GT&T

Tariff 1/2014

Table of Contents

Tariff Notice No. 1/2014 1

General Memorandum 4

Section 1 4

Overview of Licensed Telecommunications Provider 4

Policy Underlying GT&T's License and Cross-Subsidization of Domestic Rates 6

Developments since the Late 1990s Threaten the Sustainability of GT&T Rates 6

Developments Impacting the Rationality of GT&T Rates since February 2002 9

The Experiences of Other Utilities Since 2002 11

Rationale for the Proposed Rate Changes 12

Introduction to the Costing Model 15

LRAIC Model Background 16

GT&T Rate Base and Revenue Requirement 17

Other Notable LRAIC Model Results Using 2011 Data 19

Falling International Revenues Cannot Effectively Cross-Subsidize Domestic Rates 19

Requirement for Rate Rebalancing 21

Section 2 -- Specifics on Proposed rates 24

Rates and Proposals Regarding International Calls 24

International Outbound Voice Service 24

International Inbound Voice Service 31

Rates and Proposals Regarding Domestic Services 32

Installation Charges for Basic Dial Tone Services 33

Monthly Rental (Dial Tone Access) Charges 34

Intra and Inter Exchange Metered Rates 37

Fixed-to-Mobile Rates 37

Switched Wire Line Feature Rates 38

National Directory Assistance Call Rate 38

Affordability and Universal Service 39

Exhibits 40

List of Tables

Table 1 Historical Guyana Dollar to US Dollar Exchange Rate 9
Table 2 Guyana Inflation Since 2001 10
Table 3 Comparison of Guyana Residential Line Rental to Other Caribbean Countries 15
Table 4 Rate Base Summary (USD) 18
Table 5 GT&T Test Year Earnings 18
Table 6 Revenue Requirement & Shortfall 19
Table 7 Service Contributions to Total Revenue 21
Table 8 Caribbean Comparative International Calling Rates 28
Table 9 Selection of Proposed Rates – Most Called Destinations 29
Table 10 Other Representative ILD OB Rates 29
Table 11 Installation Cost 34
Table 12 2011 Estimated Loss on Access (In USD) 35
Table 13 Proposed Dial Tone Monthly Rental (Access) Rates 36
Table 14 Proposed Channelized E1 Rates 36
Table 15 Current and Proposed Domestic Metered Rates 37

List of Figures

Figure 1 Diesel Fuel Price June-06 to Aug-12 11
Figure 2 Decline in International Traffic 2006-2012 25

Guyana Telephone & Telegraph Company Ltd.

79 Brickdam, Stabroek, Georgetown, Guyana S.A. P.O. Box 10628. www.gtt.co.gy

June 30, 2014

The Hon. (Ret'd) Justice Prem Persaud
Chairman, Public Utilities Commission
298 Church Street, Queenstown, Georgetown

Tariff Notice No. 1/2014

Dear Mr. Chairman,

In compliance with the requirements of subsections 41(1) and 41(2) of the Public Utilities Act of 1999, as amended, and pursuant to Subsection 32(2) and Section 33 of the said Act, GT&T hereby applies for approval of a tariff regime establishing a change of rates in some instances and new rates in others, reflecting i) the imperative to rebalance telecom service rates prior to the imminent passage of the new telecoms law and regulations, and ii) the substantial changes in the telecommunications environment since the Commission last approved rates in 2002.

Since 2002, GT&T has been subject to material increases in costs and material decreases in revenues. While GT&T has made significant investments in improving the efficiency of its operations and delivery of service, its input costs have increased so significantly that they have outstripped these efficiency gains. This can be clearly seen, for instance, in the greatly increased costs of electricity services, of which we know the PUC is cognizant, and pure inflationary pressures. GT&T is acutely aware that faced with these very problems, the electricity and water utilities have managed to secure Commission-approved rate increases in the intervening twelve years.

Revenues from GT&T's international services have decreased substantially and are insufficient to support the current below-cost rate levels for its domestic services. Under GT&T's current rate structure, GT&T's international service revenues subsidize its below-cost domestic rates to keep rates for local services and domestic calling low. In theory, GT&T is expected to earn adequate revenue from above-cost international services. However, downward pressures on international collection and settlement rates have intensified and the volume of outbound international calls has been flat in recent years despite Commission approved promotional rates much lower than the existing tariffed rates. Indeed, there has been, and continues to be considerable bypass of both GT&T's international service facilities and the international settlement rate system by other providers (*e.g.*, Internet cafés; and leaky PBX, SIM Bank and over-the-top service providers) all of whom operate without the requirement of the appropriate license.

From a national perspective, there are also strong reasons for the rate changes proposed in this filing. The prospective passage of the new telecoms law and regulations, designed to introduce full competition in the provision of telecommunications networks and services, will cause major shifts in Guyana's telecoms marketplace. Experience and economic theory caution governments and regulators

that full and efficient competition cannot occur without rebalancing rates so they are more closely aligned with costs across all services. For example, the World Bank makes the point as follows:

> *"Highly distorted tariffs are not sustainable under competition. The high margins of international service are quickly competed away and the incumbent is increasingly left with loss-making services. The case for tariff rebalancing thus becomes urgent not only for economic efficiency, but, primarily, for the incumbent's financial survival, and to give the new entrants incentives to invest in a broad spectrum of networks and services, not only in the overpriced international segment." (Policy Division, Global ICT Dept., World Bank, Report No. 27671, p. 37)*

This rate rebalancing filing is a decisive move in the direction of establishing cost-oriented rates which will facilitate fair and effective competition and thereby boost the likelihood of success of the new legislation. Failure to address the rebalancing of GT&T's service rates would fly in the face of international experience and would thereby constitute a serious impediment to success of the telecoms sector under the new framework. Thus, rate rebalancing is critical and the changes proposed in this filing will move GT&T closer to a full realization of that objective.

The structural changes in the Industry noted above, as well as the substantial increase in costs since 2002, have consistently resulted in GT&T under-earning its rate of return. In addition to the imperative of rate rebalancing in the face of the looming passage of the new legislation, the Commission has a statutory obligation to ensure that GT&T's Commission-approved rates are sufficient to allow the company to generate the revenue required to earn a minimum rate of return of 15 percent on capital dedicated to public use. GT&T believes that in the current circumstances, the best way to do this is to initiate the process of rate rebalancing. The changes proposed in this filing will move GT&T materially closer to this objective.

Finally, this filing is underpinned in part by GT&T's new costing model which was developed by Analysys Mason, the internationally recognized UK-based consulting firm, which specializes in telecommunications, technology and media. GT&T commissioned this model to facilitate the Commission's understanding of which services are being offered at rates below cost, how the introduction of competition will compromise GT&T's viability in the absence of rate rebalancing and support the requested rate increase necessary to make these service prices remunerative. The cost model shows that virtually all rates for domestic services are below long-run average incremental cost, meaning that the current tariffs will not permit GT&T to earn a sufficient return at a time when input costs are rising, some revenues are falling (including the revenues which fund cross-subsidization) and other revenue sources will be substantially diminished in a competitive environment. As the Commission is aware, the cost model has been shared with its staff and GT&T took the time to familiarize the Commission's Senior Financial Analyst with the model, its workings, and these findings. The proposed rate changes will not only put GT&T's tariffed rates in closer alignment with costs, they will allow true competition to develop and also compare favourably with rates in other Caribbean nations. GT&T asks the Commission to take cognizance of the foregoing issues and expeditiously grant these proposed rate changes and GT&T's rationalisation request.

The new and changed rates will take effect 30 days from date of this Notice.

Enclosed with this Notice are:

i) an Explanatory Memorandum which explains the background and purpose of the filing;

ii) a description of the costing model and the results it generates using audited 2011 data, and

iii) a tariff Document which details the existing and duly established tariffs, the proposed rate changes and new rates, and the reasons for the change in rates.

Yours sincerely,

Gene Evelyn
Consultant, Ratemaking & Regulatory Affairs
Guyana Telephone & Telegraph Company, Ltd

General Memorandum

Section 1

Overview of Licensed Telecommunications Provider

1. GT&T is the continuing company which was formed to replace the Guyana Telecommunications Corporation ("GTC") after Atlantic Tele-Network ("ATN") in 1990 entered into an agreement with the Government of Guyana ("GoG") to purchase 80 percent of the shares in a new company, the Guyana Telephone & Telegraph ("GT&T") which commenced operations on January 28th 1991.

2. Under the License issued to GT&T by the GoG's representative, the Minister of Communications and Works, under Section 7 of the Guyana Telecommunications Act of 1990, GT&T was granted, among other things, the exclusive right to own and operate wireline telecommunications systems and networks and to provide local telephone services and international voice and data services.

3. GT&T's License is subject to i) the Telecommunications Act of 1990 (as amended), ii) the Public Utilities Commission Act of 1990, as amended ("PUC Act"), and iii) the Purchase Agreement between the GoG and ATN.

4. GT&T's exclusive license recognizes the importance the Government attributed to ***both*** broad-based access to telecommunications services and low local service prices by its conscious decision to permit GT&T to subsidize domestic services through higher international rates. In exchange for GT&T investing in expanding and modernizing the national telecommunications infrastructure,[1] Section 33 of the PUC Act and Section 6(9)(b) of the Purchase Agreement stipulate that GT&T is guaranteed a minimum 15 percent rate of return on capital dedicated to public use.

5. GT&T's License was granted for a period of 20 years, renewable at its option for a further period of 20 years. It should be noted that while GT&T has publicly expressed support for GoG's policy to introduce full competition in the sector, GT&T made application to renew its license and that application was approved by way of letter dated December 21, 2010 under the same terms and conditions.

---

[1] See below "Policy Underlying License and Cross-Subsidization of Domestic Rates."

6. The GoG's policy decision to expeditiously introduce and pass new legislation to usher in full competition in the provision of telecommunications networks and services in Guyana is well advanced. From all indications, a new telecommunications law is likely to be approved by the Parliament before August 2014. GT&T understands that technological, regulatory and other changes in the international telecommunications environment since 1990 might necessitate that its License be renegotiated and modified. Indeed, currently, ATN/GT&T and GoG are engaged in such negotiations in light of the prospective legislation.

7. Assuming that new enabling legislation will be passed shortly, identifying and moving towards cost-based rates for all services prior to the commencement of a new competitive environment is all the more important because properly rebalanced rates, which are aligned with costs, is a prerequisite for accurate economic signaling in an emerging competitive marketplace. In these circumstances, GT&T considers this rate filing critical to its financial viability going forward and essential to a rational introduction of competition.[2]

8. Moreover, GT&T has not been earning its statutory minimum rate of return. In order to do so, GT&T's revenues must exceed its costs of providing service, inclusive of all taxation, by an adequate margin. However, what has been happening in recent years is that GT&T's costs have increased significantly and revenues from GT&T's international long-distance services, especially inbound international service, have declined significantly. As GT&T's international long-distance revenues have fallen so has GT&T's capacity to cross-subsidize the below-cost domestic services. The situation is further complicated by the fact that the input costs of GT&T's domestic services have increased markedly over the same period but since 2002 GT&T has not had any domestic rate increases.

9. The reality described above, coupled with the imminent introduction of full competition, point to the urgency with which the Commission must act to ensure that both international and domestic

[2] The Commission will recall that Government's document *"Reform of the Telecommunications Sector in Guyana,"* developed by Consultant Hank Intven for the Ministry of Works and Communication, makes this very point as follows: "...rate rebalancing should be implemented as soon as possible, to raise the level of local rates to real economic costs. This reform will provide a financial incentive to GT&T, and to other service providers that may be licensed in the future, to expand services to all consumers and businesses that will pay the cost of such expansion. It is proposed that a rate rebalancing plan be developed as part of the National Telecommunications Policy. The purpose of this plan would be to align local rates more closely to costs, taking into account benchmark rates for similar countries...." [Reform of the Telecommunications Sector in Guyana, p. 55]

service rates are rebalanced. With the introduction of full competition in the market looming, it is particularly important that the Commission act expeditiously to approve this tariff filing as an initial step in facilitating effective competition within the sector. All stakeholders must recognize that in a competitive environment, service prices which are below cost cannot be sustained.

Policy Underlying GT&T's License and Cross-Subsidization of Domestic Rates

10. In 1990, the GoG took a conscious decision to create a monopoly structure for the provision of national and international telecommunications services in Guyana. This decision was neither irrational nor unusual. The GoG recognized that, historically, this structure was used in conjunction with cross-subsidization to accelerate the expansion and modernization of telecommunications sectors across the world and to increase access to the network. Thus, Condition 18 of GT&T's License was written ***not to disallow*** cross-subsidization but merely to prevent the licensee from "***unfairly cross-subsidizing***" services.

11. In other words, Guyana's telecommunications sector was designed to allow international rates to be set high enough to subsidize domestic rates with a view to making telecommunications services ***affordable*** to greatest degree possible to all Guyanese consumers. This was a fairly typical construct in similar markets where high-margin long distance service subsidized high cost local service and allowed the regulated entity to earn a guaranteed rate of return, thus insuring that the objectives of the national telecommunications policy were achieved.

12. In order for this framework to work, in the face of cost increases, rates would have to increase. The framework is not sustainable in conditions where the rates for the subsidized service, here domestic services, cannot be raised in the face of rising costs and other circumstances are reducing the net revenues on the subsidizing international services. That is exactly what has been happening with GT&T over the past dozen years.

Developments since the Late 1990s Threaten the Sustainability of GT&T Rates

13. Over the period 1997-2002, GT&T engaged in a series of applications seeking increases in its domestic and international rates. These filings sought to keep pace with developments affecting GT&T's costs of providing service and changes in international settlement rates while ensuring that

GT&T earned its revenue requirement or close to it. GT&T's last comprehensive rate increase application was granted over 12 years ago.

14. On December 31st 1997, GT&T filed an application with the Commission seeking increases in local and international rates. This filing was suspended by way of Order dated January 6th 1998. Thereafter, based on hearings on January 26th 1998, the Commission issued Order #1 of 1998 approving temporary increases in rates for the regulated wire line services normally covered in GT&T's filings.

15. After a number of proceedings in the following four years, on December 19th 2001, the Commission made permanent the temporary rates approved in Order #1of 1998 with effect from March 27th 1998. As part of these proceedings, the Commission determined, despite GT&T's disagreement, that cellular operation (revenues and expenditures) should be included in the filing and that, in the calculation of the average base rate, i) Franchise Assets be eliminated from the Test Year, ii) the allowance for working capital be reduced to G$1 billion, iii) debt service reserves be removed in the determination of the rate base, and iv) Advisory Fees be disallowed as a rate making expense.[3]

16. GT&T next submitted a rate filing on December 31st 2001, essentially to recoup revenues it anticipated losing consequent upon the United States Federal Communications Commission ("FCC") action to mandate that US-based international carriers were forbidden to pay GT&T settlement rates in excess of US 23 cents per minute by January 1st 2002. This filing was also intended to commence the process of rate rebalancing by taking a small first step toward bringing both domestic and international rates closer to cost-based rates thereby reducing the need for cross-subsidization of local services. During the hearings, the Commission requested that GT&T make a number of adjustments to GT&T's cost of service projections. In particular, the Commission requested:

[3] Although GT&T does not agree with these actions, it reminds the Commission of them for purposes of demonstrating that, despite these adjustments to the rate base, whatever their merits were over twelve years ago, GT&T has applied these to its current analysis and still under earns today. (The Commission in 2001 asserted that even if all US Administrations had reduced GT&T's settlement rates to US$0.65 per minute, at the approved temporary rates GT&T – subsequently made permanent – GT&T would still have earned a minimum of 15 percent rate of return. That conclusion, whatever its merits might have been in 2001, is unfounded today.

- the removal of the franchise right asset (mischaracterized as "goodwill") from the cost of service,
- the removal of the amortization expenses related to the franchise asset from the cost of service,
- the removal of all Advisory Fees from the cost of service
- the removal of interest bearing accounts (other assets) from the rate base,
- a significant reduction in working capital, arguing that GT&T should use 15 day of operating expenses including interest or should produce a full lead-lag study to justify any alternative approach,
- the removal of increases in plant and accumulated depreciation which resulted from GT&T's revaluation of GT&T's assets in 1998, and
- the removal of depreciation expense that represents the increased depreciation for the revalued assets.

17. In Order #1 of 2002 dated February 18th 2002 the Commission approved temporary rates for GT&T as follows:

- There would be one peak period *(6 am to 6 pm Mondays through Fridays)* and one off-peak period *(6 pm to 6 am Mondays through Fridays and all weekends and Public Holidays)*
- For all international destinations except the USA and the UK, the existing peak period collection charge shall remain in effect and the temporary off-peak collection charge shall be the previous First Off-Peak rate,
- For the USA and UK, the temporary pre-tax peak rate was established at G$100 and G$136 per minute, respectively and the pre-tax off-peak rate G$90 and G$123 per minute, respectively.
- With respect to local rates, the intra-exchange calls, the pre-tax peak and off-peak rates were set at G$0.60 and G$0.30, respectively
- With respect to inter-exchange calls, the pre-tax rates ranged from peak rate of G$3.00 to G$7.00, per minute and off-peak rates of G$2.00 to G$5.00, per minute.
- Residential line rental was set at G$500 per month for the first and second and G$750 per month for the third and any subsequent line,
- Business line rental was set at G$1,500 per month for the first four lines.
- All other rates remained unchanged.

18. These new temporary rates became effective on February 1st 2002. GT&T has not had any rate increases approved in the intervening twelve-plus years.

Developments Impacting the Rationality of GT&T Rates since February 2002

19. The years between 2002 and 2014 saw numerous developments which served to erode the real value of the rates approved in February 2002 and the return which GT&T is guaranteed on its capital dedicated to service provision. With each passing year, GT&T faced increased challenges to earning its revenue requirement. While GT&T has kept domestic rates steady since 2002, costs have increased tremendously and downward pressure on international rates has been strong. Although depreciation of the Guyana Dollar against the United States Dollar has been modest in the past decade (at least as compared to prior periods), within Guyana there has been significant inflation over past 10-12 years. With no rate increase since 2002, the current domestic rates are now materially below relevant costs. Thus, a rate filing at this juncture is more than justified, even if excluding the urgent need for rate rebalancing prior to the advent of full competition.

20. Two developments which adversely impact the cost of service the Company observes keenly are depreciation of the Guyana Dollar (against the United States Dollar) and the rate of inflation. Over the period 2001-2013 the GYD:USD exchange rate was significantly more stable than the previous decade. Table 1 shows the exchange rate movement over the period. Over the past 12 years, there was a material, yet relatively modest at least as compared to prior periods, 9% percent depreciation in the Guyana Dollar against the United States Dollar. However, It should be noted that within the last 7 months there has been much more volatility in exchange rates and we have noted that during the first and second quarters of 2014, the United States dollar was trading for as much as G$213.75, indicating significant weakening of the Guyana dollar in 2014.

Table 1 Historical Guyana Dollar to US Dollar Exchange Rate

2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
189.5	191.8	194.3	199.8	200.3	201.0	203.5	205.3	203.3	203.5	203.8	204.5	206.3

Source: Bank of Guyana Statistical Abstract

21. On the inflation front however, Guyana's performance was much worse. Inflation has had a substantial impact on our costs. Price inflation caused input prices to rise and thus increased the

company's expenses on raw materials, supplies and wages. The inflation which the Guyana economy experienced over the period 2001-2013 is shown in Table 2 below.

Table 2 Guyana Inflation Since 2001

	OLD SERIES ENDED AT DECEMBER 31, 2009 (Base Year 1194)									Cum	Annual
	2001	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**Change**	**Rate**
Georgetown CPI	166	176	184	194	210	219	250	266	276	67%	6.6%

	NEW SERIES COMMENCED January 1, 2010					Cum	Annual
	Dec-09	**Dec-10**	**Dec-11**	**Dec-12**	**Dec-13**	**Change**	**Rate**
All Items	100.0	104.4	107.9	111.6	112.6	13%	3.0%

Source: Guyana Bureau of Statistics

22. As a company which is regulated on the basis of rate of return, GT&T is especially sensitive to the impact of high inflation and requires that additional revenues be generated to maintain, expand and upgrade the network dedicated to public use. If there is inflation in the price of inputs and no means by which to increase rates, as has been the case since 2002, then GT&T falls further from generating adequate earnings to maintain the network and provide basic dial tone services. **As is clear from Table 2, since our last rate increase, the overall effect of inflation has increased our costs by 87%[4] for goods and services procured in Guyana.** We take the position that if rate setting takes little or no cognizance of price inflation then the rates set can at some point actually become confiscatory. A good example of the impact of inflation on the Company would be an examination of the impact of electricity and diesel prices over the period 2003 to 2011.

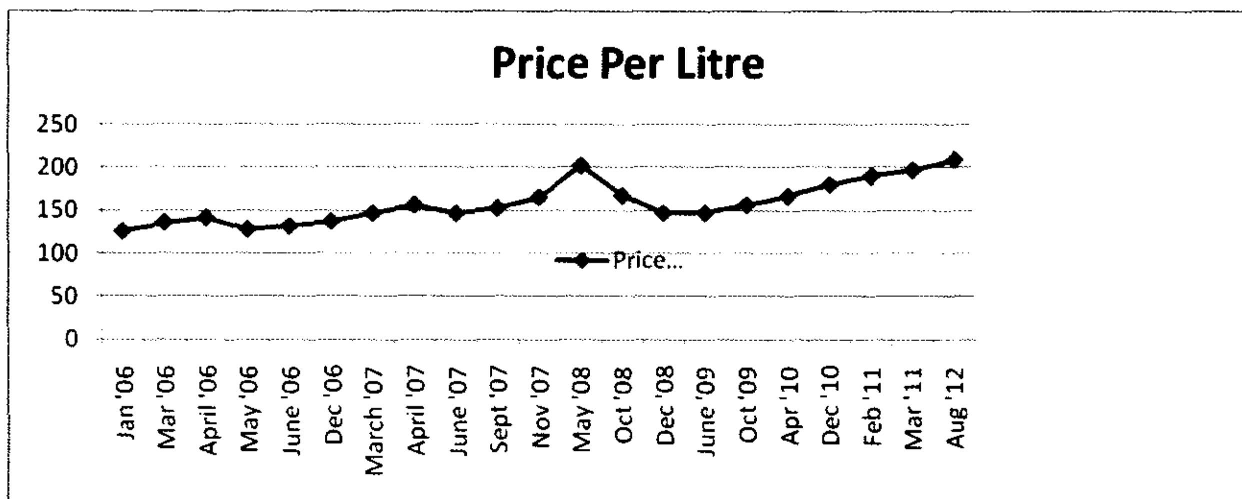
23. Whereas GPL supplies electricity to a relatively small urban and suburban area along the coast, GT&T's operations are spread across the country. Further, GPL's operations demonstrate critical weaknesses: technical losses continue to hover around 14 percent of gross generation, commercial losses are estimated at 18 percent of gross generation, and quality of service remains low. These factors, together with the high cost of generation and already high tariffs place tremendous burdens on industrial consumers, many of whom have opted to be off the grid. These entities are unlikely to return unless GPL's output becomes of suitable quality relative to cost. Thus, by way of example, in 2005 GT&T's electricity bill averaged around G$38.7 million per month; by 2012 the average

[4] If one normalizes for the change in data series effectuated as of 2009, the overall increase in CPI from 2001-2013 is 87.4%.

monthly bill had more than doubled to around G$78 million per month. Moreover, the average electricity consumer suffers in excess of 120 power outages per year.

24. Given the skyrocketing costs, limited footprint and questionable reliability of the national power company, GT&T is forced to operate 151 generators (whose capacities range from 15 to 1,400 kva) across the 10 Administrative Regions. This reality means that the Company's performance is sensitive to changes in fuel (diesel) prices. The chart below shows the movement in the price of diesel over the period 2006 – 2012.

Figure 1 Diesel Fuel Price June-06 to Aug-12



25. The data shows a 66.4 percentage increase in diesel prices over the period under observation. Practically, what this means is that while GT&T has had no rate increases over the period, the price of this specific critical input (by way of example) has increased inexorably and significantly.

The Experiences of Other Utilities Since 2002

26. Over this very same period the public utilities in the water and power sectors both enjoyed multiple rates increases, allowing them to have their rates better keep pace with rising costs. Guyana Water Inc. ("GWI") was granted rate increases in 2005 of 10 percent on the 2003 unmetered rate and 5 percent on the metered rate, effective July 1st 2005. Later, in Order 5 of 2006, the Commission approved new fixed charges for domestic and non-domestic customers and a host of ancillary charges for connection, reconnection and tampering. Then, on 10th June 2012, after hearings in

response to GWI's Tariff Harmonization filing dated October 31st 2012 for adjustments to existing tariff bands, the introduction of new tariff bands, introduction of a fixed charge, increases in ancillary charges and the introduction of new ones, and the introduction of a security deposit, the Commission approved rates which became effective July 1st 2013. Indeed, even as this filing document was being prepared in early 2014, it was our understanding that GWI had submitted yet another rate application to the Commission.

27. The Commission in both Orders #3 of 2005 and #2 of 2013 appears to suggest that it shares the view that approved rates of a regulated rate of return utility should cover the cost of the services provided. The Commission made the following statement:

> *"The current tariff table has in excess of twenty different rate schedules, none of apparently developed the objective of making consumer prices cover the costs of supply.....What is urgently needed is the development of a rational tariff schedule."*

28. In the case of the power utility, Guyana Power and Light ("GPL") secured rate increases effective January 1st 2008 by way of paragraph 12 of the First Schedule of the Electricity Sector Reform Act No. 11 of 1999. GPL had threatened another rate increase in 2013. While this increase was put on hold by the President, the Electricity Act makes ample provision for GPL to adjust its rates upwards.

29. GT&T seeks to end this disparate treatment relative to other utilities and to bring its rates close to cost-based levels, just as other utilities have been able to do over the period when GT&T's rates have been static.

Rationale for the Proposed Rate Changes

30. The proposed rate changes with this tariff filing seek to restore some semblance of cost-based rates that will move GT&T closer to recovery of its guaranteed rate of return. We thus encourage the Commission in its deliberations to focus on the adequacy of the rate of return allowed and the rates which underpin that return, with a view to ensuring that:

i) service rates are sufficiently reflective of underlying service costs, so that efficient consumer-usage of services is encouraged,

ii) prices which are fair, in the sense that they allow the company not only to acquire new and potentially more efficient technologies but also to recover its costs,

iii) service rates are stable and predictable enough for consumers to plan their utility expenditures, and

iv) the rate of return is sufficient for the Company to attract capital, so that the Commission can be assured that an adequate level of service is available to customers.

31. Based on the PUC Act, when establishing rates for GT&T's services, the Commission has an obligation to consider the interests of both the company and the consumers. In fact, Section 32(2) of the Act specifically stipulates that:

> *"In determining the rate a public utility may charge for any service provided by it, the Commission shall have regard to consumer interest and investor interest and to the rate of return obtained in other enterprises having commensurate risks, provision of safe and adequate service at reasonable costs, and to ensuring the financial integrity of the company."*

32. In other words, enshrined in the Act is GT&T's entitlement to rates which are sufficiently adequate to cover the total cost of providing the service and to ensure a sufficient return on the capital dedicated to public use. As noted earlier, Section 33 of the Act, as well as section 6(9)(b) of the ATN-GoG Purchase Agreement, establish 15 percent as the minimum rate of return to which GT&T is entitled.

33. Thus, the rates and charges which are proposed in this filing are cognizant of and based upon the determination of the Company's revenue requirement, which is defined as the total revenues necessary to recover prudent investment and reasonable and necessary costs and to earn a fair profit. The general formula for establishing the revenue requirement is: *the sum of the allowed rate of return times the applicable rate base, plus applicable operating expenses (including depreciation, income taxes and other operating taxes).*

34. The cost data which supports the determination of the revenue requirement is set out below in the last sub-part of this section. Briefly, the costing model uses the period January 1, 2011 to December 31st 2011 as the test year. The appropriate levels of rates and charges are determined based on the calculated revenue requirement in conjunction with forecasts of demand for the various classes of regulated services (*i.e.*, local services, international outbound services and domestic usage-sensitive services).

35. To arrive at the proposed rates and charges, we have followed two well established regulatory principles:

    i) As far as is reasonably possible, each regulated service should be priced to reflect the resources necessary for the provision of said service;

    ii) Services should be priced to recover the company's operating expenses and allowable rate of return.

36. While GT&T seeks to move its revenues closer to the allowed rate of return there is a ***far greater*** need to rationalize our current tariff structure. Up until this time GT&T has been essentially cross-subsidizing, *i.e.,* using its international rates to subsidize local rates. Historically, this is a practice that has been followed by most if not all telephone companies in emerging or less than perfectly competitive environments. However, as explained below, there is already downward pressure on GT&T's international revenues which will only increase with the introduction of full competition. Thus, both international and domestic rates need to migrate closer to being set on a cost basis, because a competitive environment will drive them closer to cost regardless, and the historic subsidy of local services rates by international rates needs to be reduced and eventually eliminated.

37. The monthly rental (access) charge for both residential and business customers need to be adjusted upwards. Table 3 below shows how GT&T's current residential recurring monthly access charge stacks up against those of our sister companies in the region. While we do not have comparable numbers for recurring monthly rental charges that businesses face in the region, by extrapolating from the residential rates that are available to us, we are sure that these rates are all well in excess of the US $7.43 per month paid by Guyanese businesses.

Table 3 Comparison of Guyana Residential Line Rental to Other Caribbean Countries

Jurisdiction	Monthly Rental US dollar equivalent	Ratio to Current Guyana Rate
Cayman Islands	18.30	7.4
Trinidad & Tobago	17.45	7.0
St. Lucia	11.24	4.5
Dominica	10.20	4.1
St. Vincent/Grenadines	8.80	3.5
Belize	10.10	4.1
Guyana	2.48	

38. Our service installation charges also pose a challenge for the Company. Currently, residential and business customers pay the equivalent of US $2.48 and US $7.43 respectively for service installation. While we do not have comparable numbers for all the various jurisdictions in the region, a survey of available information reveals that these rates are well in excess of ours. For example, in Belize the residential installation charge is approximately US$ 50. The currently approved installation charges may have been justifiable when GT&T, as a consequence of public policy directives, was engaged in a massive build-out telecommunications facilities to increase penetration of basic telephony to as much of the population as economically feasible. That rationale is far weaker today as our line growth has diminished dramatically, and Cellular service is almost universally available by both GT&T and a competing operator.

39. GT&T's domestic local (intra-exchange) and long-distance (inter-exchange) rates must also be addressed urgently. These are loss-making services because the currently approved domestic rates were set well below cost and have remained there even as operating costs have risen dramatically. Admittedly, the comparison of these rates across countries is not straightforward [or as instructive], in part because of differing land masses and differing local exchange sizes, both of which have implication for transmission costs which tend to be distance-sensitive.

Introduction to the Costing Model

40. Recognizing that the Commission would require GT&T to demonstrate that some of its services are priced below cost and fully understanding that eventually Guyana's telecommunications sector would be opened to full competition, GT&T in 2010 commissioned the highly-reputable international consulting firm *Analysys Mason* to develop a cost model that:

i) provides a systematic approach to the allocation of revenues, costs and capital investment to services,

ii) allows for deep insights into the business,

iii) supports Management and regulatory decision-making,

iv) allows for easy updating, routine maintenance and refinement of elements (*e.g.*, Routing factors),

v) provides results which can be easily understood and reconciled with the audited accounts.

41. The following subsections provide further details on the *Analysys Mason* costing model and the conclusions the Commission should draw from it regarding the non-cost-based rates of GT&T and the current shortfall in meeting its revenue requirement.

LRAIC Model Background

42. *Analysys Mason* was selected because the company is a leader in the worldwide provision of consulting services in the telecommunications, media and technology sectors. The firm has distinguished itself in such areas as the formulation of telecoms, media and regulatory policy, the provision of regulatory advice to operators, regulators and governments, development and analysis of regulatory accounts, and local loop unbundling.

43. GT&T was especially impressed by Mason's expertise and demonstrated competencies in the areas of regulatory pricing, costing and building cost models in evolving telecommunications markets. Analyses Mason was tasked with building a Long-Run Average Incremental Cost ("LRAIC") cost model. The LRAIC model uses the same approach as the more familiar Fully Allocated Costing ("FAC") models in terms of driving costs to services using allocation drivers. However, the LRAIC model utilizes both historic and current cost accounting, the latter to provide a forward-looking perspective which reflects changing asset prices over time. Also, although costing models do not generally speak to revenues, GT&T instructed that its model be developed to accommodate revenues because it is important that our model be able to point to loss-making services and the degree to which GT&T is under earning.

44. The model and its working manual were shared with the Commission and GT&T representatives met with the Commission's Financial Analyst to explain how the model works.

45. *Analysys Mason* has advised that the GT&T LRAIC model is suitable for the Guyana regulatory environment and, since it includes revenues, is capable of gauging the magnitude of the cross-subsidy of domestic services by the international telephony business as well as the shortfall in GT&T earning its revenue requirement under the guaranteed rate of return. In other words, the model is capable of supporting the process of rate rebalancing in this market. This ought to be important to both GT&T and the Commission since both entities ought to be interested in rate rebalancing: GT&T because rates which do not cover costs are unsustainable in a competitive environment; the Commission because rebalancing before the introduction of competition is in the public interest.

46. The cost model, which has been populated with GT&T's financial information for the financial year ending December 31st 2011, has already been provided to the Commission.

GT&T Rate Base and Revenue Requirement

47. It is important to note that in our development of the applicable test year rate base we have attempted to faithfully follow the Commission's rulings over the years and to take cognizance of all of the Commission's guidance. In particular, we have done the following:[5]

i) Eliminated franchise assets from the test year rate base. *[We would note that GT&T disagreed with this Ruling and that subsequent revisions of International Accounting Standards (both IFRS and GAAP) would support our position regard the treatment of Intangible Assets.]*

ii) Kept the depreciation rates which the Commission approved.

iii) Refrained from including Advisory Fees as an expense for ratemaking purposes. *[It should be noted that we have done this for this exercise only and do not concede that Advisory Fees should be removed from the rate base or otherwise accounted for in any manner other than that which we have consistently utilized since being licensed.]*

iv) Refrained from a revaluation of assets as a consequence of Currency devaluation.

48. Our detailed computation of the company's test year rate base is self-explanatory. In Table 6 below we have presented a summary of the rate base computation, based on the methodology recommended by the Commission over the years.

[5] See PUC Orders Nos. 7 of 2001; 1 of 2002.

Table 4 Rate Base Summary (USD)[6]

Line	Components	Source	Start Test Year	Ending Test Year
1	Avg. Property, Plant & Equip. (net)	Monthly Statements	75,689,000	83,094,966
2	Avg. Franchise Rights (net)		3,776,239	3,689,845
3	Avg. Materials & Supplies		3,365,871	4,268,870
4	Avg. Prepayments		1,099,394	1,200,133
5	Avg. Working Capital		11,918,504	13,872,311
6	Avg. Other Non-current Assets		54,235,165	46,672,884
7	Avg. Customer Deposits (deduct)		(3,471,090)	(3,690,460)
8	Avg. Deferred Income Taxes (deduct)		(14,356,239)	(14,442,673)
9	Avg. Rate Base (Incl. Franchise Rights)		132,256,844	134,665,876
10	**Avg. Rate Base (Excl. Franchise Rights)**	Ln. 9 – Ln 2	**128,480,605**	**130,976,031**

49. On this rate base valued at roughly US $131 million, GT&T is entitled to earn a 15 percent rate of return. However, as the summary in Table 7 below shows, in the test year GT&T earned a mere 8.6 percent, equivalent to US $11.3 million. This implies a shortfall of US $8.4 million.

Table 5 GT&T Test Year Earnings

Line	Components	Source	End Test Year Data
1	Avg. Rate Base (Excl. Franchise Rights)		130,976,031
2	Allowed rate of Return on Rate Base		**15%**
3	Allowed Return on Rate Base	Ln 1 x Ln 2	19,646,405
4	Actual (Annualized) Return on Rate Base	Schedule 1	11,294,088
5	Under Earning in Test Year	Ln 3 – Ln 4	-8,397,316
6	Actual Return on Test Year Rate Base	Schedule 1	**8.59%**

50. GT&T is under earning because the company is failing to generate the volume of revenues required (especially in international service categories). GT&T's revenue requirement is summarized in Table 8 below. The data shows that whereas GT&T's revenue requirement is in excess of US $148 million, GT&T's actual (annualized) revenues earned in the test year amount to US $84.9 million, resulting in a revenue shortfall of US $63.4 million. In other words, GT&T requires a 74.6 percent revenue increase to achieve a 15% rate of return.

[6] The rate base is the gross value of the company's assets, minus accumulated depreciation. Cost of capital is also called the allowed rate of return and is the interest that the company pays on its debt plus the return it must provide to shareholders to ensure they continue to invest in the company

Table 6 Revenue Requirement & Shortfall

Line	Components	Source	Test Year Data
1	Revenue Requirement	Schedule 1	148,286,230
2	Actual (Annualized) Revenues Earned	Schedule 1	84,905,353
3	Revenue Shortfall (To be made up)	Schedule 1	63,380,877
4	Percentage Revenue Increase Required	Ln 3 / Ln 2	74.60%

Other Notable LRAIC Model Results Using 2011 Data

51. The outputs of the model include, *inter alia*, unit cost calculations and disaggregated margins for the retail services and allow us to gauge the magnitude of the cross-subsidy required from the international business to sustain domestic services. Further, insofar as the model disaggregates network costs from costs associated with the provision of retail services, the model aids our understanding of the pricing of interconnection.

52. The model output is unambiguous on the issue of cross-subsidy. It demonstrates that with the existing structure of prices, fixed domestic voice services (local and local long-distance calls) in 2011 incurred a loss of some G$32 million while fixed calls to the two mobile networks accounted for a total loss of some G$138 million.

53. The heavy losses on fixed to mobile calls can be traced to the artificially low fixed origination rate of G$12 per minute ordered by the Commission. Given that the Commission approved a mobile termination rate of G$14 per minute, effectively, on fixed-to-mobile calls GT&T incurs a non-reimbursed loss of G$2 per minute.

54. On the access front, the costing model shows that in 2011 GT&T lost some G$2.8 billion in the provision of access to some 153,000 customers. The wireless local loop networks are also loss makers, as was the provision of dial-up Internet service (which GT&T has since ceased to offer) which incurred a loss of some G$567 million in 2011.

Falling International Revenues Cannot Effectively Cross-Subsidize Domestic Rates

55. As shown above, GT&T's domestic loss-making services (access, installation, local metered and domestic toll calls) are priced substantially below industry norm in the region, and are sustained with funds from the dwindling margins generated by the international business: fixed network

international inbound and outbound calls, international inbound and outbound calls on GT&T's mobile network and international inbound and outbound calls on Digicel's mobile network. However, the revenues from international services have been insufficient to provide the intended cross-subsidy of domestic rates and are even less likely to do so given that full competition will soon be introduced in the market.

56. Because of the availability of numerous close substitutes, the price elasticity of demand for international call origination is high. Two such substitutes are i) the use of the Over-the-Top services such as Skype, Vonage, Face Time, *etc.*, and ii) the use of local bypass facilities. There is no evidence anywhere that bypass disappears with the introduction of competition. Indeed, it is likely that the advent of full competition will exert even further downward pressure on GT&T revenues.

57. GT&T recognizes that the introduction of full competition into Guyana telecommunications market is inevitable. The GoG has concluded that globalization, the revolution in Information and Communications Technologies ("ICTs") and the signing of the General Agreement on Trade in Services ("GATS") have ushered in a new era for telecommunications. The new telecoms paradigm adopted by GoG posits that full competition in the provision of telecommunications services is imperative for realization of affordable international calling rates as well as for attracting international investment, increasing efficiency and promoting growth.

58. Unfortunately, subsidizing some services with revenues from others, which is the framework established by the GoG in the GT&T License granted in 1990 and under which GT&T operates today, is ***completely incompatible*** with a competitive environment. This presents an additional justification (in addition to the need to allow GT&T to earn its revenue requirement in the face of declining international rates and traffic volumes) as discussed earlier, to orient **both** domestic and international telecommunications service rates to costs. This action must be taken before the introduction of full competition in the sector.

59. After full competition is ushered in, GT&T will likely lose all of the revenue it currently generates from international inbound and outbound calls originating or terminating on Digicel's network, assuming that it concurrently receives an international license as currently contemplated. In 2011, these revenues amounted to some G$1.2 billion. We know for certain that after the introduction of

competition the volume of international traffic handled by GT&T will further decline, regardless of price elasticity effects, pushing GT&T even further away from the ability to earn its revenue requirement if domestic rates are not increased to cover GT&T's costs of providing those services. Thus, prior to the introduction of competition, GT&T, needs to have the rates for these services oriented towards the underlying costs of providing the services. Loss-making domestic services cannot be maintained in a competitive environment.

60. As Table 5 below shows, over the period 2009 to 2013, even though revenues from our international telephony business continued to fall consequent upon the inexorable reductions in international settlement rates and increases in "grey" and bypass traffic, revenues from the provision of these services still constitute an unacceptably large percentage of total revenues.

Table 7 Service Contributions to Total Revenue

	2009		2010		2011		2012	
Service	$s	%	$s	%	$s	%	$s	%
Local exchange	7,749,054	43%	8,127,070	48%	8,704,297	50%	8,068,310	45%
International long-distance inbound	5,482,063	31%	4,027,199	24%	3,601,531	21%	3,797,341	21%
International long-distance outbound	2,483,577	14%	2,014,650	12%	1,798,783	10%	1,814,714	10%
Other	2,111,866	12%	2,743,730	16%	3,300,986	19%	4,274,049	24%
Total	17,826,560	100%	16,912,649	100%	17,405,597	100%	17,954,414	100%

Requirement for Rate Rebalancing

61. There is ample empirical evidence to demonstrate that failure to rebalance rates prior to the advent of full competition could conceivably result in the failure of substantial portions of the telecoms sector. New entrants will find it most attractive to enter a market where margins are greatest (*e.g.*, international calling) as is already evident here in Guyana. In addition, failure to rebalance GT&T's service rates before the advent of full competition would compromise the Company's financial viability and threaten the existence of the PSTN. Equally important, is the fact that above-cost prices *(e.g.,* for outbound international calls) would encourage entry by high cost operators and below-cost prices would discourage the entry of low-cost operators. Absent rate rebalancing *before* the passage of legislation to introduce further competition, the competition objective of the GoG would be jeopardized because the unbalanced prices would provide distorted market signals and result in inefficient market entry.

62. GT&T cannot operate in a competitive environment with the service rates it currently has and rates need to be adjusted with a view to ensuring that, at a minimum, the company i) that the marginal revenue on all services is at least equal to its marginal costs ii) remains financially viable in the new competitive environment, after a considerable amount of international traffic would have been lost to other international telephony providers and international settlement rates would have fallen further, and iii) earns the 15 percent rate of return to which it is entitled. Although we have sought to demonstrate that GT&T's service rates should be aligned with the underlying service costs **prior** to the introduction of competition and that the new Draft Telecoms Act speaks to cost-based service rates, the requirement that GT&T should be allowed to earn its guaranteed rate of return is reason enough to adjust the rates as proposed in this filing (and detailed in the next section).

63. As alluded to throughout, the movement to cost-oriented pricing is referred to as "rate rebalancing." According to the World Bank, orienting telecommunications service rates to the underlying service costs is required when a regulator seeks to increase economic efficiency or when an incumbent provider (like GT&T) is about to face competition from new entrants. This latter point is emphasized by the World Trade Organization ("WTO"). While the Draft Telecoms Act does not use the term rate rebalancing, it rightly makes clear that all service prices should be cost-oriented or otherwise "rates rationalised." Our commissioning of *Analysys Mason* to develop a LRAIC model, consistent with the Commission's counsel over the years, was intended to assist the Commission in the deliberations it will need to undertake to address this rate rebalancing filing.

64. Notably, in all jurisdictions in the Caribbean where Governments have taken action to introduce full competition in the telecommunications sector, rate rebalancing was undertaken ***first***. Invariably, this process has resulted in an increase in line rental (access) charges, local metered calling and domestic toll rates, and a reduction in international long distance rates. This is what GT&T proposes herein.

65. GT&T is not unmindful of the political sensitivity to rate rebalancing. But the fact is that any rate increase, however small, will be unpopular. While consumers have paid comparatively little for domestic services over the past decade since the last rate adjustment, we are keenly aware that any increase will most directly affect those with the least ability to pay. However, it is important that Government, the Regulator and all stakeholders understand the myriad consequences of failure to

rebalance rates prior to the introduction of competition. Having studied the new Draft Telecommunications Act and Regulations, we have noted that while the documents do not mention the concept of rate rebalancing, they do stipulate that the Commission should have a predilection to moving all operators offering telecom services to cost-oriented rates.

66. The Commission's obligations in this regard are well articulated in section 14 of the Draft Pricing (Telecommunications) Regulations as follows:

> **"Cost-oriented pricing.**
>
> **14.** (1) Subject to the pricing methodologies provided for in the Schedules and the other provisions of these Regulations, the Commission may, in any instance in which it establishes a price regulation regime, develop, prescribe and apply the methodologies, which may include benchmarking and network modeling, that operators and service providers shall apply to determine and demonstrate that they are providing specified telecommunications services on a **cost-oriented basis**.
>
> (2) **Cost-oriented** pricing determined and demonstrated under these Regulations shall be based on charges equal to the long-run incremental cost of an efficient operator or service provider, as the case may be, plus, if applicable, an appropriate portion of shared and common costs, for the relevant telecommunications services." ***(emphasis supplied)***

67. That the new Draft Telecommunications Act and Regulations should take this position is hardly surprising. As far back as August 2001, the Study entitled *"Reform of the Telecommunications Sector in Guyana,"* undertaken by Consultant Hank Intven on **behalf of the Office of the Prime Minister and Minister of Public Works and Communications**, concluded that the preferred option for the reform of the telecommunications sector comprises **rate rebalancing**, opening all markets to competition in an orderly fashion, the introduction of incentive regulation, and the establishment of a universal access program. All of these components of the reform program are enshrined in the Draft Act and Regulations.[7]

[7] GT&T does not necessarily agree with all the provisions enshrined in the Draft Act and Regulations and recently has offered its point of view and comments to the Select Committee.

Section 2 -- Specifics on Proposed rates

Rates and Proposals Regarding International Calls

International Outbound Voice Service

68. Beginning with the FCC's implementation of a glide path to lower international settlement rates and its endorsement of least cost routing of international traffic, GT&T's international telephony business began to falter. These developments, in conjunction with i) the fierce competition GT&T faces from the so-called Over-the-Top ("OTT") operators (*e.g.*, Skype, Vonage, Google, etc.)[8], ii) the uncontrolled and unregulated expansion in the Internet café business, and iii) multiple variants of inbound and outbound bypass of GT&T's international gateway that remain unchecked, have served to seriously undermine GT&T's international traffic minutes and revenues.

69. Thus, as can be seen from Figure 2, between January 2006 and August 2013, international inbound minutes fell 55.1 percent from 14.0 million to 6.3 million and the total minutes handled (inbound plus outbound) fell by 42.3 percent from 16.3 million to 9.4 million. International outbound minutes is the only category which showed an increase (34.2 percent), moving from 2.3 million to 3.1 million. The overall impact of these developments is that GT&T's revenues from its international telephony business fell by 57.4 percent over the period, moving from G$708.4 million to G$301.6 million. As was explained earlier, going forward in a competitive environment these traffic and revenue numbers can be expected to decline even further, in part because GT&T will lose all the minutes and revenues associated with international inbound and outbound calls handled other operators granted international licenses.

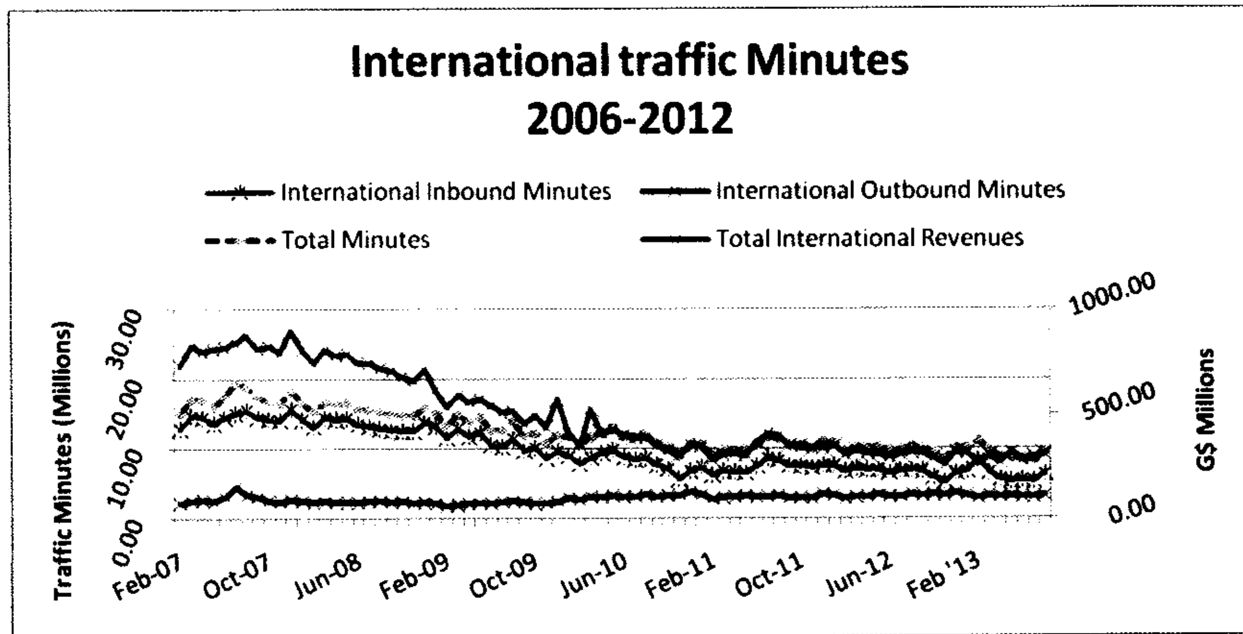
70. Notwithstanding the anticipated decline in the volume of international traffic that GT&T will handle post liberalization due to new entrants, the very introduction of competition will place downward pressure on both outbound collection charges and international settlement rates. Recognizing this, GT&T believes it is advisable to take action now to begin the reduction of collection charges with a

---

[8] In recent testimony before the United States Congress, Verizon's General Counsel, Michael Woods, stated "....telecommunications networks are evolving beyond traditional switched telephony. Voice over Internet Protocol (VoIP) technologies handle voice traffic over the Internet (as opposed to the public switched telephone networks) and already account for a substantial portion of voice traffic. Even more dramatic has been the rise of "over-the-top" applications that use peer to peer or other technologies to establish direct connections between users over the Internet. In 2012, ***one such application accounted for 34% of all international voice calling minutes*** " [emphasis supplied].

view to bringing them closer to the cost associated with the origination of an outbound international call.

Figure 2 Decline in International Traffic 2006-2012



71. There are two international telephony initiatives which GT&T would wish to have approved by way of this filing. These are:

a. Significantly reduce international collection rates.

b. Quote collection charges on a per minute basis but bill international calls on a one second increment rather than a 1 minute increment.

72. As the Commission is aware, since early 2010 GTT has been operating with promotional rates to all international destinations. As noted above, outbound traffic has increased substantially, however the increase in traffic has in no way been adequate to offset the effect of lowered rates.

73. We would make the following observations:

i) Roughly 15 countries, including the USA, the UK and Canada account for some 97 percent of GT&T's outbound international traffic.

ii) With regards the reduction in international collection rates, it needs to be observed that GT&T's LRAIC model does not possess the granularity that would allow us to estimate the all-in cost associated with originating international calls to the various destinations. Thus, to set cost-

oriented outbound international collection charges in a prospective competitive environment, we have looked at our direct costs (those amounts paid, by destination, to international carriers for call termination) and we have compared our prospective rates to the operators across the Caribbean where competition has already been introduced and cost-oriented tariffs approved. Our reasoning here is that in regards to indirect or allocated costs, while labour rates will tend to be lower in Guyana vis-à-vis other operators in the Caribbean, these are offset by higher costs associated with Guyana's size *(e.g., Guyana is roughly 20 times the size of Jamaica)*, its low population density, geographic isolation and GTT's greater network footprint, much in distant interior areas, all of which result in substantially higher unit costs for connectivity and circuits.

iii) In addition to the foregoing factors, two other items are noted as having changed since the Commission last approved outbound collection rates. First, formerly a tax surcharge was imposed on all outbound international calls, which has been replaced by VAT. Second, the market for termination of international traffic has changed dramatically. Mobile carriers exist in almost every jurisdiction, and almost universally, termination rates for mobile carriers are higher than rates for termination to fixed line operators. Because mobile termination rates are set by any number of operators in any given jurisdiction, there are, quite literally, thousands of rates (direct costs to GT&T) which need to be analyzed in computing margins and ultimately, domestic retail rates.

iv) In regards to the latter, we considered a rate structure that incorporated these differences. Taken to its logical conclusion, rather than two rates (peak and off peak) by country destination, we would require a minimum of 6 rates by destination – fixed, mobile and "other" by peak and off peak. The complexity of that analysis is substantial. While such a structure would allow that adequate margin is generated on every call, we determined that (a) the confusion to customers in the near term would outweigh the benefits given that there will be substantial consumer confusion already immediately after liberalization and (b) alternatively, in the short term, we could derive a rate that was a fair compromise. In other words, for the consumer calling a fixed destination the rate may be slightly higher than *could* be, but if calling a mobile destination, the rate is lower than it *should* be.

v) We also considered abandoning rates by country and moving to zone pricing. After much analysis, we determined that the simplicity did not translate into consumer benefit. Certainly we could construct rates, by zone, that ensured adequate margin based on our current understanding of the distribution of traffic and calling patterns of Guyana consumers. We concluded however that there would be more losers than winners, simply because consumers do not call zones, they call people. Post liberalization, depending upon how the market adapts, we may reconsider this decision, but if so, it will be based on targeted and specific plans that consumers will have the option to choose, or not choose, based on their specific calling patterns and circumstances.

vi) Finally, we considered abandoning the peak, off-peak differential. Historically, there was both an engineering and a cost rationale (supply-related issues) in addition to demand issues which strongly urged a peak off-peak distinction. Today, the supply issues have less weight since the bandwidth required to transport and terminate (as function of the bit rate) an international long distance call is small relative to the bandwidth required for internet access and other data services. However, an off peak differential still has the effect of incenting marginal calling, *i.e.,* calls that would not be made if the rate is too high. Thus, a single rate is perhaps slightly less than a peak rate, but substantially more than an off peak rake. Businesses would prefer the slightly lower single rate to the detriment of residential consumers who prefer the flexibility of the lower off peak rate for discretionary calls. We lean here on the side of residential consumers, since communications is a requirement of business. Post liberalization, the market may force the elimination of a peak, off peak differential, but for now we deem that the consumer and this Commission would be best served by maintaining the structure that has been in place since 1991.

74. Table 8 below shows the current outbound international call rates of operators across the Caribbean. Table 9 shows the rates we are proposing to our principal call destinations, as compared to current Commission approved rates (non-promotional) to these destinations. In only two cases, the rates to Antigua and the off-peak rates to St. Vincent and St. Lucia, are we proposing an increase. These two anomalies are due to the aforementioned high mobile termination rates. Our

rate reductions are being proposed despite the effects of historical and ongoing inflation in Guyana and ongoing depreciation of the Guyana dollar against the major international currencies.

75. Table 10 shows a selection of rates to other prominent international destinations; the full list is attached as Exhibit 8. Overall, in only 4 cases have peak rates increased and in only twenty cases have off-peak rates increased. However, most of these increases are for destinations which do not feature prominently in the calling patterns of Guyanese consumers. Rate reductions are generally in the range of 50-60%. While the rate reductions are dramatic and substantial as compared to existing tariffed rates, in general they are in keeping with the average retail cost (excluding taxes) for a 3 minute call as based upon the promotional rates currently in place and approved by the Commission. Thus, we anticipate that these rates will be both traffic and revenue neutral.

Table 8 Caribbean Comparative International Calling Rates

		US/UK/Canada		**Rest-of-the-World**	
Country	**Operator**	**Peak**	**Off-Peak**	**Peak**	**Off-peak**
Jamaica	Lime	34.85	34.85	120.95	120.95
	Digicel	20.50	20.50	51.25	51.25
Barbados	Lime	127.10	94.30	157.85	127.10
	Digicel	94.30	67.65	209.10	155.80
St. Lucia	Lime	98.40	71.75	98.40	98.40
	Digicel	108.65	79.95	112.75	108.65
Dominica	Lime	98.40	71.75	98.40	98.40
	Digicel	86.10	86.10	143.50	108.65
Trinidad & Tobago	TSTT	41.00	30.75	84.05	59.45
	Digicel	41.00	32.80	79.95	63.55
Cayman Islands	Lime	92.25	79.95	161.95	125.05
	Digicel	88.15	63.55	125.05	88.15
BVI	Lime	51.25	41.00	92.25	82.00
	Digicel	61.50	51.25	92.25	82.00
Antigua & Barbuda	Lime	112.75	82.00	135.30	73.80
	Digicel	114.80	84.05	133.25	98.40
St. Vincent & the Grenadines	Lime	114.80	82.00	114.80	114.80
	Digicel	143.50	86.10	143.50	86.10
Suriname	Digicel	57.40	57.40	114.80	114.80
Curacao	Digicel	112.75	112.75	268.55	268.55
Bermuda	Digicel	153.75	153.75	153.75	153.75

Rates Normalized at GYD:USD 205:1

Table 9 Selection of Proposed Rates – Most Called Destinations

		PEAK				OFF PEAK			
		Rates		Change in Rate		Rates		Change in Rate	
Destination	C-Code	Old	New	$s	%	Old	New	$s	%
Antigua	1268	72.24	84	11.76	16%	50.57	67	16.43	32%
Barbados	1246	72.24	72	(0.24)	0%	50.57	50	(0.57)	-1%
Bermuda	1441	101.41	91	(10.41)	-10%	70.99	61	(9.99)	-14%
British Virgin Islands	1284	248.17	88	(160.17)	-65%	173.72	74	(99.72)	-57%
Canada	1	134.50	90	(44.50)	-33%	94.15	75	(19.15)	-20%
Cayman Islands	1345	102.34	85	(17.34)	-17%	71.64	56	(15.64)	-22%
Dominica	1767	112.49	95	(17.49)	-16%	78.74	73	(5.74)	-7%
Jamaica	1876	130.59	86	(44.59)	-34%	91.41	63	(28.41)	-31%
Netherlands Antilles	599	264.72	105	(159.72)	-60%	185.30	86	(99.30)	-54%
St. Lucia	1758	91.68	89	(2.68)	-3%	64.18	71	6.82	11%
St. Vincent	1784	91.68	91	(0.68)	-1%	64.18	73	8.82	14%
Suriname	597	139.84	78	(61.84)	-44%	97.89	62	(35.89)	-37%
Trinidad	1868	72.24	72	(0.24)	0%	50.57	50	(0.57)	-1%
United Kingdom	44	136.00	95	(41.00)	-30%	123.00	81	(42.00)	-34%
USA (48 Contiguous States)	1	100.00	85	(15.00)	-15%	90.00	70	(20.00)	-22%

Table 10 Other Representative ILD OB Rates

		PEAK				OFF PEAK			
		Rates		Change in Rate		Rates		Change in Rate	
Destination	C-Code	Old	New	$s	%	Old	New	$s	%
Australia	61	281.73	105	(176.73)	-63%	197.21	83	(114.21)	-58%
Brazil	55	271.68	112	(159.68)	-59%	190.18	88	(102.18)	-54%
China	86	473.75	110	(363.75)	-77%	331.63	90	(241.63)	-73%
Egypt	20	500.96	149	(351.96)	-70%	350.67	126	(224.67)	-64%
France	33	342.24	118	(224.24)	-66%	239.57	98	(141.57)	-59%
Germany	49	329.38	113	(216.38)	-66%	230.56	95	(135.56)	-59%
India	91	317.30	110	(207.30)	-65%	222.11	90	(132.11)	-59%
Indonesia	62	425.54	144	(281.54)	-66%	297.88	118	(179.88)	-60%
Japan	81	442.56	110	(332.56)	-75%	309.79	90	(219.79)	-71%
Pakistan	92	421.26	147	(274.26)	-65%	294.88	119	(175.88)	-60%
Russia	7	343.15	116	(227.15)	-66%	240.21	94	(146.21)	-61%
South Africa	27	399.70	129	(270.70)	-68%	279.79	109	(170.79)	-61%
Taiwan	886	546.18	115	(431.18)	-79%	382.32	92	(290.32)	-76%

76. GT&T believes that any further reductions in outbound collection rates call will have to be introduced post liberalization when it will be possible to create targeted calling plans for businesses and consumers, after sufficient data is available to assess how the market is evolving.

77. As we have done in previous rate filings, we would caution the Commission that excessively low international collection charges can be a "double-edged sword." GT&T has had the experience before where extremely low collection charges relative to those abroad have resulted in large call volumes out of Guyana and a drastic reduction in inbound traffic as consumers (both Guyanese consumers and their Diaspora correspondents) will choose the least expensive carrier, and person