introduction of IPP in the electricity generation. NAWEC continues to be the sole player in this sector as such meeting the ever increasing demand becomes a challenge. The company apart from its meagre resources has to rely on Government assistance to expand its network. Over the last four years the sector has witnessed one of the biggest expansion projects undertaken by the company. The first was the Brikama water expansion Project funded by the Netherlands Government and the Kotu ring rural water supply project funded by the ABD. The combined output of these projects when completed has the potential to double the company's water production capacities.

The ability of the company to expand using

internally generated revenue is hampered by the Government policy of freezing water rates for a very long time. As a result of this government policy water provision for a long time has been below cost giving no incentive to the company to efficiently provide the service.

Sewerage services have also continued to be provided solely by NAWEC. The sector has not received any significant upgrade in recent times. The infrastructure is in dire need for upgrade to address the constant blocking of the network.

The company just like with water has no incentive to use internally generated revenue to upgrade the network because the service is operated below cost. The Government's freeze on water rates technically means the sewerage rates cannot be increased since both are tied together.

Customer Class	KWH Consumption	2008 rates	PURA's Determined Rates for 2010	Ministry's Determined Rates for 2010	PURA's Determined Rates for 2011
Domestic Credit Meters	0-40	2.02	2.02	1.92	2.24
	41-600	6.83	6.50	6.20	7.20
	601-1000	7.58	7.00	6.65	7.75
	Above 1000	9.07	8.00	7.60	8.40
Cash Power	Flat rate	6.76	6.50	6.20	7.20
Commercial		9.43	8.00	7.20	8.60
Hotel/Industries		10.43	8.50	7.65	8.95
Agriculture		9.07	8.00	7.20	8.00
Area Councils		9.07	8.00	7.20	8.70
Central Government		9.07	8.00	7.20	8.70

Table 4: Evolution of Tariffs for electricity services from 2008-2011

The last approved tariff rate which was far below what NAWEC applied for is a clear testimony that drastic policy decisions have to be made in order to address the surging electricity tariffs. The 2011 approved rates attracted a 17% increase over the previous rates and if the status quo remains the population should expect another tariff application come next year requesting for another increase in line with the changing oil prices globally.

Apart from the Wartsila power plant, NAWEC has secured a D443,849,710m loan from the IDB to put up a new 9MW power plant in Brikama. This project when commissioned together with the Wartsila project will help to increase the generation capacity of NAWEC and reduces their dependency on the IPP for Generation.

Location/Unit	Make	Installed Year	Installed Capacity (MW)	Available Capacity (MW)
KPS - G1	Mirrless	1981	3.0	2.5
KPS - G2	Mirrless	1981	3.0	2.5
KPS - G3	Mirrless	1997	3.4	2.5
KPS - G4	Deutz	2001	6.4	5.5
KPS - G6	MAN B&W	1990	6.4	5.5
KPS - G7	Deutz	2001	6.4	5.5
KPS - G8	Deutz	2001	6.4	5.5
KPS - G9	Deutz	2009	6.4	5.5
<b>Total</b>			<b>41.4</b>	<b>35</b>

Table 5: List of engines at Kotu Power Station.

Location/Unit	Make	Installed Year	Installed Capacity (MW)	Available Capacity (MW)
BRK (NAWEC)	Wartsila	2011	9.0	8.3
<b>Total</b>			<b>9.0</b>	<b>8.3</b>
<b>Total for NAWEC</b>			<b>50.4</b>	<b>43.3</b>

Table 6: List of engines of at Brikama Power station owned by NAWEC

## ELECTRICITY GENERATION

During the year under review, the company has added one power plant located in Brikama to its existing fleet increasing its available output to 43.3MW. There were no additions to the existing plants at the IPP apart from the routine maintenance and the available output still remains at 16MW. In the provincial electricity service there were no additions apart from the normal routine maintenance.



## Independent Power Producer (IPP) Brikama Power Station

Location/Unit	Make	Installed Year	Installed Capacity (MW)	Available Capacity (MW)
BRK - G1	Deutz	2006	6.4	5.5
BRK - G2	Deutz	2006	6.4	5.5
BRK - G3	Deutz	2007	6.4	5.5
BRK - G4	Deutz	2007	6.4	5.5
<b>Total</b>			<b>25.6</b>	<b>16.5</b>

Table 7: List of engines of at Brikama Power station owned by the IPP

## Provinces

Location/Unit	Installed Year	Installed Capacity (MW)	Installed Capacity (MW)	Available Capacity (MW)
Essau	2006	460	2 x 200 + 1 x 60	400
Farafenni	2006	1400	2 x 600 + 1 x 200	1360
Mansa Konko	2006	1000	2 x 400 + 1 x 600	940
Kerewan	2006	220	1 x 100 + 2 x 60	180
Kaur	2006	180	3 x 60	120
Bansang	2006	600	3 x 200	540
Basse Mobile Unit		450	1 Containerized	410
Basse Santo Su	2006	1400	2 x 600 + 1 x 200	1360
<b>Total</b>		<b>5710</b>		<b>5310</b>

Table 8: List of Power station in the Provinces owned by NAWEC

## TRANSMISSION AND DISTRIBUTION

Electricity is transmitted for distribution via five radial 11-kV feeders and three 33 kV feeders that form a ring in the GBA. The 33 kV feeders supply medium voltage substations where the voltages are transformed to 11 kV for further distribution. As of December 2011, NAWEC has the following substations in operation.

During the year under review, NAWEC has continued to implement the Venezuela project worth over US\$20 million. This investment is earmarked to improve losses in transmission and also increase access to electricity services in the West Coast Region. New distribution lines are being connected in several peri-urban areas and in old settlements like Kanifing and Banjul the old bare conductions used in the early days of electricity distribution are being upgraded.

By end of 2011, NAWEC had a total electricity customer base of 98,116 in 990 coded zones grouped in seven categories as shown in the table 9.

## CATEGORY NUMBER OF CUSTOMERS

CATEGORY	2007	2008	2009	2010	2011
Domestic	48,517	50,390	53,898	54,465	24,767
Commercial (NGO'S, Schools, etc)	6,159	6,177	6,262	6,038	5,118
Major consumers (Industries, Banks, S/markets etc)	598	636	683	689	463
Agriculture		54	54	57	5
Local Government Authorities	1,084	1,093	1,160	1,201	1,214
Central Government	1,409	1,415	1,430	1,453	
Prepayment Customers	17,212	26,584	40,396	49,942	67,763
<b>TOTAL</b>	<b>75,034</b>	<b>86,349</b>	<b>103,883</b>	<b>113,845</b>	<b>98,116</b>

Table 9: Number of customers per customer category (2007 - 2011)

**Note:** The decline in Domestic consumers from 54,465 in 2010 to 24,767 in 2011 is due to two factors. The first is that in 2011 unlike the previous years NAWEC separated the water Domestic meters from the Electricity meters. The second reason is due to the policy of transferring defaulting Domestic Credit Meters consumers to the prepayment platform.

ITEMS	2007	2008	2009	2010	2011
Customer population	75,034	86,349	103,883	113,845	98,116
Sales MWh -Credit	118,924.7	115,776	96,397	106,594	80,947
Sales MWh-Prepayment			59,025	77,731	87,042
Rev. collection Credit	1,064,723,110	970,850,817	777,262,398	630,356,000	<b>628,463,000</b>
Prepayment sales	N/A	300,419,120.98	456,083,156	512,615,000	<b>647,586,000</b>
System Losses Power House Consumption	39%	33.34%	32.7%	31.2%	31.2%
Power Demand MW	88	90	108	126	132
Energy Demand MWh	416,280	473,040	501,420	596,030	621,680
Customer growth p/a %	7.5	15.1	20	10	-14
Energy Demand Growth rate	12.8	13.6	6	18.9	4.3
Power Demand Growth rate	12.8	2.2	20.0	16.7	5
Revenue growth rate	51	19	-3.0	-7.3	12

Table 10: Status of the electricity market.

NAWEC during the period under review has increased its customer number by 23% which is very significant and if this trend continues one should expect better prospects for the company. Energy demand will continue to rise for both domestic and industrial consumption and as such the company needs to expand its generating capacity alongside the network expansion being carried out to meet the ever increasing demand.

The increase in service connections has paid dividends in revenue generation, from a negative growth of -7.3% in 2010, the company turned this around to a positive growth rate of 12% in 2011. This is a significant milestone and the company needs to maintain this momentum in their quest for sustainability.

This increase in revenue could be associated with the impressive performance made in the prepayment sales. The policy decision to change from credit meters to prepayments is yielding results. In 2011 the company realised prepayment sales to the tune of D 647,586,000 representing an increase of 23% over the 2010 sales. This is a remarkable improvement on the previous year when the company could only realize a 10% increase over the 2009 figures.

## WATER SERVICE PROVISION

The Government of The Gambia in fulfilment of its obligation to the populace and also meeting the MDG targets on water for all by 2015 has made gigantic strides in the provision of water throughout the country. In the Greater Banjul Areas and the major administrative town centres and major towns water is provided commercially by NAWEC. In the areas that do not enjoy NAWEC's services, pipe borne water is provided through the Department of Water Resources in collaboration with donor agencies and NGOs.

Various technologies are used ranging from solar energy to wells fitted with hand pumps. This stand alone water sources and the expansions carried out by NAWEC has greatly enhanced the well being and access to clean water for the Gambia populace.

The utility company over the years has embarked upon a massive expansion in Brikama which has enabled the company to extend the service to under served areas along the coast. This project has added 15 new boreholes and a treatment plant to the existing network as shown in the table below.

Well fields	No. of Boreholes	Status
Salagi & Jambur	15	Operating
Wellingara & Sukuta	11	Operating
Fajara	6	Operating
Brikama	16	Operating
TTC	1	Operating
NASA	1	Operating
Yundum	1	Operating
Kanifing	1	Operating
Kerr Serigne	1	Operating

*Table 11: List of various well fields and the number of boreholes in each well field.*

Well Fields	No. Of Boreholes	Status
Essau	2	Operating
Kerewan	2	Operating
Mansakonko	2	Operating
Farafenni	2	Operating
Kaur	1	Operating
Janjangbureh	1	Operating
Bansang	1	Operating
Basse	2	Operating
Juffereh	1	Operating

Table 12: list of provincial boreholes and their operating status.

Sewerage Plant	Status
Banjul	Operating
Kotu	Operating

Table 13: Sewage facilities in the GBA

## WATER QUANTITY SOLD AND REVENUE

The quantity of water produced, sold and revenue generated during the period from 2005 to 2009 is shown in the table below.

YEAR	PRODUCTION m <sup>3</sup>	SALES m <sup>3</sup>	LOSSES m <sup>3</sup>	REVENUE Dalasi
2005	15,744,435	12,683,728	24.13	99,378,992
2006	15,731,946	12,746,884	23.42	106,182,076
2007	16,700,684	15,106,454	10.55	149,392,820
2008	19,546,743	13,939,154	40.23	139,037,861
2009	23,781,445	23,724,864	0.24	141,642,524
2010	27,781,445	22,605,584	23.00	152,240,000
2011	28,309,264	18,501,049	53.01	126,473,463

Table 14: Amount of water produced, sold and revenue generated.

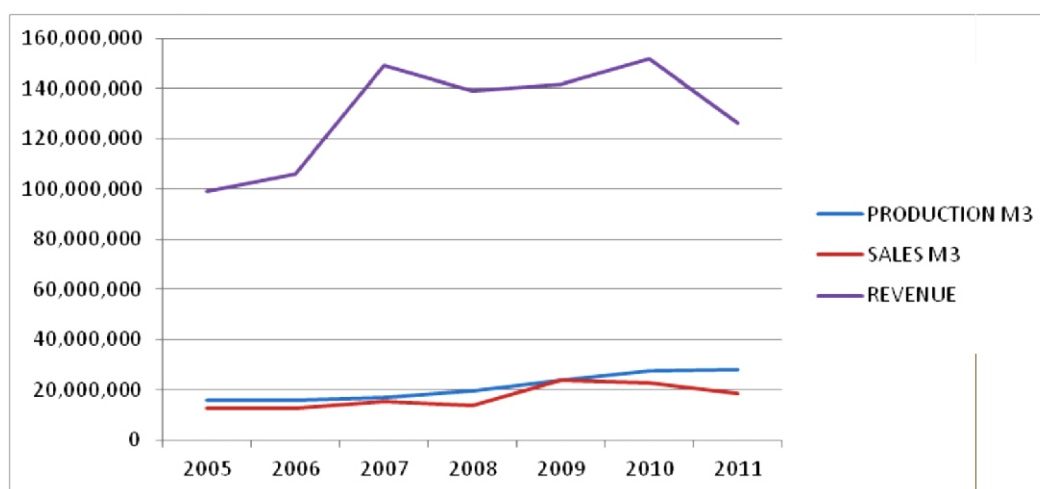


Figure 14: Volume of water produced, sold and revenue collected.

The production figures from 2005 to 2011 in the above chart indicate that the company has been increasing its yearly production to meet increasing demand. From a production figure of about 16 million cubic meters in 2005, the company was able to increase the production to about 20 million in 2008. By 2011 the production levels increased to 28 million cubic meters justifying the need for the expansion carried out in the network.

However, when the production figures are compared with the revenue and sales figures, the results portray a gloomy picture for the sector. Whereas the company is increasing its production yearly the sales and revenue figures maintain a steady reverse trend. In 2005, when the production was 16 million m<sup>3</sup> the company could only realized sales of only 13 million m<sup>3</sup> representing a loss of 24%.

The trend remains pretty much the same until 2008 when the company nearly loss half of all the water produced by recording a loss of 40%. However, in 2009 the company miraculously turns the situation around by making zero losses. This achievement is indeed faltering and the authority will revisit this figures and if necessary make the necessary adjustments if required. The company could not however maintain this momentum and in the subsequent years registered further losses of 23%, in 2010 and hitting a record low in 2011 by registering a loss of 53%. This is a very sad situation considering the massive investment carried out in the sector.

Looking at the revenue figures above, The continual decrease in revenue for water operations according to NAWEC highlights the necessity of having a cost reflective tariff. Although this is a part of the reason, the impetus is on NAWEC to ensure efficiency in its operations. Losses of over 50% cannot only be attributable to low tariffs, it is imperative that other non-tariff decisions be taken to address the huge water losses continually being witnessed.

The sector has witnessed a variety of investments over the years and in order to match those strides, losses in production definitely need to be reviewed.

## PART IV:

### CONSUMER AFFAIRS REVIEW

The Consumer Affairs Directorate is responsible for consumer related activities and all stakeholder relations to do with consumer education and awareness programs. During the period under review the directorate registered the following milestones.

- Customer Satisfaction Survey of toll free numbers of all regulated public services
- Monitoring Customer Care Centers of all Regulated Utilities
- Stakeholder Relations
- Validation of Consumer Bill of Rights
- 4th Consumer Parliament
- Consumer Education and Advocacy(CFL)
- SIM Card Registration
- Study Tour and Training

### CALL CENTER MONITORING

During the months of March and December the Directorate conducted a call center monitoring exercise through random mystery calls, to the customer care numbers of all regulated utilities. Equal numbers of calls were placed to all regulated utilities at random in order to assess their level of preparedness and competence thereof. This is a periodical exercise that the directorate embarks upon in order to have a first hand experience as to, for example how long it takes for them to respond to customers calls, how courteous they respond to their customers, and how effectively they handle their complaints.

This exercise compared to earlier years have shown some improvement in terms of taking responsibility on the part of the operators, who have by now grown to the idea that there is some form of monitoring that takes place of which they can be directly held responsible. This has resulted in enhanced quality, in terms of how customer interactions are generally handled.

### CUSTOMER CARE CENTER MONITORING

As in 2009, The Directorate compliments its efforts in ensuring that customers are dealt with fairly, as a result we always try to understand the environment that the customer care staff are housed and maintained. This we believe can be the only way to ascertain the reasons that we may have found as gaps in the provision of a quality customer care service. Because if the personnel charged with dealing with customers are themselves victims of circumstances this will invariable impact on their overall output. As such we embarked upon customer care center visits to all regulated utilities from Banjul to Gambisara in the Upper River Division.

During our visits to these centers it became clear to us that, there is a big divergence between those offering good customer service and those lagging behind. This further proves to us that there is a direct correlation to the way that staff of regulated entities are housed and maintained and their output. Consultations were carried out with all operators in order to share these findings and map a way forward for a quality customer experience to be had by all regardless of their supplier.

The conducted exercise was one based on a fact finding mission. However it has yielded more than we have bargained for, in terms of conditions of work and environment, health and safety, but especially the self motivation level of customer care staffs, who in the absence of any coherent strategy in relation to customer care provision, sometimes have to go the extra mile in learning about products and services as an own initiative in order to help customers who have come to know them on first name basis.

Conversely, notwithstanding, the impediments that were highlighted in terms of technical constrains, personal ability, and organizational norms and cultures. The exercise was an eye opener for us both as regulators and individuals, in our understanding and appreciation of the underlying reasons as to how and why customers are received and treated the way they

are by the concern operators. Furthermore, it enabled us to understand and strengthen our working relations with all the centers that we have visited.

## **STAKEHOLDER RELATIONS**

In the month of April the directorate, operating under its mandate to be the focal directorate in encouraging, nurturing and fostering the growth of consumer advocacy groups in the country engaged consumer advocacy groups. During the period under review and met with a group who identified themselves as Consumer and Competition Advocacy Group (CCOSPAG), which is a non Governmental organisation, whose aim is to ensure that all consumers in The Gambia would be protected from all forms of neglect and exploitation, whilst guaranteeing their rights as enshrined in Law. During our interactions with them they shared with us, their work programme, which mainly focused around their collective efforts to draft a consumer bill of rights, which they have invited the Authority through the directorate is invited to sit on the final drafting process. This development in the industry is welcomed and commended by the Authority as the way forward, in our collective strive to protecting the interest of The Gambian consumers. It is worthy to note that this particular project is championed by the Ministry of Trade.

This also shows the commitment of the Authority in fulfilling its role in making sure that coherent methods are adopted to make sure that the role of protecting the interest of the consumer is not conducted in a vacuum but kept paramount.

## **VALIDATION OF CONSUMER RIGHTS BILL**

As mentioned before, the Directorate was invited and participated in the validation of the Consumer Rights bill coordinated by the Ministry Of Trade, Industry, Regional Integration and Employment in collaboration with The Gambia Competition Commission. Getting a Consumer Rights bill is recognised by the Authority, as an instrument that can only enhance its role in protecting the interest of the Gambian

consumers. PURA's experience and efforts could be integrated in this process by learning from it's already established instruments it has in place which are not limited to processes and procedures of complaint handling but advertisement codes and standards as well as quality of service guidelines.

## **4<sup>th</sup> CONSUMER PARLIAMENT**

The Directorate held its 4th consumer parliament in Banjul, which was primarily preceded by the usual media campaign to sensitise the populace as to why, when, how and what is expected of would be parliamentarians.

The event took off as expected and the attendance was unprecedented in the history of our holding of the event. Most of the interventions were related to telecoms and electricity services. All operators were represented except UNIQUE SOLUTIONS and NETPAGE. The 4th edition of the Consumer Parliament of the regulated sectors of the Public Utilities Regulatory Authority took place on 1st October, 2011, at The Gambia Senior Secondary School, Banjul. And as expected it served as a platform for consumers to come face to face with their service providers and collectively address concerns affecting them all, it also served as a medium for transparency in the industry; by getting stakeholders' views, reactions and inputs into regulatory policies and programs and provide reliable feedback to the Authority for effective regulation.



*Figure 15: A cross section of Operator Representatives at the Parliament.*



*Figure 16: Operators taking in the light side of the event*





*Figure 17: A snapshot of consumer Parliamentarians keeping track of proceedings*



*Figure 18: Parliamentarians Taking keen interest in the proceedings*



*Figure 19: Elderly Parliamentarian contributing and sharing wisdom expressing as well as concerns to the Panel*

## CONSUMER EDUCATION AND ADVOCACY COMPACT FLUORESCENT LAMP PROJECT (CFL).

In June 2011 the directorate in line with our established philosophy of information, education and communications, saw us collaborating with the Directorate of Technical Regulation, (DTR) in preparing the scene for educating consumers through advocacy as to the benefits of using CFL light bulbs as opposed to the incandescent light bulbs, in the community of Banjul North (Tobacco Road).

This event was organised with the belief that “seeing is believing” which stemmed from our earlier intervention in Kanifing South where a similar project, in which the Authority purchased 1000 CFL bulbs which were installed in a given area for free. The community benefitted directly from the exercise in terms of the cost of their electricity bills and quality of service enjoyed as a result of reduced demand from the grid for the entire area, and most importantly a change in habit.

This exercise would not have been successful if it was not supported by the Banjul City Council Mayor's Office, the National Assembly member for the area, the ward councillors, and the community at large. As with the previous project, the event was broadcasted on the GRTS

national TV station so that it can serve as a reference point for those who might not be affected by this gesture but may learn from the experience of the community of Tobacco Road residents.

The event was as envisaged well received by all and sundry, based on its perceived benefits for the operator and consumers as a whole, we have since taken note of the success and hope to build upon it in our forthcoming advocacy work.



*Figure 20: PURA DG, Mr. Abdoulie Jobe and Mayor Samba Faal look on as the first bulb is changed*



*Figure 21: Active participation by the PURA Chairman, Mr. Dodou B. Jagne and DG Jobe*



*Figure 22: Capturing it all on tape during the Opening Ceremony*



*Figure 23: Visual Energy saving Demonstration by EE (PURA)*





*Figure 24: Visual demonstration by the DG PURA and the 1<sup>st</sup> bulb being changed by the Mayor of Banjul*

## **SIM CARD REGISTRATION**

In the month of May 2011 the Directorate took a leading role in preparing the ground for the sensitization to do with a Policy Directive that all SIM Cards in use must be registered, for reasons of both personal and national security.

In this vein the Directorate in collaboration with all relevant departments devised a media sensitization plan to put into effect the implementation of this policy decision, based on our Information, Education and Communication (IEC) ethos, which saw us engage the general public through a campaign in our quest to first educate them as to why, how and where they should register their SIM Cards? Massive media sensitization was employed which covers radio, TV and the printed press.

As of date the registration of SIM Cards is known to most Gambians and the reason for this is the planning, that we have done in terms of educating the masses as to why we are calling on them to go and register their SIM cards.

Therefore the education continues to play a large role in the overall acceptance of the scheme.

Study Tour: National Communications Authority of GHANA (NCA)

As we all know regulation in general is quite a new phenomenon in not only the sub-region but Africa as a whole, as such most of the regulatory interventions embarked upon are benchmarked with what and how others do it. The Director of Consumer Affairs together with Deputy Director Legal Licensing and Enforcement and Consumer Affairs Officer embarked on a study tour to our sister regulator the National Communications Authority of Ghana.

During this visit the areas of discussion we had with them revolved around the following areas:

- SIM Card Registration - since Ghana have been implementing the SIM card registration longer than PURA we learnt lessons in a range of areas for a successful implementation of SIM card registration, which have all since been adapted.
- Licensing - areas of licensing and how this relates to consumer affairs were also discussed.
- Consumer protection issues - in this regard to this we shared our model of Consumer parliament and “Bantaba outreach” of which synergies were drawn in relation to their own systems of consumer advocacy.
- Call Center - we conducted a tour in TEMA on the out skirts of Accra to visit a fully fledged call center of MTN, from where discussions were had to do with best practice, some of which we have already implemented in our own call centers.
- Dispute resolution - Similarly areas of contentions and accord were shared in the methods that we both apply in resolving disputes between customers and operators and operators.

PURA also visited the national media commission who are responsible for regulating all non technical aspects of broadcasting. This also happens to be within our mandate to regulate

## SIGTEL TRAINING LOMÉ (TOGO)

During the period under review, Consumer Affairs was represented in attending the second Telecommunication Information Management System (SIGTEL) Training Workshop in Lomé. The ECOWAS Commission, in collaboration with the Government of Togo, organized the training workshop for National Correspondents for Indicators (NCIs). The event was held from the 5th to the 9th September 2011 at the Community

Computer Centre located at the Headquarters of the ECOWAS Bank for Investment and Development (EBID) in Lome, Togo.

The objectives of the SIGTEL training workshop are as follows:

- i. Development of a database, for the Management of Information Systems for Telecommunications (SIGTEL).
- ii. Harmonization of the ECOWAS indicators with the ITU Telecom/ICT indicators.
- iii. Standardization of the data collection methodologies of the ECOWAS indicators and Telecom/ICT infrastructures.
- iv. Improvement of data collection in a proactive manner.
- v. Capacity building for National Correspondents for Indicators.

Following discussions between the training team and the NCIs, some of the key recommendations made to the NCIs, the National Regulatory Bodies and the ECOWAS Commission:

1. Continuous improvement of data collection methodologies and deployment of new technologies in data collection.
2. Processing and transmission for data integrity.
3. Provision of regular training of NCIs and direct assistance from ECOWAS to all member states.
4. NCIs are encouraged to attend ITU indicators meetings, as well as other training activities that will facilitate excellent performance in the SIGTEL project.
5. Periodic submission of data to ECOWAS is March for the half yearly and August for the yearly data transmission.
6. The data transmitted to ITU must be the same data transmitted to the ECOWAS data management unit

## PART V:

### LEGAL AND COMPLIANCE REVIEW

During the period under review, the legal unit undertook the following activities:

#### DISPUTE RESOLUTION

- a) Resolution of a dispute between GAMTEL and the Internet service provider association of The Gambia (ISPAG) which was lodged with the Authority by the ISPAG on 9<sup>th</sup> February 2011 and concluded on 22<sup>nd</sup> March 2011 by way of a Determination which all parties complied with.
- b) Resolution of a dispute between GAMTEL and COMIUM which was filed by GAMTEL on 17<sup>th</sup> February 2011 and concluded on 29<sup>th</sup> June 2011. The Authority did not investigate this complaint due to lack of sufficient evidence.
- c) Resolution of a dispute between QCELL and all GSM operators which was filed by QCELL on 22<sup>nd</sup> February 2011 and a Determination issued 27<sup>th</sup> June 2011.

#### DEVELOPMENT OF GUIDELINES

The following guidelines were drafted and came into force during the period under review:

- a) Procedure for resolution of complaints/disputes before the Gambia Public Utilities Regulatory Authority: These guidelines set forth the principles and procedures that PURA shall refer to in resolving disputes pursuant to the PURA Act 2001. The guidelines shall encourage the fair resolution of disputes by the Authority. The said guidelines came into force on 15<sup>th</sup> May 2011 after extensive consultation with all stakeholders.
- b) Guidelines for application of broadcasting licenses: These guidelines

set forward the process, procedure, criteria and information requirements for any person who wishes to apply for a broadcasting license

- c) Guidelines for application of information and communications licences: These guidelines set forth the procedure, criteria and information requirements for any person who wishes to apply for an IC licence.
- d) Guidelines for community radio stations: the objective of these guidelines was to ensure that community radio stations are regulated and provided with parameters within which to operate as government has provided them with all financial waivers regarding license fees, spectrum fees, taxes etc.

The objective of the above mentioned guidelines is to ensure that applicants and licensees are aware of the rules and regulations with regards to their particular sector and to ensure that objective and transparent processes are followed based on objective criteria in order to ensure confidence in the Authority's processes.

#### STAKEHOLDER RELATIONSHIP

- a) The legal department conducted a presentation at a joint workshop hosted in April by the Gambia Competition Commission. The objective of the workshop was to allow the relevant regulatory bodies to have a better understanding of their roles and mandates.
- b) PURA signed an MOU in April with Internet Technology Association Gambia (ITAG). The objective of the MOU was to establish a jointly beneficial relationship to build capacity between the two institutions and strengthen our roles in the ICT sector.
- c) PURA hosted a workshop for the energy sector in June.

Attendants at the workshop were GIEPA, MOE, PURA, NAWEC and other stakeholders. The objective of the workshop was to ratify a licensing framework which PURA had created specifically for Independent Power Producers in order to encourage alternative energy supply.

- d) PURA hosted a workshop for all community radio stations in July. The objective of the workshop was to present the draft guidelines and also engage the community radio stations with regards to establishing a regulatory framework including licensing etc.

## LICENSING

In March 2011 PURA recommended for the award of an IPP License to GAMWIND, a company that had applied to provide alternative energy via windmills.

PURA prepared application packages for water, energy and IC licenses which provided application forms and information packs to interested members of the public.

An internal review process was also created to ensure that all relevant directorates are involved in the review of license applications.

PURA revoked five broadcasting licences on 11th August 2011. These licenses were issued 19th July 2010 and the licensees had failed to start operations within six months of issue and the additional period allowed by the Minister which is contrary to section 236 of the Information and Communications Act 2009.

The licences of the below listed applications were revoked:

- a) Deggo FM
- b) Jazz FM
- c) Digital FM
- d) Gambisara FM

## ENFORCEMENT

The following administrative fines were levied on the below listed licensees:

- a) 1-Net World was fined the sum of D110,000 for failing to obtain the Authority's prior approval before transferring 90% of their shares to another company called Afrimax Gambia BV on 8th July 2011. This fine was paid on 25th August 2011.
- b) Netpage, an ISP, was fined D10,000 for failing to comply with the Authority's directive to attend a Consumer Parliament in Banjul on 1st October 2011. This fine was paid on 14th October 2011.
- c) Unique Solution, an ISP, was fined D10,000 for failing to comply with the Authority's directive to attend a consumer parliament in Banjul on 1st October 2011. This fine was paid on 14th October 2011.

## AFRICA COAST TO EUROPE (ACE) SUBMARINE CABLE PROJECT:

The legal department also assisted with the effectiveness of the ACE project by doing the following:

- a) Acquiring the TIN number for the Special Purpose Vehicle (SPV) from GRA
- b) Acquiring all signatures of shareholders on the Memorandum of Articles and Association
- c) Completing the declaration of compliance and form C006 for the registration of the SPV
- d) Incorporating the SPV at the Ministry of Justice
- e) Drafting the agreement between the Government of the Gambia and the SPV for the financing principles of the project based on a template provided by the World Bank
- f) Assisted the International lawyer in tasks such as printing and preparing various agreements such as consortium agreements etc
- g) Guided the international lawyer in various matters regarding ACE.



## PART VI: REGULATORY ACTIVITIES

### SPECTRUM MANAGEMENT

#### Interference Complaint

A complaint was received on 25<sup>th</sup> January 2011 from some residents in Bakau Sanchaba (Fajara Barracks area) that when they switched on to GRTS TV, they experience some interference on their screens.

effect their equipment was causing to the residents when switched on.

PURA identified the cause of the interference and consequently advised the culprit to stop using the equipment. After this intervention the interference stopped in the area.

#### FM RADIO SOUND STATIONS

- An application was received from The Gambia National Commission for UNESCO, for an FM sound radio



Figure 25: Samples of interference on television screens

According to the complainants, the interference signals emanates from a nearby Church (Lighthouse Chapel International) anytime service was conducted.

PURA's engineers after several visits on different days to nearby compounds verified the facts of the complainants then proceeded to the Church and requested the Pastor to come witness the

frequency to install a Community Radio station in Bansang. PURA processed and recommended for a license to be given by the Minister of Information and Communications Infrastructure. Following the Minister's approval, a frequency of 107.2 MHz from the GE84 plan band was assigned.



Figure 26: Typical FM sound radio station studios

- After an application was received and processed, a frequency of 100.4 MHz was assigned to Capital Radio, a commercial radio station, following the Minister's approval. They were also assigned a frequency 860 MHz for their Studio Transmitter Link (STL) to send the studio signals from Kairaba Avenue to Abuko where the transmitter is installed.

## GUIDELINES AND APPLICATION FORMS FOR COMMUNITY RADIO

Guidelines and application forms for operating Community Radio stations were developed. Below is an excerpt of the technical parameters of the guidelines;

*Coverage:* Community radio stations are expected to cover areas typically up to 15 km in radius, however a maximum coverage of 25 km (this will be the exception rather than the rule) could be considered in instances of communities whose terrain has a peculiar case. PURA shall therefore consider, on a case by case basis, whether licensing a service on more than one transmitter might provide better coverage of the target community, for example, if the terrain presents difficulties. However, this will only be the case where there is sufficient

frequency availability, and this approach is deemed to be the most technically efficient.

- Power:* The maximum effective radiated power (e.r.p.) should not exceed 200 Watts, this will be with respect to the coverage.
- Sensitivity:* the transmitter should give a minimal input signal which would be received at the receiver end with a signal to noise ratio of 12dB within the area of coverage.
- All FM radio stations (both commercial and community) must have an audio compressor / limiter connected between the final output of the studio audio and the input of the transmitter. The input signal of the audio compressor / limiter must be 0dB or -12dB depending on the manufacturer of the audio compressor limiter.
- The antenna height must not exceed 25 meters.

## PRIVATE MOBILE RADIO (PMR)

- Esam Security Company applied for a Private Mobile Radio (PMR) frequency from the VHF band and was assigned a frequency from the VHF band for their radio communication network.



Figure 27: Private Mobile Radio (PMR) base station and handsets

- a) G4S requested for assignment of a new frequency for use with their Private Mobile Radio (PMR) network for data and was assigned that same frequency after going through the database and found that the frequency was free.

### AMATEUR RADIO ENTHUSIASTS

Amateur radio license was requested from radio amateur groups from the Czech Republic and Slovakia for the third time (2007, 2010 and 2011) for a competition held in The Gambia from 20th October to 31st December 2011. They were a guest of Benny Holgerson of Radio Syd and the group comprises of eight amateur radio enthusiasts who have been enjoying this hobby for almost twenty years now.

The call signs assigned to them were;

- a) **C5A** for the competition
- b) **C52C** for the radio amateurs expedition
- c) **C50C** for the radio amateurs expedition

### INTERNET SERVICE PROVIDER (ISP)

One Net World, a licensed ISP requested for the replacement of their 50 MHz (2.640 GHz to 2.690 GHz) from the previous 2.5 GHz band assignment to the 2.3 GHz band in order to roll out WiMAX. Due to the limitation on this band which has a total of 100 MHz of bandwidth, the Authority after assessing their request and to

efficiently manage the national spectrum, a scarce national resource, decided to assign One Net World a bandwidth of 40 MHz (2.300 GHz to 2.340 GHz) on the 2.3 GHz band so as to accommodate other applicants. The band is divided to accommodate three service providers, because the quality of the service to be provided is taken into consideration.

NETPAGE requested for a change in their previous spectrum assignment of 20 MHz in the 2.5 GHz band to 30 MHz in the 2.3 GHz band, the reasons giving was that they intend to enhance and expand their network / services for their customers. They requested for new microwave frequencies in the 11 GHz and 18 GHz bands for their backhauls. The Authority after assessing their request and to efficiently manage the national spectrum, a scarce national resource, decided to assign 30 MHz bandwidth (2.340 GHz to 2.370 GHz) on the 2.3 GHz band. They were also assigned channels 1 and 4 on the 11 GHz band and channels 17 and 20 on the 18 GHz band for their backhauling.

### MAST AND TOWERS

PURA wrote to spectrum (wireless) users as a matter of concern to the safety of the general public and aviation in particular to provide lighting and paint all mast / towers as per International Civil Aviation Organization (ICAO) rules.



*Figure 28: Top part of the mast painted red and lighted part of the mast painted white showing lights*

PURA determined that all licensed ICT service providers in The Gambia who have installed mast / towers, should adhere to the international mast / tower requirements for the painting / markings and lighting of the mast / towers as prescribed by International Civil Aviation Organisation (ICAO) of whom the Gambia Civil Aviation Authority (GCAA) is a signatory. They have since been giving deadlines and constant monitoring is on going to make sure the concerns of the Authority on this aspect are adhered to.

put to sea. The applications received were processed and the vessels owners assigned their requests, through the GMA after the appropriate payments were made to GRA.

### TYPE APPROVAL ISSUES

Several type approval certificates were issued to international manufacturers who wish to sell their radio-communication and telecommunication terminal equipment in The Gambia, after producing technical documents

Name of Vessel	Call Signs Assigned	NMSI Numbers Assigned
MV Haddijatou	C5J18	629009002
MV Lady Zinab	C5J30	629009000
MV TUG M/T FARES	C5J24	629009008

Table 15: maritime call signs of ships issued frequencies.

### MARITIME ISSUES

Applications were received through The Gambia Maritime Administration (GMA) on behalf of the below listed Gambian registered vessels for Call Signs and MMSI numbers which are international requirements before any vessel is

and test reports from recognised international test laboratories.

The type approval certificates that were issued per equipment model in 2011 are for the following equipment;

Item No.	Equipment Model
1	CF-53 – Panasonic Personal Computer Notebook
2	CF-D1 – Panasonic Personal Computer Notebook
3	FS5MAF4 - Tire pressure monitoring transmitter / driver safety
4	KMHSYNCG2 – SYNC Gen II / a voice-activated hands-free, in-car communications
5	KOJBG10B - Remote Function Actuator (RFA) module
6	ZAFT6BCM – T6 Body Control Module RF Receiver
7	WIBT20 – Bluetooth RF Module – 3D device
8	WIDT10B – Wi-Fi Module – 3D device
9	SSG-3100GB – The 3D glasses
10	SSG-S3000GR – The 3D active glass
11	WIBT30A – This Bluetooth Module
12	WIBT30D – This Bluetooth Module
13	Bosch Huf - Flip Key Button
14	PA710MDMEBT – Digital Car Audio System
15	AC110A5UG – Digital Car Audio System
16	Realtek RTL8188CE – single-chip Wireless LAN (WLAN) controller

Table 16: Lists of equipment issues with Type Approval Certificates by PURA.

## WORKSHOP / CONFERENCE

PURA's Spectrum Manager attended the first African Summit on Analogue to Digital Television Transition and Spectrum Policy in Nairobi, Kenya organized by African

- c) television,
- c) evaluate the use of the spectrum resulting from the analogue-to-digital television transition and the approaches to introduction of new services, technologies and applications, and



*Figure 29: The opening ceremony of the Digital Migration and Spectrum Policy Summit*

Telecommunications Union (ATU) in collaboration with the International Telecommunications Union (ITU), the Kenyan Communications Ministry and Communication Commission of Kenya (CCK). The summit was from 29<sup>th</sup> November to 1<sup>st</sup> December 2011.

The digital television transition process has many components which individual countries and the African Region as a whole must be prepared to address. The goal of the Digital Migration and Spectrum Policy Summit was to serve as a forum for countries in the region to;

- a) share their current digital migration progress,
- b) learn from experiences of other countries that have or are in the process of transitioning from analogue to digital

- d) consider policies related to the released spectrum among ATU Member States in a timely and efficient manner.

The Summit was also geared to conduct a Regional examination of the digital dividend spectrum in the region with a view to fostering cooperation among Member States to make the freed spectrum available for new technologies and services, as quickly and efficiently as possible in order to improve broadcasting and mobile broadband infrastructure and access to affordable ICT services, particularly in rural and remote areas of Africa. The deadline for analogue to digital switchover is 15th June 2015 as agreed during the ITU World Radio Conference of 07 (WRC-07) held in Geneva, Switzerland on October 2007.

## WEST AFRICAN REGIONAL COMMUNICATIONS INFRASTRUCTURE PROJECT

The Gambia is one of the African Countries which remains to date without connectivity to submarine cable and rely exclusively on satellite communications and fibre optic connection through neighbouring countries for international connectivity. The result has been an unreliable service and high prices for international calls and internet connection. This, coupled with a deteriorating national backbone infrastructure has created a difficult environment for expanding availability. The lack of access to low price and high quality telecommunication

services is one of the factors that limits The Gambia's potential to create jobs, expand production of goods and services and trade competitively with the rest of the world.

The Government of The Gambia (GOTG) in its quest to achieve the Millennium Development Goals (MDGs) and its blue print "Vision 2020" objectives saw the need for improving The Gambia's international connectivity, as well as for greater regional economic and communication infrastructure integration. For this reason, the GOTG has decided, along with many other West African countries, to become a member of the Africa Coast to Europe (ACE) fiber-cable project. The fibre optic layout and connectivity is shown in the figure below.

### ACE at a glance

- 17 000 km long
- An overall investment of USD 700 million
- 40G technology proof (5.12 Tbps)
- 23 countries connected including:
  - 21 countries with landing points
  - 2 landlocked countries (Mali and Niger) via terrestrial link
- 7 countries previously not served by a high bandwidth cable system (Eq. Guinea, Gambia, Guinea, Liberia, Mauritania, Sao Tome & Principe and Sierra Leone)



Figure 30: Current Configuration of ACE submarine Cable stations

A Special Purpose Vehicle (SPV) "The Gambia Submarine Cable Co. Ltd" has been established between the private Global System for Mobile Communications (GSM) operators, the Internet Service Providers (ISP), the GOTG and the Gambia Telecommunications Company (GAMTEL/GAMCEL) to participate in the ACE consortium and secure access to capacity.

The Government of The Gambia through GAMTEL signed the ACE "Construction and Maintenance Agreement" (C&MA) on 5<sup>th</sup> June 2010 and has accordingly become a member of the ACE consortium and will be part of the new fiber-cable system. This support forms part of the West Africa Regional Communications Infrastructure Program (WARCIP) Gambia Project prepared by the GOTG with financial support from the World Bank through an International Development Association (IDA) grant of US\$35 million.

The project development objective of WARCIP The Gambia is to increase the geographical reach of broadband networks and reduce costs of communications services in the territory of The Gambia. The project seeks to provide a comprehensive solution to address bottlenecks relating to connectivity to enable the creation of a fully integrated network which will eventually link all countries' networks in the region. It also supports the strengthening of the enabling environment by provision of critical technical assistance and local capacity to institutions and provides project implementation support.

The project is to be implemented over four years commencing 2011 and the total cost of the project is estimated at US\$35 million.

#### **PURA ACCELERATES PROGRESS:**

The Gambia is to benefit from high speed Internet connectivity through the Africa Coast to Europe (ACE) fibre optic submarine cable project which is expected to commence service between the months of October to December 2012.

The ACE submarine communications cable is a cable system undergoing construction along the west coast of Africa between France and South Africa, planned by the ACE consortium which was initiated on June 5, 2010 and consist of:

- i. 17,000 km long fibre cable
- ii. An overall investment of \$700 million
- iii. It will connect 23 countries, either directly for coastal countries or indirectly through terrestrial links for landlocked countries like Mali and Niger. This will be the first international submarine cable to land in Equatorial Guinea, The Gambia, Guinea, Liberia, Mauritania, Sao Tome and Principe and Sierra Leone.
- iv. The ACE system will deploy wavelength division multiplexing (WDM) technology, which is currently the most advanced for submarine cables. With WDM, cable capacity can be increased without additional submarine work. With an overall potential capacity of 5.12 Tbit/s, the system will support the 40 Gbit/s technology from its launch

The Construction and Maintenance Agreement (C&MA) of ACE submarine cable project was signed on Saturday, June 5<sup>th</sup> 2010.

The current members of the consortium are:

- i. Baharicom Development Company
- ii. Cable Consortium of Liberia
- iii. Companhia Santomense de Telecomunicações
- iv. Côte d'Ivoire Telecom
- v. Expresso Telecom Group
- vi. France Telecom
- vii. The Gambia Sunmarine Cable Company
- viii. International Mauritania Telecom
- ix. Orange Cameroun
- x. Orange Guinée
- xi. Orange Mali
- xii. Orange Niger
- xiii. PT Comunicações
- xiv. Republic of Equatorial Guinea
- xv. Republic of Gabon
- xvi. Sierra Leone Cable Company
- xvii. Sonatel
- Xviii. Sotelgui

This project is expected to provide new business opportunities through high speed Internet service and increased bandwidth to support developments in e-commerce, e-health, e-education and e-government in the country, in addition to:

- Enabling countries such as The Gambia which is being connected to a submarine cable for the first time to not rely on expensive satellite bandwidth
- Provides direct access amongst African countries connected by ACE thereby eliminating transit charges
- Reduce International communications costs
- Access the most advanced internet and mobile service (IPTV, mobile TV, Video on demand, music downloads, pictures and other value added services)

PURA saw the ACE project as the most challenging and extensive regulatory activity embarked upon by the Authority and in this regard, played a critical role in the facilitation and formation of The Gambia Submarine Cable Company (GSC) as the special purpose vehicle to construct, own and operate the US\$ 35 million ACE Gambia Landing station. The GSC, which was incorporated on 12th September, 2011, is a public-private partnership venture comprised of The Government of The Gambia, GAMTEL, and GAMCEL owning 49% shares whilst AFRICELL, COMIUM, QCELL, NETPAGE and UNIQUE SOLUTIONS own 51% of the shares.

The task of even having stakeholders who are competitors to meet and form a company was a major and daunting task, but PURA lived up to the challenge.

This positive development is due to the high degree of confidence exhibited by the Mobile and Internet service providers in the ability of PURA to maintain a fair, stable and transparent regulatory environment in which their investment would be protected. It also reflects the Government of The Gambia's commitment to empower the communications service providers to spread the benefits of new technologies to

customers irrespective of geographical considerations.

## NATIONAL BACKBONE INFRASTRUCTURE

The ICT sector in The Gambia is relatively small but quite competitive. There is partial competition in domestic and international traffic. The Gambia is also participating in the Africa Coast to Europe (ACE) submarine fibre optic cable project providing the country with its first international submarine cable landing station and connectivity to the network of international submarine cables providing the world with more affordable high speed interconnections.

Since the ACE fibre cable project will make the international connectivity not only be more accessible, available and affordable, the national connectivity particularly Internet would still remained a challenge. The long term vision of the Government is to use ICT to substantially transform The Gambia's under-developed, low-income agricultural-based, technologically and industrially weak economy into a high income information-rich and knowledge-based economy and society in the emerging information and knowledge age.

The national and regional backbone infrastructural challenges are common in most countries in the ECOWAS region hence the need for a regional approach. In a bid to address these common challenges, the ECOWAS Regional Backbone infrastructure and e-Governance platform program (ECOWAN) was "Adopted" on the 31st July 2010 during the 9th Meeting of ECOWAS Ministers of Telecommunication and ICT, held in Accra, Ghana.

Taking note of the ultimate objective of the project which is to deepen regional and national socioeconomic integration and development, and the facilitation of trade and innovation by improving the ICT connectivity infrastructure in The Gambia under open access principles, The Government of The Gambia (GoTG) through The Ministry of Finance and Economic Affairs (MOFEA) received a loan from the Islamic Development Bank (IDB), project, towards the



implementation of the ECOWAS Regional Backbone Infrastructure and e-Governance Program (ECOWAN)-The Gambia Project.

This followed a mission by the Islamic Development Bank (IDB) which was received by The Honourable Minister of information and communications infrastructure (MOICI) and they made courtesy visits and held several meetings with key stakeholders of the project Ministry of finance and economic affairs, MOICI, Ministry of Trade and Regional Integration, GAMTEL and Sector Regulator (PURA).

The IDB proposed intervention would focus mainly on developing the national fibre optic networks to provide landing for regional connectivity by connecting the border cities to the capital city, which will house the last mile (WIMAX) Infrastructure. Part of the project includes:

- i. Laying a new fibre cable network on the North bank and the present fibre in the south bank replaced completely.
- ii. Replacement of all existing Switching equipment with IP-based NGN switches.
- iii. Replacement and Right Sizing of power systems in all Critical Stations.

As a result of the critical regulatory roles required to ensure open access to all stakeholders as well as a successful implementation, the IDB approved for PURA to be part of the stakeholders overseeing the project. PURA is fully committed and supporting this particular ICT investment as this will bring considerable economic and social improvements to the citizenry. This is because the undersupply of national connectivity and the resulting low broadband penetration levels in The Gambia can lead to a risk of 'isolation' from the connected world. Long term risks can include a wider gap in social and economic development and PURA is determined to reduce the gap.

## PURA's WEB SITE

In a bid to provide improved access to the general public, the Authority's web site ([www.pura.gm](http://www.pura.gm)) has been redesigned and developed, with additional information added, and a more "user friendly" design implemented. Licensing information, application forms, guidelines, complaint forms and contact information have been added to the site, and work is ongoing to make the site even more useful to the stakeholders and consumers.

The website will enable applicants to access all the criteria and information needed by applicants to process their applications on line.

In addition, the web site is now the prime communications vehicle for the Authority, where decisions and notices are available quickly, and responses in electronic form now encouraged.

## NUMBERING PLAN REVIEW

A National Numbering Plan outlines the General Principles to be applied in the management of the numbering resource, the processes and procedures relevant to number resource management, the guidelines for the allocation, assignment and management of the central office codes, the dialling plan, the principles and procedures for the assignment and use of the short codes and the relevant forms and procedures for the management of the numbering resources. A Numbering Plan is required to ensure equitable distribution and management of the numbering resource so as to ensure a competitive telecommunications environment. A Numbering Plan is made of international prefix, short codes, number blocks and number ranges.

With the enactment of the IC Act in 2009, the Authority was mandated by Sections 97 and 98(2) to take overall responsibility of the national numbering. The relevant section of the IC Act 2009 stipulates that the Authority is responsible to plan, carry out and control the assignment of all national numbering resources.

The Authority has embarked on an extensive consultation and review of numbering resources with a view of meeting the following objectives:

- to promote growth and development of the communications sector in The Gambia
- to promote efficient utilization of the number resource in The Gambia
- to promote fair competition in the telecoms and ICT sector
- to improve existing framework for the administration of the numbering resource to ensure transparency and efficient management
- to ensure future developments are provided for through reservation of numbers

A term of reference for the numbering plan consultancy was prepared and sent to the ITU for assistance on a co-sharing basis. The Authority expects to start the consultancy service in July 2012.

## AFRICELL'S APPLICATION FOR NEW NUMBERS

On the 8<sup>th</sup> of March 2011, the Authority received an application from AFRICELL for additional numbers to roll out their 3G network. The Authority reviewed the application and requested AFRICELL to provide additional information and justification for their application.

This information was reviewed and AFRICELL were further invited to make a presentation to the professional staff of the Authority on their application, their roll out plans and universal service obligations covering both the urban and the rural areas. Following AFRICELL's presentation, the Authority further reviewed the application and in the spirit of best practice regulation, consulted extensively with MOCI and all the telecommunication service providers

A comprehensive report was prepared, detailing the review and consultation processes embarked upon by the Authority, and the rationale of its determination to assign AFRICELL the three (3) lower ranges in number block "2" i.e. 20xxxxx, 21xxxxx and 22xxxxx as can be seen in Table 17.

Service / Usage	Technology	1st Digit B	2nd Digit P	3rd Digit Q	Other Digits MCDU	REMARKS
Int access		0	X	X	XXXX	
Short code		1	X	X	XXXX	
AFRICELL	MOBILE	2	0	X	XXXX	20xxxxx
		2	1	X	XXXX	21xxxxx
		2	2	X	XXXX	22xxxxx
QCELL	MOBILE	3	X	X	XXXX	
GAMTEL	FIXED	4	X	X	XXXX	
GAMTEL	FIXED	5	X	X	XXXX	
COMIUM	MOBILE	6	X	X	XXXX	
AFRICELL	MOBILE	7	X	X	XXXX	
GAMTEL	Fixed/wireless	8	X	X	XXXX	
GAMCEL	MOBILE	9	X	X	XXXX	

Table 17: National Numbering Plan Assignments

Following due consultation, PURA allocated these number resources to AFRICELL and urged them to continue to roll out their networks in both underserved and un-served areas so that the universal service obligation of the country can be met in due course.

The table also reflects the current state of play as regards use of short codes.

PURA believes that the current state of affairs regarding short code management requires review. This is to ensure that customers (in general) can access services from all telecommunications service providers in an easy and simple manner without recourse to having to

SERVICE	Gamcel	Africell	Comium	QCell	Gamtel
Customer Care	130	111	111	111	151
Credit Recharge(Voice)	155	134	100	100	
Credit Recharge(SMS)	*125*xx#	*134*xx#	*100*xx#	*100*xx#	
Balance Enquiry(Voice)	134	133	101	101	192
Balance Enquiry(SMS)	#125#	*133#	#101#	*101#	

Table 18: Current short code structure

## HARMONISING AND OPTIMISATION OF SHORT CODES

PURA noted with concern that currently all telecommunication operators use different short code digits for the various services they deliver to their customers. The five key services identified by PURA are as per the table below.

remember different short codes for each operator on each service they provide.

In view of the above, the proposal set in the table below sets out a harmonised and rationalised approach that simplifies access and use by consumers.

SERVICE	Gamtel	Gamcel	Africell	Comium	QCell	Proposed harmonised Short Code
Customer Care	151	130	111	111	111	111
Credit Recharge(Voice)		155	134	100	100	100
Credit Recharge(SMS)		*125*xx#	*134*xx#	*100*xx#	*100*xx#	*100*xx#
Balance Enquiry(Voice)	192	134	133	101	101	101
Balance Enquiry(SMS)		#125#	*133#	#101#	*101#	*101*xx#

Table 19: Proposed harmonized short codes

The telecommunication service providers were consulted with a view to activate the proposed harmonised short codes and allow both services to be accessed by customers simultaneously for a period of 1 year, following which access to services using the old access codes will be denied. This activity is expected to be effective by June 2012.

## **PROMOTING INTERNATIONAL PARTNERSHIPS**

Working in partnership with the World Bank and other international organizations, PURA has put in place an international standard telecom regulatory framework and welcomes the chance to work with other international telecom regulators and funders. It was in this spirit that PURA received a delegation from the Federal Communication Commission (FCC) of the USA in March 2011. The purpose of their visit was to share experience and best practice regulations between the two sister organizations.

PURA has also benefitted from training sessions offered from the International telecommunications Union (ITU) and shall look to other bodies for regulatory and capacity building, particularly in emerging technologies considering that the telecoms sector is dynamic and changing rapidly. PURA has also formed partnerships with other telecom regulators in Africa, and Sri Lanka.

# ELECTRICITY SERVICES REGULATORY ISSUES

## NATIONWIDE TREK

As in previous years PURA conducted a monitoring exercise by visiting all the power stations and association facilities throughout the country from the 16th to the 21st of May 2011.

During the tour, discussions were held with the staff on site and the role of PURA was explained to them. It was also made known to them that, as the regulatory body not all our visits will be announced.

The team visited all the NAWEC facilities from Barra to as far as Fatoto, the furthest customers of NAWEC are in Koina who are served by the Customer service point in Fatoto. At each site the team met with the Station Manager and held discussions with him to get first hand information on service delivery and also what some of the operational constraints were.

During PURA's annual treks, the key observation that PURA engineers look out for were mainly:

- i. State of the Generation Facilities
- ii. State of the Transmission and Distribution Network
- iii. Health, Safety, Security, and Environment (HSSE)
- iv. Mobility of the provincial staff
- v. Analysis and Evolution of Peak Load (demand)

The provincial T&D network is in excellent condition. Almost all the poles are still firmly erect and the cables are well strung. All the transformers are also in good condition.

In terms of Health and Safety, the PURA team was satisfied with the NAWEC's efforts to upgrade the fire infrastructure. The Team was informed that a NAWEC team from Kotu Power Station had visited all the Provincial Power stations and conducted training on HSE in April and early May 2011. All the Station Managers were issued new fire extinguishers and also for the boreholes within their service areas. For some of the bigger installations bigger fire

extinguishers have been installed and the staff trained on how to use them.

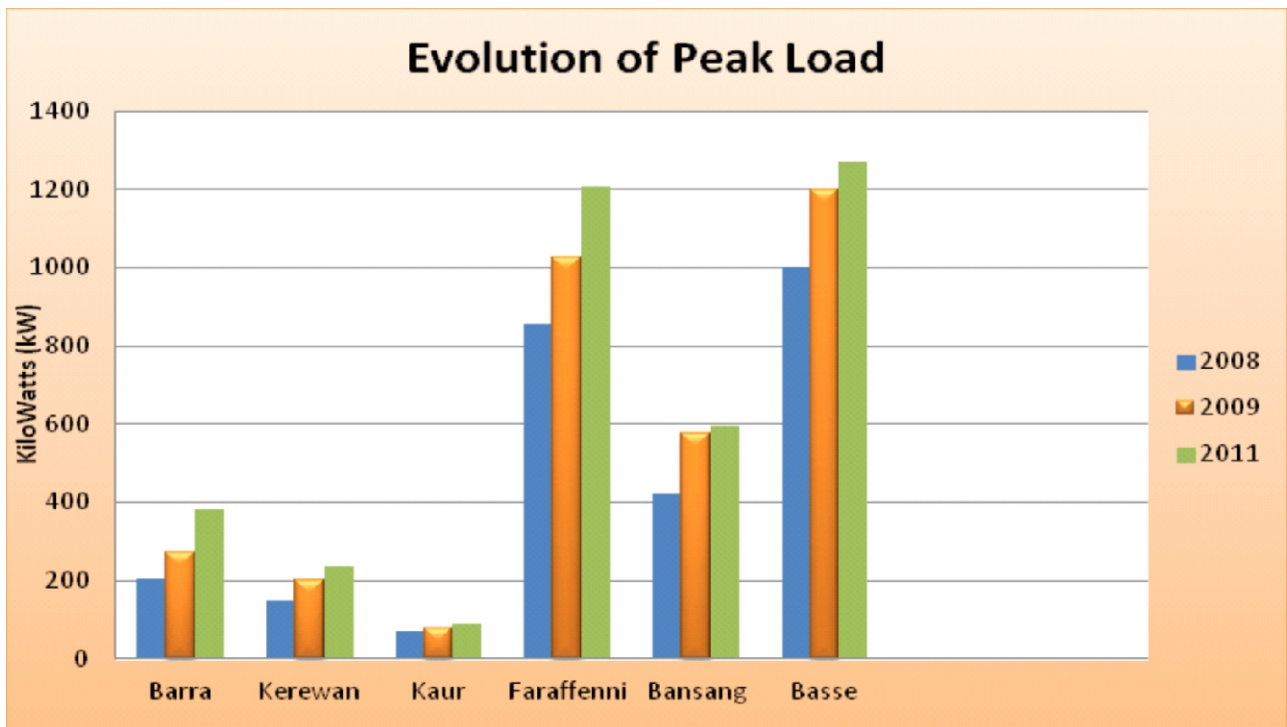
A concern for PURA was the low level of security in some of the premises. Indeed in Mansakonko for example the guards in the Borehole were volunteering and Janjanbureh also lacks security especially since the Cashier is working till late. In some of the facilities there was also evidence of intruders or thieves trying to break-in due to the low level of security. Additional risks came from animals entering some of the borehole sites due to the extremely low fence and damaged gates.

Mobility remains a persistent and recurrent request from the provincial staff. The lack of vehicles is also a major constraint.

Energy demand in the provinces continues to rise sharply as well and many facilities like Basse, additional emergency power has had to be installed by NAWEC to meet the demand. This poses several challenges for NAWEC both in terms of cost and logistics. The figure below shows the evolution of the demand in the provinces.



**Figure 31 New Fire extinguishers**



*Figure 32: Evolution loads for provincial stations since 2008*

## KOTU POWER STATION:

PURA visited Kotu Power Station (KPS) several times in the year and most notably in June 2011 during severe power outages. One issue that PURA discussed with NAWEC was the need to inform consumers of problems as soon as they occur but also to notify PURA in even more detail.

On the actual power outages and interruptions NAWEC emphasised that they would endeavour to be on radio and TV to inform the public and

PURA was also updated on the overhaul of G#6 which was also at an advanced stage with the cam shaft already in. Regarding G#9 which was installed two years ago, NAWEC informed PURA that the engine is doing well.

The 9MW engine financed by the Islamic Development Bank was commissioned in July 2011.

Finally PURA informed NAWEC that the onus was on them to inform PURA when these major incidents happen.



Damaged control equipment & switch gear at Kotu Power Station (source: PURA) 2010



New equipment installed by NAWEC during 2011

Figure 33: refurbishment works at Kotu Power station following the fire in 2010.

that NAWEC. PURA was informed that the main cause of the outages at that time was that a fault had occurred on an 11kV underground cable near Brusubi and also on some of the surge and lightning arresters. Additionally they were encountering problems at KPS with Generator No. 4 which was developing low oil pressure and mechanical problems on the flushing filter.

With most of the machines running with very little spinning reserves it was very likely that they will not be able to withstand such shocks from the network.

Prior to the transmission problems there was also scheduled maintenance going on and this compounded the problem. Generators No. G#7 at KPS and G#3 at Brikama Power station (BPS) were currently under maintenance with G#7 at an advanced stage of completion.

## SEPTEMBER 2011 BLACKOUTS

During the Months of September there were severe rolling blackouts in the GBA. PURA thought it best to visit NAWEC again and find out the exact cause of the problem in order to enable us response adequately to consumer complaints.

PURA Engineers visited all the Power Plants both public and private to find the root cause of the problem. It is evident that NAWEC cannot simultaneously plan, seek funding, and implement projects in generation, T&D, water production, distribution as well as network expansion to meet soaring demand. Site inspection of engines and discussions with plant managers gave PURA the opportunity to obtain first hand information on the state of the electrical power system.

We have found that the current state of affairs was due mainly to a sequential breakdowns and failure of key engine components in all three power plants resulting in significant loss of generation capacity.

PURA physically inspected all the damaged components for verification purposes. We also noted that in all power plants NAWEC and GEG acknowledged that they lacked capacity to carry out simultaneously maintenance.

Furthermore it is evident that several of the engines at both Brikama and Kotu are at the end of their design life and would continue to develop small but critical failures rendering significant parts of the various power plants.

The newly install plant in Brikama also suffered from a mechanical problem with its cooling pump failing resulting in severe water leakages. This pump was under warranty and was eventually replaced by the supplier.

The most important of these is for NAWEC to inform the general public of the situation. Consequently NAWEC was summoned to the PURA office and a Press Release was issued on the Daily Observer issue of Thursday, the 29<sup>th</sup> of September 2011.

The PURA sensitisation video was screened on TV 14<sup>th</sup> to 20<sup>th</sup> July 2011 again for a month as part of the public sensitization campaign Rainy Season Safety tips.

## **NATIONAL ENERGY RETREAT**

The Ministry of Energy organised a National forum to discuss the issues affecting the electricity supply in The Gambia and to chart the way forward. Several stakeholders were invited to make a presentation including PURA. PURA's presentation was focused on the need to improve the whole value chain and that it was important for NAWEC to be reformed. Amongst the recommendations presented by PURA were the following:

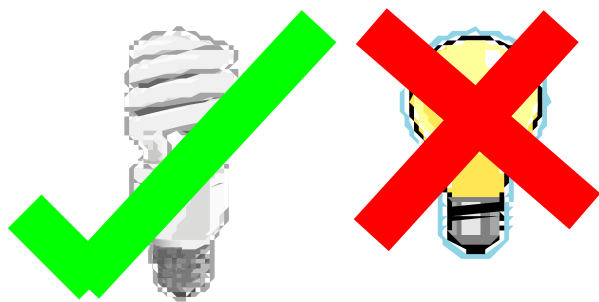
- i. Unbundling of Water and Electricity Services
- ii. Electricity Masterplan for the country ( 20 yrs)
- iii. Development of National Transmission Study

- (development of a national grid)
- iv. Fuel Diversification Study ( optimal solutions)
- v. PPP financing mechanisms and IPP tendering

After the Retreat, the Ministry of Energy was to prepare a Report of all the key recommendations of the workshop and recommend them as key policy initiatives to move the sector forward.



## BANJUL CFL PROJECT



PURA conducted a second CFL project on 16th July 2011 this time at Tobacco Road estate in Banjul. In total, some 1000 CFL lamps were distributed to the neighbourhood at the back of

Saint Augustine's high school leading up to the bond road stream. The lamps were distributed free of charge to the residents of the identified area that was carefully chosen in collaboration with NAWEC the national water and electricity service provider.

The area was identified as a poor neighbourhood with a poor distribution network with high losses. To help reduce network losses (36%) and alleviate the impact of high tariffs (US\$0.26/kWh) resulting from a mode of generation that is based on fossil fuels, energy efficiency is a key initiative of the utilities' regulator in assisting the sector to have a win-win-win situation for all parties including the regulator, the utility and consumers.



*Figure 34: Tobacco Road: Wole Coker Street, bordering the target area of the CFL project.*

Key amongst the objectives of the project was the following:

- Change Consumer Lamps from incandescent to CFL's
- Advice Consumers on how to save Energy save money and save our environment.
- Help Consumers to save energy
- Provide CFL lamps FREE to consumers to realize Energy savings
- Reduce the unnecessary loads on the Pilot Transformer Substation
- Improve the voltage level at the consumer premises
- Reduce the losses on the low voltage feeders.
- Reduce load level at the transformer substation
- Assist NAWEC to improve upon its quality of Service.

# WATER SERVICES REGULATORY ISSUES

## WATER QUALITY TEST:

Water source and distribution protection is vital for the sustainability of good water quality reaching the consumers. To this effect, PURA in collaboration with the Department of Water Resources undertook Quarterly Nationwide water quality test on 82 water points comprising of boreholes, treatment plants, service taps and reservoir tanks. Also site visits are conducted to assess the status of the water infrastructure and facilities. PURA facilitates the water lab with reagents and also fund the expenses for the quarterly treks.

The main objective of undertaking such water quality test is for the protection of public health and hence help in the elimination, or reduction to a minimum the constituents of water that are known to be hazardous to the health of the community.

The main water quality parameters analyzed are thus tabulated:

- Overall pH values were observed to be low in all test points. Hence improved aeration process or the introduction of lime into the system is required to address the low pH values.
- Conductivity which in previous years were high for Kerewan due to the salt water intrusion at borehole #1 has gone down to from over 1047 $\mu$ S/cm to within the range of 24 33.47 $\mu$ S/cm. This has been mainly due to the commissioning of the new borehole at Saba Village.
- Residual chlorine were noticed to be low in some areas especially in the provincial services wherein within in most case their chlorination plants were observed to be non operational.
- No visible impurities, abnormal odour or taste were noticed on the tests done.
- Coli forms were noticed to be present in some of the test results, although not they were within the acceptable limit, this however is best desired not to present at all

in the water. These were mainly noticed in the provincial services where the disinfection units were not functioning and also in the GBA during the rainy season. This thus emphasized the need for constant disinfection of the water system to reduce or eliminate the presence of coli form in the water.

In general it could be said that the water quality was good but improvements should be made in the disinfection units (chlorination system) so as to improve the residual chlorine values and hence help in the reduction of coli form presence in the water especially for the provincial services and also during the rainy season.

Efforts should be made on the overall pH value for the water as the tests indicated overall low pH values.

**GBA Water test results**

PARAMETERS AND GUIDELINE VALUES															
Location	Sample points	pH	Conductivity	TDS	Salinity	Total Coliform	Faecal Coliform	Residual Chlorine	Nitrate per nitrogen	Phosphate	Sulphate	Copper	Fluoride	Total Iron	Nitrite per nitrogen
<b>Guideline values</b>		6.5 - 8.5	<1300µS/cm	<1000 mg/l	PPT	0/100ml	0/100ml	<0.35 mg/l	10mg/l	3.5 mg/l	250mg/l	1.0mg/l	1.50mg/l	0.3 mg/l	3mg/l
		Results Range	Results Range	Results Range	Results Range	Results Range	Results Range	Results Range	NO <sub>3</sub> - N mg/l	PO <sub>4</sub> - <sup>3</sup> mg/l	SO <sub>4</sub> - <sup>2</sup> mg/l	CU <sup>+2</sup> mg/l	F mg/l	Fe <sup>+2/3</sup> mg/l	-N mg/l
Banjul	7	4.95 - 6.05	43 - 122.5	21.5 - 61.3	0.0 - 0.1	0	0	0.0 - 0.79	0.65 - 2.30	0.15 - 0.68	0 - 5.00	0.01 - 0.27	0 - 2.00	0 - 0.02	0.001 - 0.008
Bakau	4	5.71 - 6.17	300 - 340	150.1 - 170.3	0.0 - 0.2	0	0	0.1 - 0.4	2.80 - 6.00	0.0	0 - 6.00	0.0	0.25 - 0.95	0 - 0.02	0 - 0.033
Latirkunda	2	5.45 - 6.66	33.30 - 94.60	16.7 - 47.3	0.0	0	0	0.0 - 1.18	0.43 - 0.70	0.0	0 - 2.00	0.0	0.56 - 0.80	0.0	0 - 0.001
Pipeline	1	5.92 - 6.50	39.3 - 280	19.6 - 140.1	0.0 - 0.1	0	0	0.12 - 0.2	5.69 - 8.20	0.0	0 - 1.00	0.0	0.56 - 0.61	0.0	0.0
Jeshwang	4	5.24 - 6.33	32.90 - 112.20	16.4 - 166.8	0.0 - 0.1	0	0	0.0 - 0.53	0.32 - 2.80	0.0	0 - 8.00	0.0	0.53 - 0.71	0 - 0.46	0 - 0.002
Kanifing	2	5.38 - 6.16	33.4 - 105	16.8 - 52.5	0.0 - 0.1	0	0	0.0 - 0.3	0.39 - 5.00	0.0	3.00 - 6.00	0.0	0.23 - 0.49	0 - 0.01	0 - 0.003
Tallinding	1	6.09 - 6.44	34.6 - 40.5	17.3 - 20.20	0.0	0	0	0.11 - 0.33	0.42 - 0.55	0.0	1.00 - 3.00	0.0	0.36 - 0.42	0.01 - 0.03	0.0
Bakoteh	3	5.21 - 6.53	29.2 - 83.5	14.6 - 41.7	0.0	0	0	0.15 - 0.56	0.32 - 2.80	0.0	0 - 4.00	0 - 0.18	0.20 - 0.60	0 - 0.09	0.002 - 0.070
Kololi	2	4.98 - 5.72	22.7 - 58.2	11.4 - 29.1	0.0	0	0	0.1 - 0.42	0.32 - 0.90	0.0	0 - 3.00	0 - 0.17	0.02 - 0.48	0 - 0.05	0.001 - 0.004
Kotu	1	5.79 - 6.52	29.2 - 31.2	14.6 - 15.6	0.0	0	0	0.29 - 0.85	0.28 - 0.70	0.0	0 - 3.00	0.01 - 0.06	0.02 - 0.22	0.02 - 0.07	0.002 - 0.004
Serrekkunda	2	4.90 - 5.60	45.2 - 149.8	22.6 - 74.9	0.0 - 0.1	0	0	0.13 - 1.19	3.00 - 4.00	0.0	0 - 6.00	0.0 - 0.19	0.01 - 0.49	0.01 - 0.04	0.003 - 0.015
Fajikunda	1	4.74 - 6.94	43.6 - 66.7	21.8 - 33.3	0.0 - 0.1	0	0	0.10 - 0.49	0.52 - 0.80	0.0	1.00 - 2.00	0.02 - 0.06	0.03 - 0.38	0.09 - 0.15	0.008 - 0.010
Latirkunda Sabiji	1	6.00 - 7.30	34.6 - 196.4	17.3 - 98.2	0.0 - 0.1	0	0	0.00 - 0.43	0.15 - 0.50	0.0	1.00 - 2.00	0 - 0.03	0.09 - 0.19	0.02 - 0.06	0.005 - 0.007
Bundung	1	4.56 - 6.54	55.2 - 241	14.7 - 111.2	0.0 - 0.1	0	0	0.00 - 0.24	2.35 - 5.60	0.0	0 - 1.00	0 - 0.09	0.04 - 0.36	0.04 - 0.07	0.001 - 0.004
Sukuta	3	5.29 - 6.67	29 - 31	14.5 - 19.1	0.0	0	0	0.10 - 0.42	0.15 - 0.70	0.0	0 - 4.00	0 - 0.03	0 - 0.40	0.0	0.001 - 0.004
Yundum	3	4.44 - 6.81	20.3 - 46	10.2 - 23.8	0.0	0	0	0.00 - 0.54	0 - 0.90	0.0	0 - 3.00	0 - 0.04	0 - 0.50	0.0	0.001 - 0.005
Brikama	5	5.16 - 6.68	32 - 161.5	16 - 80.8	0.0	0 - 22	0	0.00 - 0.46	0.50 - 4.40	0.0	0 - 2.00	0.0	0.09 - 0.60	0.0	0.001 - 0.015
Banjulinding	2	4.79 - 5.32	17.1 - 42.4	8.6 - 21.2	0.0	0	0	0.07 - 0.59	0.79 - 1.20	0.0	0 - 3.00	0.0	0.23 - 0.50	0.0	0.001 - 0.004
Lamin	2	4.32 - 5.49	27.4 - 47.8	13.7 - 23.9	0.0	0	0	0.06 - 0.55	1.00 - 2.00	0.0	0 - 1.00	0.0	0.05 - 0.29	0.0	0.001 - 0.008

*Table 20: Water test results for the GBA, 2011*

## Provincial Water test results

PARAMETERS AND GUIDELINE VALUES															
Location	Sample points	pH	Conductivity	TDS	Salinity	Total Coliform	Faecal Coliform	Residual Chlorine	Nitrate per nitrogen	Phosphate	Sulphate	Copper	Fluoride	Total Iron	Nitrite per nitrogen
Guideline values		6.5 - 8.5	<1300µS/cm	<1000 mg/l	PPT	0/100ml	0/100ml	<0.35 mg/l	10mg/l NO <sub>3</sub> -N mg/l	3.5 mg/l PO <sub>4</sub> <sup>-3</sup> mg/l	250mg/l SO <sub>4</sub> <sup>-2</sup> mg/l	1.0mg/l CU <sup>+2</sup> mg/l	1.50mg/l mg/l	0.3 mg/l Fe <sup>+2/3</sup> mg/l	3mg/l -N mg/l
Barra	1	5.11 - 5.41	51.30 - 58.80	25.70 - 29.40	0.0	0 - 32	0.0	0 - 0.62	0.70 - 0.74	0.0	4.0 - 6.0	0.09 - 0.1	0.14 - 0.18	0.02 - 0.04	0.002 - 0.006
Essau	1	5.13 - 5.55	56.60 - 82.70	28.30 - 41.40	0.0	0 - 24	0.0	0 - 0.04	0.60 - 0.70	0 - 0.03	2.0 - 4.0	0.0	0.02 - 0.03	0.07 - 0.11	0 - 0.001
Mayamba	1	4.90 - 5.62	50.20 - 73.30	25.10 - 36.70	0.0	0 - 32	0.0	0 - 0.83	0.58 - 0.60	0 - 0.02	2.0 - 8.0	0.0	0.01 - 0.03	0.02 - 0.07	0 - 0.001
Kanuma	2	4.49 - 5.27	53.10 - 62.00	24.50 - 30.10	0.0	0 - 40	0.0	0 - 0.80	0.30 - 0.60	0 - 0.01	0 - 4.0	0 - 0.02	0.01 - 0.07	0.03 - 0.13	0 - 0.002
Kerewan	3	3.90 - 5.06	24.10 - 33.70	12.10 - 16.90	0.0	0 - 32	0.0	0.0	0.28 - 0.90	0 - 0.01	0 - 6.0	1 - 0.01	0.06 - 0.27	0 - 0.10	0 - 0.014
Farafenni	7	4.11 - 5.67	44.00 - 57.80	22.00 - 28.90	0.0	0 - 46	0.0	0 - 0.11	0.20 - 3.10	0 - 0.35	0 - 4.0	0 - 0.06	0.01 - 0.53	0 - 0.05	0.002 - 0.039
Janjangbureh	3	5.54 - 6.50	185.1 - 210.0	92.70 - 105.2	0.1	0 - 32	0.0	0.0	0 - 0.14	0 - 0.01	1.0 - 4.0	0 - 0.08	0.14 - 0.35	0 - 0.11	0.001 - 0.003
Bansang	5	5.68 - 6.50	84.40 - 115.5	41.10 - 55.70	0.0	0 - 64	0 - 20	0 - 0.2	0 - 1.90	0 - 0.22	2.0 - 11.0	0 - 0.20	0.06 - 0.24	0.01 - 1.71	0 - 0.011
Basse	5	4.45 - 5.45	17.93 - 83.10	9.00 - 41.50	0.0	0.0	0.0	0.0	0 - 0.30	0 - 0.13	0 - 3.0	0.0	0.06 - 0.33	0 - 0.13	0.002 - 0.015
Mansankonko	2	4.54 - 6.21	45.90 - 54.80	23.00 - 27.40	0.0	0 - 24	0 - 12	0 - 0.22	0.10 - 0.74	0 - 0.02	0 - 2.0	0 - 0.10	0.07 - 0.21	0.04 - 0.15	0.003 - 0.032
Pakalinding	1	4.60 - 6.00	44.40 - 55.40	22.00 - 27.70	0.0	0.0	0.0	0 - 0.13	0.10 - 1.02	0.02 - 0.06	2.0 - 4.0	0 - 0.01	0.03 - 0.38	0.02 - 0.05	0.001 - 0.003
Soma	4	4.50 - 6.20	44.90 - 54.40	22.00 - 27.20	0.0	0 - 24	0.0	0 - 0.20	0.20 - 1.50	0.01 - 0.20	0 - 3.0	0.0	0 - 0.13	0.01 - 0.08	0.002 - 0.012

Table 21: Water test results for the Provinces, 2011

Parameter/Indicator	Drinking Water Quality Standards	Effluent Discharges, Irrigation, and Reuse Standards	Fisheries and Recreation Quality Standards
Temperature, °C	In general, cool water has more palatable taste, than the warm one. Higher temperatures of water accelerate bacterial growth, and may aggravate problems concerned with taste, odour and colour.	Summer temperatures of water should not rise for more than 3°C, as a result of wastewater discharges, compared to the monthly-average temperature of water of the hottest month of the year, for the last decade.	Water temperature should not rise for more than 5°C, compared to the natural temperature of the water body: not exceeding 20°C in summer, and 5°C in winter for the water bodies for cold-water fishes (salmon, trout, white-fish). For other water bodies, at the most 28°C in summer and 8°C in winter.
pH	6 – 9	6.5 – 8.5	6.5 – 8.5
Suspended Solids, mg/l	0.00	0.75	0.25
Dissolved Oxygen, mg/l	4.0	minimum 4.0	minimum 6.0
BOD <sub>5</sub> , mg/l	3.0	6.0	3.0
COD, mg/l	15.0	30.0	30.0
NH <sub>4</sub> <sup>+</sup> , mg/l	1.5	2.0	0.05
NO <sub>2</sub> <sup>-</sup> , mg/l	3.0	0.08	0.02
NO <sub>3</sub> <sup>-</sup> , mg/l	45.0	40.0	9.1
Phosphates (as PO <sub>4</sub> <sup>3-</sup> ), mg/l	3.5	3.5	3.5
Cl <sup>-</sup> mg/l	350	350	300
SO <sub>4</sub> <sup>2-</sup> , mg/l	500	500	100
Total Dissolved Solids, mg/l	1000	1000	1000
COD, mg/l	5.0	12 – 30	10 – 30
Oil and Grease, mg/l	0.1	0.1	0.01
Na <sup>+</sup> , mg/l	200	120	120
K <sup>+</sup> , mg/l	3.9	50.0	50.0
Ca <sup>2+</sup> , mg/l	Total Hardness – 7-10 mmol/l	180	180
Mg <sup>2+</sup> , mg/l	Total Hardness – 7-10 mmol/l	40.0	40.0
Total Iron (Fe <sup>2+</sup> /Fe <sup>3+</sup> ), mg/l	0.3-0.5	0.5	0.05
Σα/Σβ Radioactivity, Bq/l	0.1 <sup>α</sup> /1.0 <sup>β</sup> Bq/l	0.1 <sup>α</sup> /1.0 <sup>β</sup> Bq/l	0.1 <sup>α</sup> /1.0 <sup>β</sup> Bq/l
Hg, mg/l	0.0005	0.005	0.001
As, mg/l	0.05	0.05	0.05
Pb, mg/l	0.03	0.1	0.01
Cd, mg/l	0.001	0.01	0.005
Cr <sup>6+</sup> , mg/l	0.05	0.5	0.001
Cr <sup>3+</sup> , mg/l	0.5	0.5	0.5
Ni, mg/l	0.1	0.1	0.01
Cu, mg/l	0.1	0.01	0.001
B, mg/l	0.5	0.01	0.001
Al, mg/l	0.5	0.2	0.2
Zn, mg/l	0.5	0.2	0.01
CN <sup>-</sup> , mg/l	0.035	0.05	0.001
Phenols, mg/l	0.25	0.25	0.001
Coli index/l	0	100	50
Coli count (lactose positive)/l	50	5000	20
Coliphags/l	100	100	100
Pathogens/l	Must be Absent	Must be Absent	Must be Absent

Table 22: Minimum Quality of Service Guideline standards adopted from AFUR for the various water test parameters.

## GREATER BANJUL AREA

### WATER BALANCE

Based on data collated from NAWEC from 2000 to 2011, table 23 illustrates the water balance and their share allocations. Analyses were hence made on the data in terms of water production, usage, losses, and plant capacities in response to meeting peak demand.

From the data it can be seen that domestic water consumption constitutes the largest water usage, being about 71%. However it has been noted that there is a general decline in the Area Councils' water usage. This is mainly due to the fact that the public standpipes which were billed to the councils are now being transferred to the communities who are now responsible for their payments. Table 23 shows the yearly water usage for different customer categories for the past ten years.

### PLANT CAPACITY

Capacity has increased over the years to meet the ever growing demand for water by a rapidly increasing urban and rural population in the service areas and also to meet the network expansion. The new Brikama well fields and treatment plant has put an additional daily capacity of 30,240 cubic meters into the GBA system. This has thus helped in alleviating the previous water shortages which were previously experienced. The graph below shows the peak demand being above the plant capacity as of 2000 to 2008 which hence resulted in water being rationed during those periods.

With the commissioning of the Brikama plant it can be seen that the peak demand is below the available plant capacity and hence the need for rationing is not there. However, the graph did indicate a sharp rise in the water demand tending towards reaching the available plant capacity as more expansion are made to reach more un-served areas. To this effect, efforts should be made for added capacity to meet the upcoming demand in both the served and expansion to new service areas.



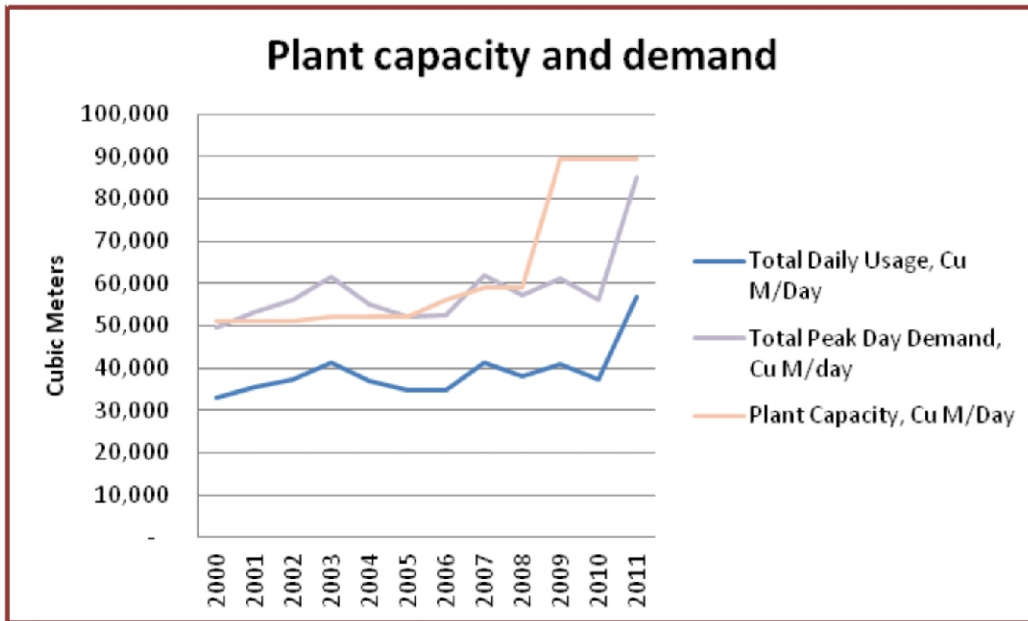


Figure 35: Graph illustrating the water demand in relation to plant capacity and peak demand for the GBA.

Y E A R		Added Capacity Liters/Sec	Added Capacity Cu M/day	Available Capacity Cu M/day
	1960		8	691
1969		8	691	1,382
1970		12	1,037	2,419
1976		15	1,296	3,715
1977		125	10,800	14,515
1984		65	5,616	20,131
1987		14	1,210	21,341
1988		89	7,690	29,030
1989		16	1,382	30,413
1990		30	2,592	33,005
1991		18	1,555	34,560
1992		191	16,502	51,062
2000		0	-	51,062
2001		0	-	51,062
2002		0	-	51,062
2003		12	1,037	52,099
2004		0	-	52,099
2005		0	-	52,099
2006		46	3,974	56,073
2007		36	3,110	59,184
2008		0	-	59,184
2009/10		350	30,240	89,424
<b>Total</b>		<b>1035</b>	<b>89,424</b>	

Table 24: Historical plant capacity data in the GBA



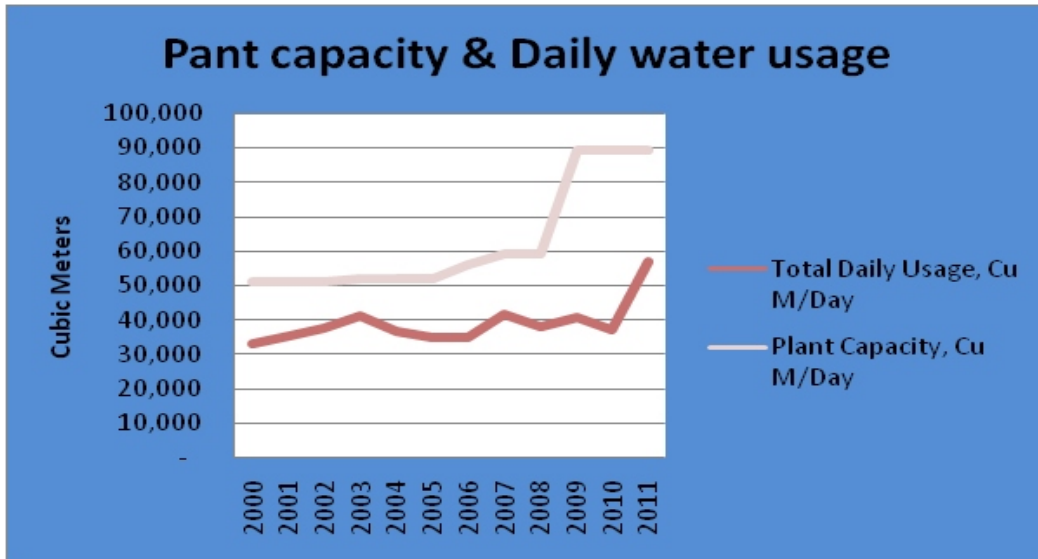


Figure 36: Graph illustrating the historical plant capacity and water usage for the GBA

## WATER PRODUCTION

NAWEC is the water and sewage service provider in The Gambia and its main water source is ground water from underground aquifers. Annual water production data was obtained from NAWEC as shown in the water balance table and from it a graph showing the water production trend over the period was hence plotted:

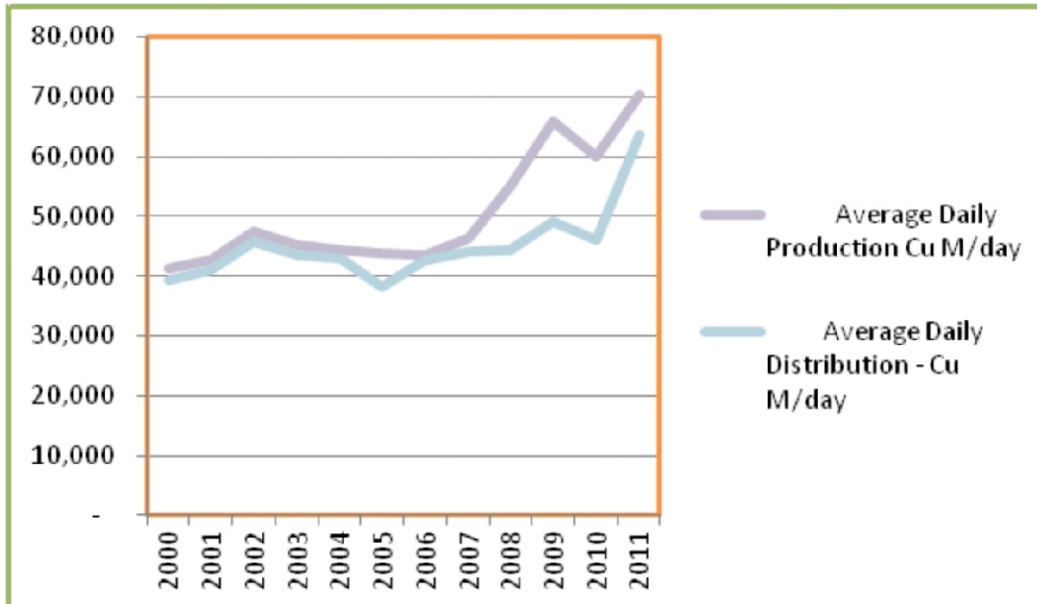


Figure 37: chart showing daily production and distribution volumes of water

- Daily average water production rate ranges between 40,000 to 54,000 m<sup>3</sup> daily from year 2000 to 2008. With the commissioning of the Brikama in 2009 both production and distribution increased to about 70,000 M<sup>3</sup>/day and about 64,000 M<sup>3</sup>/day respectively.
- Between the years 2000 to 2002, there was steady increase in the daily production but from 2003 to 2006 a gradual reduction in production output was noticed.
- Current plant capacity does exceed current demand in the service area as

shown in Figure.31. However future projections do indicate a sharp rise in demand and plans should be put in place to plan to future capacity expansion.

### WATER USAGE

By far domestic consumptions constitute most of the water usage as illustrated in the charts below. 71% is for the domestic usage and 17 % being central government followed by Hotels and Clubs, 4% and 3% for Commercial services. Agricultural use of NAWEC water services is quite negligible.

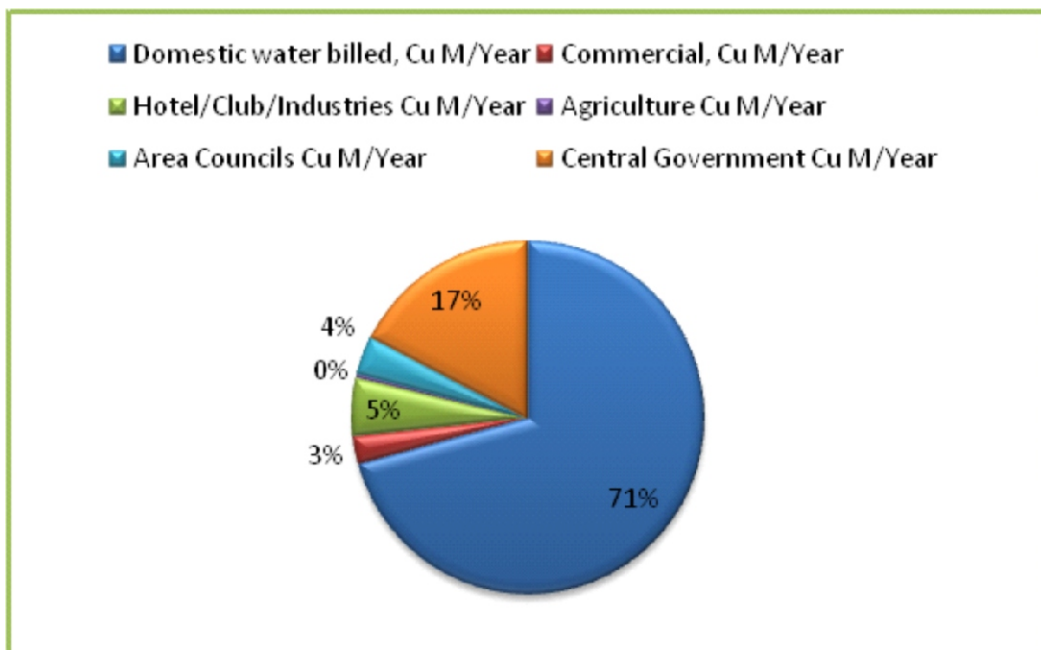


Figure 38: Chart illustrating 2011 water usage in the GBA per customer category

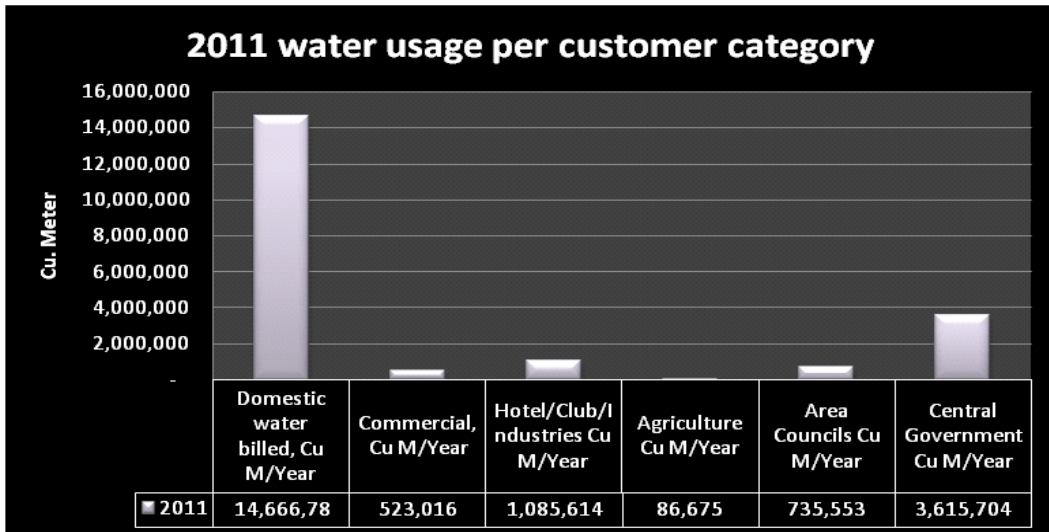


Figure 39: volumetric water consumption by customer class in 2011.

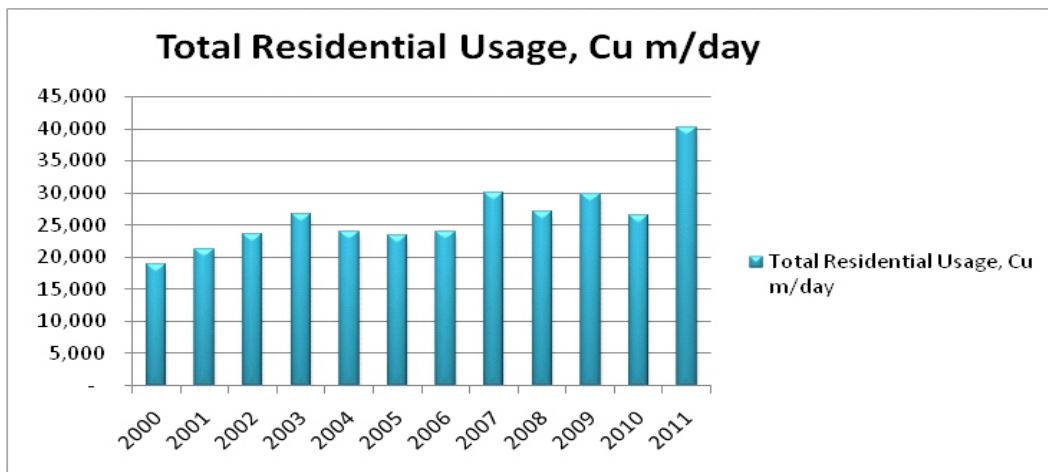


Figure 40: Residential usage of water

## NON REVENUE WATER

This is water which is lost in the system and is expressed as a percentage of the total volume of water pumped. In this analysis it can be seen as being the sum of the un-accounted for water (real and apparent loss) plus the un-billed authorized consumption as expressed in the Non Revenue Water table.

Non- revenue water is generally attributable to causes such as distribution system leakages, meter inaccuracies, illegal connections, hydrant flushing, fire fighting and other maintenance. Non revenue water could be expressed in two blocks:

- Authorized unmetered water, which include firefighting, hydrant flushing, and maintenance.
- Unauthorized unmetered water, which include illegal connections, system leakages, etc.

Improvements has been noticed in the percentage reduction of Non-revenue water from an all time high of about 35% in 2009 to about 20% in 2011. However there is still room for more improvement to further reduce this amount and thereby further improve efficiencies.

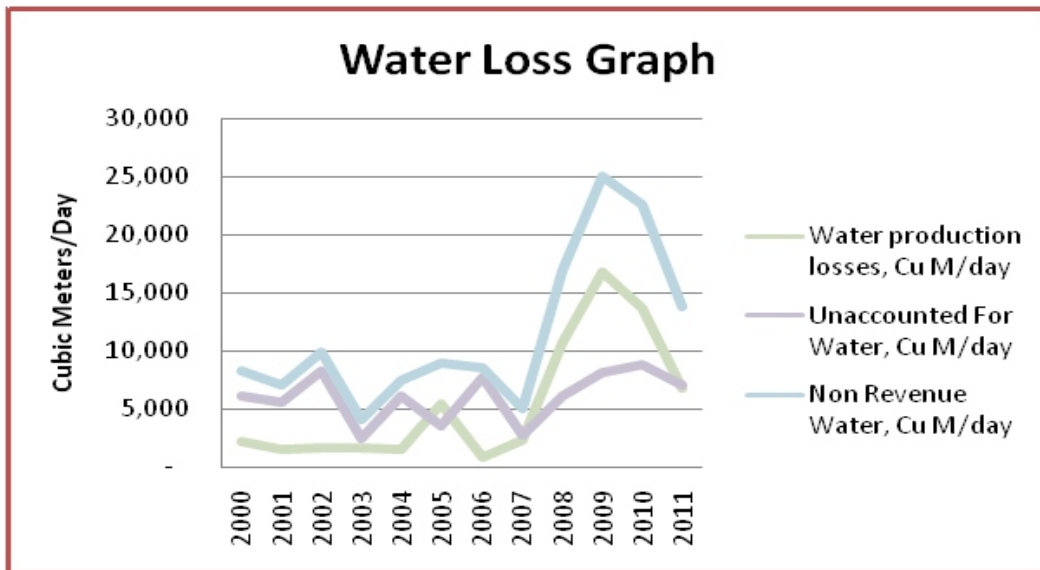


Figure 41: Volumetric non revenue and unaccounted for water, GBA

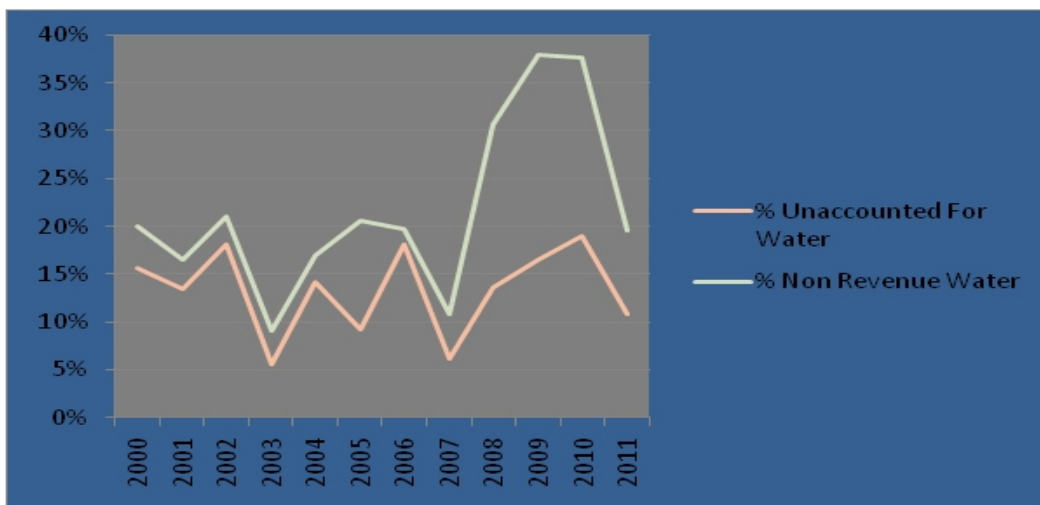


Figure 42: Graph showing the percentage non revenue and unaccounted for water, GBA

Unaccounted for water varies between 5 to 18% and the non revenue water averaged to about 17% between years 2000 to 2007. However the non-revenue was noticed to have decreased to about 11% in 2011. These efforts should be continued so that more gains could be registered through:

- a) More commitment to metering by replacing faulty meters, ensure that all meters are read accordingly and avoid estimate billing, etc.
- b) leakage maintenance,
- c) improved meter registration,

- d) more efficient metering system,
- e) reduce data error,
- f) increased media sensitization on efficient water usage,
- g) benchmarking and utilization of best practice in the water sector

#### PROVINCIAL SERVICES:

Data in the provincial services are not as detailed as that of the GBA. However, from the NAWEC annual reports the following were extracted in order to have a general overview of their storage capacities and productions.

#### STORAGE CAPACITIES

Settlement	Water Tank Capacity (m <sup>3</sup> )
Barra/Essau	600
Juffureh	400
Mansakonko	300
Farafenni	800
Bansang	600
Janjangbureh	300
Basse	600

Table 25: Storage tank capacities in each provincial town

#### Production Capacities

Station	Production (m <sup>3</sup> ) 2009	Production (m <sup>3</sup> ) 2010
Essau	247,149	272,923
Kerewan	135,021	109,458
Mansakonko	532,471	522,551
Farafenni	434,941	518,752
Kaur	1,527	2,006
Janjangbureh	105,898	99,997
Bansang	309,499	317,799
Basse	382,170	565,058
<b>Total</b>	<b>2,148,676</b>	<b>2,408,544</b>

Table 26: Annual water produced

## TOUR OF PROVINCIAL WATER FACILITIES

PURA embarked on a provincial tour to evaluate the basic status of the facilities as regards to their ability to affect product efficiencies and quality.

There has been marked improvement in the following;

- a) Water leakage on tanks has now been repaired, through the EDF fund, except for that of Basse and Juffureh. This marks a great improvement as compared to the previous year wherein almost all the provincial tanks were profusely leaking. With this it is envisaged that there will be a great reduction in the provincial water loss.
- b) The new disinfection system installed has greatly improved the water quality. However there exist few stations where minor fault such as faulty or low capacity dosing pump needs replacement.
- c) The EDF 9 project did help in improving the production capacity with new

boreholes drilled at Barra, Saba, Farafenni, Basse. However some of these boreholes are yet to be commissioned and linked to the system.

- d) With the community in charge of the public stand pipes, it was noticed that there were less damages and wastages at these water points.

PURA recommended improvements be done in the following areas:

- a) Ensure disinfection units are in proper working order.
- b) Improved security systems for the boreholes.
- c) Provision of mobility for the works.
- d) Provision of chlorine test kit for pump attendants.
- e) Improvement on tools and safety gear for the personnel.
- f) Replacement of faulty distribution meters so as to have a more accurate data on withdrawals and distributions and hence monitor losses.
- g) Improve on staff capacity building and training.

## PART VII:

### OUTLOOK for 2012 and BEYOND

#### CONSUMER AFFAIRS

The outlook for the Department of Consumer Affairs (DCA) for 2012, will be centered around more advocacy to inform and protect consumers in a professional and courteous manner by educating them on their right to Privacy, right to Choose, right to Disclosure of Information, right to Fair and Responsible Marketing, right to Fair and Honest Dealing, right to Fair, Just and Reasonable Terms and Conditions and right to Fair Value, Good Quality and Safety service.

#### ECONOMIC REGULATION

PURA has received an application for an increase in water and electricity tariff services for 2012. This application is currently under review and PURA would engage all stakeholders including government, the private sector and consumers to determine the tariffs for 2012 in line with the PURA Tariff Filing Guidelines.

PURA recognizes the collection and compilation of data to be a very important part for its' regulatory functions as provided for in section 13 (1) (h) of the PURA Act 2001. In fulfilment of this provision the Authority has since 2008 developed data reporting templates and guidelines for all the sectors it is regulating. However, to keep pace with recent developments in the sectors PURA has started reviewing and updating these templates and guidelines for all the sectors in 2011, and it is expected that work on them will be completed and implementation will start in 2012.

#### ELECTRICITY AND WATER SERVICES

The monitoring exercises and treks to NAWEC and GEGE facilities would be intensified and conducted now on a quarterly basis to ensure more detailed monitoring of electricity service delivery.

It is also hope that the licence for GAMWIND would be approved by the Hon. Minister of Energy following PURA's recommendations in 2012 and The Gambia would develop its first wind farm

Water Quality testing would also continue through our partnership with the Ministry of Water Resources and that our NAWEC would also improve on their testing procedures.

#### TELECOMMUNICATION:

PURA will implement the National SIM Card registration project and a new deadline for all SIM to be registered in The Gambia would be announced. Operators will also be encouraged to develop comprehensive campaign to reach as many subscribers as possible both in the rural and urban areas.

2012 would also be an exciting year for the telecommunication industry in The Gambia. the completion of the ACE project would revolutionise the industry. The ACE would bring permanent benefits for consumers including more reliability and higher connectivity speeds. Competition and innovation in products would also increase. PURA is a fundamental player in the project and would continue to play an active role in the project implementation stages.

#### ADMIN & HR

Our focus in coming year is for HR to be more of a Strategic Partner because organizations are all about people and HR Directorate intends to enhance its visibility and influence within and outside the institution stability, loyalty became important. This will bring more functional HR support especially re-performance management, compensation, reward and recognition for the well deserving staff.

# Appendix: 2011 Audited Financial Statements

## **PUBLIC UTILITIES REGULATORY AUTHORITY (PURA)**

Annual Report and Accounts

For the year ended 31 December 2011

AA & CO.

CHARTERED CERTIFIED ACCOUNTANTS

1 INDEPENDENCE DRIVE

P.O BOX 396

BANJUL, THE GAMBIA



# CONTENTS

	Page
General information	2
Directors' report	3-4
Auditors' report	5
Balance sheet	6
Income and expenditure account	7
Cash flow statement	8
Notes to the accounts	9-13

# PUBLIC UTILITIES REGULATORY AUTHORITY (PURA)

## General information

### DIRECTORS

Chairman	Mr. Dodou Bammy Jagne
Member	Ms. Amie Joof
Member	Ebrima Cham
Director General	Mr. Abdoulie Jobe
Ex- Officio member	Permanent Secretary (MOFEA)
Company Secretary	Mr. Kelepha Samba

### REGISTERED OFFICE

94 Kairaba Avenue  
KMC  
P.O. BOX 4230 Bakau  
The Gambia

### AUDITORS

A.A & CO  
Chart. Certified Accountants  
1 Independence Drive  
Banjul  
The Gambia

### BANKERS

Trust Bank Limited  
3-4 ECOWAS Avenue  
Banjul  
The Gambia

Guaranty Trust Bank (Gambia)  
Limited  
56 Kairaba Avenue  
KSMD  
The Gambia

Ecobank (Gambia) Limited  
42 Kairaba Avenue  
KSMD  
The Gambia

Access Bank (Gambia) Limited  
47 Kairaba Avenue  
KSMD The Gambia

Reliance Financial Services Limited  
Kairaba Avenue  
KMC The Gambia

# PUBLIC UTILITIES REGULATORY AUTHORITY (PURA)

## Director's report For the year ended 31 December 2011

The directors present their report for and accounts for the year ended 31 December 2011.

### *Statement of directors' responsibilities*

Company Law requires the directors to prepare financial statements in accordance with the Companies Act for each financial year which give a true and fair view of the state of affairs of the company and of the profit or loss of the company for that period. In preparing those financial statements, the directors are required to:

- select suitable accounting policies and then apply them consistently;
- make judgments and estimates that are reasonable and prudent;
- state whether applicable accounting standards have been followed, subject to any material departures disclosed and explained in the financial statements;
- prepare the financial statements on the going concern basis unless it is inappropriate to presume that the Company will continue in existence.

The directors are responsible for keeping proper accounting records which disclose with reasonable accuracy at any time the financial position of the Company and to enable them to ensure that the financial statements comply with the Companies Act 1955. They are also responsible for safeguarding the assets of the Company and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

### PRINCIPAL ACTIVITIES

The principal activities are to provide guidelines on rates and fees for the provision of regulated public services, examine rates and fees chargeable and to protect the interest of

consumers and of public utilities. PURA does monitor and enforce standards of performance by public utilities and to promote fair competition amongst them.

### CHANGES IN FIXED ASSETS

Significant movements in fixed assets are shown in the schedule provided in the notes.

### RESULTS AND DIVIDENDS FOR THE YEAR

The results for the year to 31 December 2011 are as set out in the attached financial statements.

## DIRECTORS AND THEIR INTERESTS

The Directors who held office are as described in the previous page. None of the directors who held office have any beneficial interest in the shares of the corporation.

## AUDITORS

The Auditors, AA & Co Accountants, will continue in office in accordance with section 155 (2) of the companies Act 1955.

**By order of the Board**

A handwritten signature in blue ink, consisting of a long horizontal stroke followed by a stylized, cursive signature.

Chairman  
Board of Directors

## AUDITORS' REPORT

### TO THE MEMBERS OF PUBLIC UTILITIES REGULATORY AUTHORITY (PURA)

We have audited the accounts set out on pages 6 to 13 which have been prepared under the historic cost convention as modified by the revaluation of certain fixed assets.

### RESPECTIVE RESPONSIBILITIES OF DIRECTORS AND AUDITORS

The directors of the company are responsible for the preparation of financial statements. It is our responsibility to form an independent opinion on the financial statements presented by the director based on our audit and to report our opinion to you.

### BASIS OF OPINION

We conducted our audit in accordance with International Auditing. An audit includes examination, on a test basis, of the evidence relevant to the amounts and disclosures in the financial statements. It also includes an assessment of the significant estimates and judgements made by the directors in the preparation of the financial statements, and of whether the accounting policies are appropriate to the company's circumstances, consistently applied and adequately disclosed.

We planned and performed our audit so as to obtain all the information and explanations which we considered necessary in order to provide us with sufficient evidence to give reasonable assurance that the financial statements are free from material misstatements, whether caused by fraud or other irregularity or error. In forming our opinion we also evaluated the overall adequacy of the presentation of information in the financial statements.

### OPINION

In our opinion the financial statements give a true and fair view of the state of the company's affairs as at 31 December 2011 and of its profit for the period then ended and have been properly prepared in accordance with the Companies Act 1955 (revised).



A.A. & Co.  
Chartered Certified Accountants  
1 Independence Drive  
Banjul, The Gambia

# PUBLIC UTILITIES REGULATORY AUTHORITY (PURA)

BALANCE SHEET AS AT 31 DECEMBER 2011

		2011	2011	2010
	NOTES	D	D	D
<b>FIXED ASSETS</b>	11		6,868,024	8,827,433
<b>CURRENT ASSETS</b>				
DEBTORS AND PREPAYMENTS	4	44,758,794		36,377,256
CASH AND BANK BALANCES	5	<u>2,373,693</u>		<u>(546,079)</u>
		<b>47,132,487</b>		<b>35,831,178</b>
<b>CURRENT LIABILITIES</b>				
CREDITORS & ACCRUALS	6	<u>672,201</u>		<u>2,098,447</u>
		<b>672,201</b>		<b>280,891</b>
<b>WORKING CAPITAL</b>			<u>46,460,286</u>	<u>33,732,730</u>
			<b>53,328,310</b>	<b>42,560,163</b>
<b>FINANCED BY</b>				
ACCUMULATED FUND	7		<u>53,328,310</u>	<u>42,560,163</u>
			<b>53,328,310</b>	<b>42,560,163</b>

DIRECTOR  \_\_\_\_\_

DIRECTOR  \_\_\_\_\_

*The notes shown from page 8 to 13 form an integral part of these accounts*

# PUBLIC UTILITIES REGULATORY AUTHORITY (PURA)

## INCOME AND EXPENDITURE STATEMENT FOR THE YEAR ENDED 31 DECEMBER 2011

		2011	2010
	NOTES	D	D
INCOME	2	45,288,880	38,190,695
<b>AFTER CHARGING</b>			
PERSONNEL COSTS	3	9,532,476	8,433,707
OTHER ADMINISTRATION EXPENSES		21,629,547	24,243,630
DEPRECIATION	11	3,358,710	3,492,558
<b>EXCESS INCOME OVER EXPENDITURE</b>		<b>10,768,147</b>	<b>2,020,800</b>
RESERVES B/F		42,560,163	40,538,288
PRIOR YEAR ADJUSTMENTS		-	1,075
RESERVES C/F		<u>53,328,310</u>	<u>42,560,163</u>

*The notes shown from page 8 to 13 form an integral part of these accounts*

# PUBLIC UTILITIES REGULATORY AUTHORITY (PURA)

## CASH FLOW STATEMENT FOR THE YEAR ENDED 31 DECEMBER 2011

		2011	2010
	NOTES	D	D
<b>NET CASH FROM OPERATING ACTIVITIES</b>	<b>8</b>	4,251,726	850,051
(Including Finance Charge)			
<b>RETURN ON INVESTMENT AND</b>			
<b>SERVICING OF FINANCE</b>			
FINANCE CHARGES		67,347	(59,455)
<b>INVESTING ACTIVITIES</b>			
ACQUISITION OF FIXED ASSETS	<b>11</b>	(1,399,301)	(10,700,090)
INVESTMENTS .			
<b>FINANCING ACTIVITIES</b>			
LONG TERM LOANS			
SHARE CAPITAL CONTRIBUTIONS			
<b>INCREASE/(DECREASE) IN CASH</b>			
<b>AND CASH EQUIVALENT</b>	<b>12</b>	<u>2,919,772</u>	<u>(9,909,494)</u>

*The notes shown from page 8 to 13 form an integral part of these accounts*



# PUBLIC UTILITIES REGULATORY AUTHORITY (PURA)

## NOTES TO THE ACCOUNTS FOR THE YEAR ENDED 31 DECEMBER 2011

### 1 (A). ACCOUNTING POLICIES

The accounts have been prepared under the historic cost convention in accordance with applicable international Accounting Standards.

### 1 (B). DEPRECIATION POLICY

The depreciation is charged to write off the cost of the fixed assets over their estimated useful lives on a straight line basis. Full depreciation is charged in the year of acquisition and no charge in the year of disposal.

Vehicles	25%
Computers	25%
Furniture & fittings	20%
Others	20%

### 1 (C) TAXATION

The authority is exempt from taxation as a Government agency, thus no tax computation required.

### 1 (D) INCOME RECOGNITION

Income comprises of regulatory fees, contribution by the Gambia Government, external funding and any other income accruing on accounts. Revenue grants are recognised in the income statement on receipt. Capital grants are recognised in equity and released to the income statement to meet related costs.

### 1 (E) FOREIGN CURRENCY TRANSACTIONS

Transactions in foreign currency are translated at the rates of exchange ruling at the date of transaction.

2a. REGULATORY FEES INCOME	2011 D	2010 D
Gamtel Co. Ltd	15,805,615	10,170,539
Nawec Co. Ltd	4,000,000	4,000,000
Gamcel Co. Ltd	5,355,072	6,145,356
Africell Ltd	13,684,140	12,159,360
Comuim	2,437,584	2,261,988
G.E.G Ltd	2,500,000	2,500,000
Qcell	881,296	500,000
Net page Ltd	50,000	50,000
Linux	50,000	-
Unique Solutions	50,000	50,000
Connexion Solutions	50,000	-
	<u>44,863,707</u>	<u>37,837,243</u>

*The notes shown from page 8 to 13 form an integral part of these accounts*

# PUBLIC UTILITIES REGULATORY AUTHORITY (PURA)

## NOTES TO THE ACCOUNTS FOR THE YEAR ENDED 31 DECEMBER 2011

	2011	2010
	D	D
<b>2b OTHER INCOME</b>		
Bank interests	13,339	208,080
Interest on staff loans	24,044	27,953
Application fees	37,500	10,000
Opretors' Contributions ITU Day	120,000	-
Other Income	230,290	-
Investment Income	-	107,419
	<u>425,173</u>	<u>353,452</u>
<b>TOTAL INCOME</b>	<b><u>45,288,880</u></b>	<b><u>38,190,695</u></b>
<b>3. PERSONNEL COSTS</b>		
	D	D
Wages and salaries	8,425,205	7,393,694
Social security and pension costs	1,107,271	1,040,013
	<u>9,532,476</u>	<u>8,433,707</u>
<b>4. DEBTORS AND PREPAYMENTS</b>		
	D	D
PREPAYMENTS	225,000	1,889,167
STAFF LOANS (PERSONAL)	964,089	926,206
STAFF LOANS (CAR)	1,858,555	2,112,805
REGULATORY FEES (see 4(b) break down)	41,711,150	31,449,078
	<u>44,758,794</u>	<u>36,377,256</u>
<b>4 (b) Regulatory Fees</b>		
GEG	8,960,426	8,910,426
Nawec	16,378,755	15,128,755
Gamtel	13,612,830	4,250,538
Africell	2,684,140	3,159,360
Linux	25,000	-
Connexion Solutions	50,000	-
	<u>41,711,150</u>	<u>31,449,078</u>
<b>5. CASH AND BANK BALANCES</b>		
	D	D
TRUST BANK (G) LTD	587,763	(788,056)
ACCESS BANK (G) LTD	18,054	49,008
GT BANK (G) LTD	140,423	89,847
RELIANCE FINANCIAL SERVICES	10,449	59,503
ECO BANK (G) LTD	1,617,004	43,619
	<u>2,373,693</u>	<u>(546,079)</u>

*The notes shown from page 8 to 13 form an integral part of these accounts*

# PUBLIC UTILITIES REGULATORY AUTHORITY (PURA)

## NOTES TO THE ACCOUNTS FOR THE YEAR ENDED 31 DECEMBER 2011

	<b>2011</b>	<b>2010</b>
<b>6. CREDITORS &amp; ACCRUALS</b>	<b>D</b>	<b>D</b>
WATRA MEMBERSHIP CONT.2010	468,000	440,250
AUDIT FEES	80,150	80,150
FINAL 20% PAYMENT FOR QOS (AGILIS)	-	1,497,921
PROVISION ON TELEPHONE BILLS	124,051	80,126
	<u>672,201</u>	<u>2,098,447</u>
<b>7. ACCUMULATED FUND</b>	<b>D</b>	<b>D</b>
OPENING BALANCE	42,560,163	40,538,288
SURPLUS FOR THE YEAR	10,768,147	2,020,800
PRIOR YEAR ADJUSTMENTS	-	1,075
BALANCE C/F	<u>53,328,310</u>	<u>42,560,163</u>
<b>8. RECONCILIATION OF OPERATING PROFIT TO NET CASH INFLOW FROM OPERATING ACTIVITIES</b>	<b>D</b>	<b>D</b>
OPERATING PROFIT/(LOSS)	10,768,147	2,020,800
DEPRECIATION CHARGES	3,358,710	3,492,558
PRIOR YEAR ADJUSTMENTS	-	1,075
(INCREASE)/DECREASE IN DEBTORS	(8,381,538)	(6,541,393)
INCREASE/(DECREASE) IN CREDITORS	(1,426,246)	1,817,556
<b>NET CASH INFLOW FROM OPERATING ACTIVITIES</b>	<u>\$ 4,319,073</u>	<u>790,596</u>
<b>9. ANALYSIS OF CHANGES IN CASH AND CASH EQUIVALENTS DURING THE YEAR</b>	<b>D</b>	<b>D</b>
BALANCE AT 1 JANUARY	(546,079)	9,363,415
NET CASH INFLOW	<u>2,919,772</u>	<u>(9,909,494)</u>
BALANCE AT 31 DECEMBER	<u>2,373,693</u>	<u>(546,079)</u>

*The notes shown from page 8 to 13 form an integral part of these accounts*

# PUBLIC UTILITIES REGULATORY AUTHORITY (PURA)

## DETAILED PROFIT AND LOSS ACCOUNT FOR THE YEAR ENDED 31 DECEMBER 2010

### 11. FIXED ASSETS SCHEDULE

	VEHICLES	COMPUTERS	FURNITURE	OTHER ASSETS	TOTAL
<u>COST</u>	D	D	D	D	D
As at 1st January 2011	4,706,645	12,044,038	4,619,042	2,253,355	<b>23,623,080</b>
Additions	-	1,251,874	147,427	-	1,399,301
Disposals	-	-	-	-	-
As at 31st December, 2011	<b>4,706,645</b>	<b>13,295,912</b>	<b>4,766,469</b>	<b>2,253,355</b>	<b>25,022,381</b>
<u>DEPRECIATION</u>					
As at 1st January 2011	4,706,645	5,139,998	4,133,642	815,362	<b>14,795,647</b>
Charge for the year	-	2,684,376	327,617	346,718	<b>3,358,710</b>
Charged on Disposals					-
As at 31st December, 2011	<b>4,706,645</b>	<b>7,824,374</b>	<b>4,461,259</b>	<b>1,162,080</b>	<b>18,154,357</b>
<u>NET BOOK VALUE</u>					
As at 1st January 2011	-	<b>6,904,040</b>	<b>485,400</b>	<b>1,437,993</b>	<b>8,827,433</b>
As at 31st December, 2011	-	<b>5,471,538</b>	<b>305,210</b>	<b>1,091,275</b>	<b>6,868,024</b>

*The notes shown from page 8 to 13 form an integral part of these accounts*

# PUBLIC UTILITIES REGULATORY AUTHORITY (PURA)

## NOTES TO THE ACCOUNTS FOR THE YEAR ENDED 31 DECEMBER 2011

	NOTES	2011 D	2011 D	2010 D
INCOME	2		45,288,880	38,190,695
			<b>45,288,880</b>	<b>38,190,695</b>
<b>EXPENSES</b>				
PERSONNEL COSTS	3	9,532,476		8,433,707
MEDICAL EXPENSES		508,052		349,367
STAFF TRAVEL INSURANCE		7,870		7,190
BANK CHARGES AND INTEREST		67,347		59,455
LOCAL TRAVEL EXPENSES		110,840		99,800
FUEL & LUBRICANTS		2,208,003		1,844,903
RENT / FACILITY MGT SERVICES		1,494,750		1,473,680
PROMOTIONAL ACTIVITIES		3,120		76,740
STATIONERY AND OFFICE SUPPLIES		750,204		574,136
RASCOM OPERATORS MEETING EXPENSES		53,200		178,644
ELECTRICITY AND WATER		678,863		358,143
SUBSCRIPTION-JOURNAL/ MAGAZINES		112,420		56,674
POSTAGES		8,599		7,293
COMMUNICATIONS		2,392,873		1,806,450
STAKEHOLDER RELATIONSHIP		547,589		511,098
REPAIRS & MAINTENANCE		575,506		428,695
CONSUMER OUTREACH PROGRAM		1,038,207		858,839
WORKSHOP / RETREAT (LOCAL)		409,303		-
STAFF CAR SCHEME		565,000		-
CONSULTANCY		181,204		706,164
CONFERENCE & MEETINGS		3,500,000		7,230,791
VEHICLE INSURANCE / LICENSE		84,146		76,238
STAFF UNIFORM		33,210		3,070
CORPORATE SOCIAL RESPONSIBILITIES		1,027,578		925,853
ADVERTISEMENT		624,730		510,535
RELOCATION EXPENSES		7,990		151,861
OPERATORS ITU DAY EXPENSES		130,000		-
BOARD FEES		298,000		357,500
MEMBERSHIP CONTRIBUTIONS		741,127		1,503,906
AUDIT FEES		80,150		80,150
TRAVEL & TRAINING EXPENSES		3,389,666		4,006,455
DEPRECIATION	15	3,358,710		3,492,558
			<b>34,520,733</b>	<b>36,169,895</b>
SURPLUS FOR THE YEAR			<b>10,768,147</b>	<b>2,020,800</b>

The notes shown from page 8 to 13 form an integral part of these accounts