



# Fair Trading Commission

## Decision

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### PRICE CAP PLAN 2012

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## TABLE OF CONTENTS

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SUMMARY ...	3
<i>Price cap structure and price controls</i> .....	3
<i>Basket 1 - 'Competitive' Services</i> .....	3
<i>Basket 2 - 'Non-competitive' Services</i> .....	4
<i>Sub-cap on residential access services</i> .....	4
<i>Price cap formula</i> .....	5
<i>Price Cap Model</i> .....	5
<i>Consultation Process</i> .....	6
<b>SECTION 1 BACKGROUND</b> .....	6
INTRODUCTION .....	7
LEGISLATIVE FRAMEWORK .....	8
Duty to Consult .....	9
REVIEW PROCESS .....	10
<b>SECTION 2 THE PRICE CAP PLAN 2012</b> .....	12
OBJECTIVES .....	12
DURATION OF THE PCP2012 .....	14
SCOPE AND STRUCTURE OF THE PCP2012 .....	14
Service scope .....	14
Basket structure .....	15
PRICE CAP FORMULA .....	17
Inflation I-Factor .....	18
X-Factor .....	19
Exogenous Z-Factor .....	19
Basket 1 - 'Competitive' regulated services .....	20
Basket 2 - 'Non-competitive' regulated services .....	21
<b>SECTION 3 PRICE CAP MODEL</b> .....	25
OBJECTIVE AND APPLICATION OF THE PRICE CAP MODEL .....	25
APPROACH .....	25
Main inputs & modelling parameters .....	25
Main calculations .....	26
Main outputs .....	27
Cost of capital .....	27
Total Factor Productivity Study .....	28
<b>SECTION 4 - PRICE CAP ADMINISTRATION</b> .....	29

## **SUMMARY**

*The Fair Trading Commission (the Commission) has determined that a new Price Cap Plan 2012 (PCP2012) will govern the adjustment of rates of the regulated telecommunications services of Cable & Wireless (Barbados) Limited (the Company) from April 1, 2012 to March 31, 2015. The PCP2012 will therefore be based on the three reporting periods, which are aligned with the Company's financial year.*

*The Price Cap Plan 2012 will replace the current Price Cap Plan 2008 (PCP2008) which was implemented in August 2008 and which will expire on March 31, 2012.*

### **One Year Moratorium**

*The Commission has sought to minimise the effect of price increases on end users and the Company will place a moratorium on price increases for all regulated prices in the first year of the price control - that is, no regulated prices will be increased in the first year of the PCP2012 from April 2012 to March 2013.*

### **Price cap structure and price controls**

*The PCP2012 will be based on two service baskets, one for 'competitive' services and the second basket for 'non-competitive' services.*

#### **Basket 1 - 'Competitive' services**

*This basket will include all regulated services for which the level of competition is sufficient to ensure that prices are reflective of a competitive market outcome. As under the current price cap plan (PCP2008), these services are international telephone services and international private leased circuits ("IPLCs").*

*These services will not be subject to an overall price cap. All 'competitive' services will remain subject to advance notification requirements to be set out in the Compliance Rules and Procedures which will be issued at a later date.*

### **Basket 2 - 'Non-competitive' Services**

*This basket will include all remaining regulated services (i.e., all regulated domestic voice access and ancillary services including residential fixed line rental, business fixed line rental, voicemail, other value added services and domestic leased circuits).*

*For the years 2013-2014 and 2014-2015, an 'RPI-X' pricing control will be applied to these 'non-competitive' services, with the X-factor set at 5.25%. The RPI is the Barbados Retail Price Index which represents an inflation factor and the X represents a productivity factor. This X-factor has been set at a level which, in conjunction with the moratorium, will result in a forecasted rate of return for the services in this basket which the Commission has determined to be reasonable.*

### **Sub-cap on residential access services**

*Residential access services are included in Basket 2. The Commission has determined that in addition to the general RPI-X constraint for Basket 2, there should be a specific constraint applied to residential access services. This additional constraint is necessary because residential services comprise a group of services contained in Basket 2, all of which can be increased or decreased once the overall cap is maintained. Placing a sub cap on residential services therefore guarantees that these services will never increase more than the capped amount in any period. Thus, following the moratorium in the first year (where there would be no price increases), the rate at which the Company will be able to raise the prices of these services will be restricted to the level of inflation or 5% a year if annual inflation exceeds this level.*

### **Price cap formula**

*The price cap formula sets the allowable (weighted) average annual price change across the capped services (i.e. those contained in Basket 2 only, as Basket 1 is uncapped).*

*The formula applied under the PCP2012 remains unchanged from the price cap formula underlying the previous price cap plan. The price cap formula allows the Company to change its retail prices on average within Basket 2 (i.e., the Actual Price Index, API) by only less than or equal to the predetermined Price Cap Index (PCI).*

*The PCI for each year (t) is then calculated as*

$$PCI_t = PCI_{t-1} (1 + I_t - X_t + Z_t), \text{ where}$$

*I* is the inflation factor (i.e. RPI);

*X* is the productivity factor; and

*Z* is the exogenous factor

### **Price Cap Model**

*The PCP2012 utilises a price cap financial model which requires determining what X-factor would allow the Company to realise a reasonable rate of return across its capped services (Basket 2) by the end of the price control period. This requires, inter alia, forecasting the expected volume of demand for the controlled services and the expected costs to the Company to deliver these services. The level of costs for the regulated services is determined taking into account the demand forecasts, expected inflation and expected efficiency gains over the PCP 2012. The expected efficiency gains are informed in part by historic trends in the Company's total factor productivity information, international benchmarking, and the review of financial information provided by the Company.*

*The Price Cap Model forecasts the costs and revenues resulting from the regulated services under a range of assumptions. By varying the level of X in the price control assumptions the*

*model forecasts how revenues and hence the forecasted return on capital employed (ROCE) will vary, thus allowing the Commission to set an appropriate X factor.*

*The Price Cap Model was developed with the assistance of the Commission's consultants and input from the Company.*

### **Consultation Process**

*The Commission utilised the public consultative process as the means of ensuring full participation in the development of the Price Cap Plan. This involved a consultation with interested parties as well as extensive discussion of the various issues with the Company.*

## **SECTION 1 BACKGROUND**

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### **INTRODUCTION**

1. Effective April 01, 2012, the Fair Trading Commission (the Commission) shall implement a new Price Cap Plan 2012 (hereinafter referred to as PCP2012) to govern the tariff adjustments of regulated telecommunications services provided by Cable & Wireless (Barbados) Limited (hereinafter referred to as the Company).
2. The price cap regime is designed to ensure that customers continue to have access to telecommunications services at just and reasonable rates while at the same time providing the Company with incentives to operate more efficiently and to be more innovative in the provision of services. Price cap regulation also allows flexibility in pricing, provided that the average change in prices charged by the Company does not exceed the Price Cap Index.
3. In June 2008 the Commission, in its Decision FTC/UR/2008-02, established a Price Cap Plan (herein after referred to as PCP2008) which detailed the principles of the price cap plan including the duration, number of service baskets, productivity factors, inflation factors, exogenous factors and related administrative procedures.
4. In accordance with that Decision and the Price Cap Plan 2008 Compliance Rules and Procedures FTC/UR/2008-03, the Commission is mandated to review the current Price Cap Plan before its expiration on March 31, 2012. The Commission commenced review of the said PCP2008 on October 14, 2011.

## LEGISLATIVE FRAMEWORK

5. The Commission is responsible for, *inter alia*, establishing rate-setting principles, setting the maximum rates to be charged, monitoring these rates, determining and monitoring standards of service and conducting periodic reviews of the rates charged by service providers by virtue of Section 3(1) of the Utilities Regulation Act CAP. 282, the Fair Trading Commission Act CAP. 326B, and the Telecommunications Act CAP. 282B.
6. When establishing the principles to regulate service providers, the Commission must in accordance with Section 3(2) of the Utilities Regulation Act have regard to:
  - (a) *the promotion of efficiency on the part of service providers;*
  - (b) *ensuring that an efficient service provider will be able to finance its functions by earning a reasonable return on capital; and*
  - (c) *such other matters as the Commission may consider appropriate."*
7. Under Section 3(3) of the Utilities Regulation Act, the Commission is specifically charged with the protection of the interests of consumers. Section 3(3) (a) states:
  - (a) *"The Commission shall protect the interests of consumers by ensuring that service providers supply to the public, service that is safe, adequate, efficient and reasonable."*
8. Additional responsibility is conferred upon the Commission through the Telecommunications Act CAP. 282B. In particular, Section 6 (1) states that:

6 (1) *“The Commission shall*

*c) be responsible for the regulation of competition between all carriers and service providers in accordance with this Act to ensure that the interests of consumers are protected; and*

*d) establish and administer mechanisms for the regulation of prices in accordance with this Act, the Fair Trading Commission Act and the Utilities Regulation Act.”*

9. Section 39 of the Telecommunications Act also assigns to the Commission the duty to establish an incentive based rate setting mechanism and to facilitate market liberalisation and competitive pricing.

#### **Duty to Consult**

10. The Commission has an obligation to consult with interested parties in making determinations of rates and standards of service in accordance with Section 4(4) of the Fair Trading Commission Act CAP. 326B specifically with regard to the following:
- a. Establishing principles for arriving at the rates to be charged;
  - b. Setting of maximum rates;
  - c. Determining the standards of service applicable to service providers; and
  - d. Carrying out periodic reviews of the rates and principles for setting rates and standards of service.

## REVIEW PROCESS

11. The Price Cap Review process included an assessment of the Company's recent regulatory and financial performance, and the overall market developments that have impacted and would continue to impact its performance. This assessment involved, amongst others, the examination and evaluation of financial information, productivity studies and market reports, submitted by the Company in preparation for the review process. It was carried out with the assistance of external consultants.
12. The review incorporated consideration of the reports that were submitted over the past three years as well as meetings with the Company to verify and discuss the information recently submitted as part of the review process.
13. The Commission issued its public consultation paper (FTC/UR/CONS/2012-01) on the PCP2008 review on February 10, 2012. This document presented information on:
  - a. the general principles and the performance of the Price Cap Plan currently in place (including the main findings from the Commission's review of recent market developments and the Company's operational and financial performance under the PCP2008);
  - b. an outline of the proposed principles and structure of the Price Cap Plan 2012; and
  - c. the parameters, methodologies and assumptions to underlie the next Price Cap Plan.
14. The objective of the consultation paper was to obtain public input to facilitate the Commission in ascertaining whether: (i) the PCP2008 has achieved the objectives for which it was designed and whether (ii) there is need to modify the principles, rules and parameters of the Price Cap Plan going forward.

15. The Commission received responses from Caritel and the Company itself.
16. The Commission has carefully reviewed and considered all submissions even though not all the views of parties have been summarised in this Decision.
17. The Commission thanks all parties who submitted responses.

## SECTION 2 THE PRICE CAP PLAN 2012

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18. **The Commission has determined that the current structure of the price cap mechanism will be modified. A new Price Cap Plan 2012, as detailed within this Decision, will govern the regulated services of the Company from April 1, 2012 until March 2015.**
19. A price cap plan is defined by a specific set of principles that are designed to fit the particular market and regulatory environment. These include the number of service baskets, productivity factors, inflation factors, exogenous factors and carry over capability.
20. This section sets out a description of each of the principles that will define the Price Cap Plan 2012 (PCP2012) and the reasons for the Commission's Decision.

### OBJECTIVES

21. The Commission considers that regulating prices through a price cap mechanism remains the most efficient and effective incentive-based form of regulation for the Company's regulated services. Additionally, price cap regulation continues to be the most common form of regulation used within the region.
22. As set out in the consultation paper, the Commission considers that the objectives of the PCP 2008 are still applicable going forward. These objectives are to:
  - a. Provide the Company with the economic incentive to reduce operating costs;

- b. Provide the Company with an incentive to be innovative and replace plant in an efficient and prudent manner;
- c. Provide the Company with a reasonable opportunity to earn a fair return on its investment;
- d. Allow efficiency gains to be passed on to consumers through reduced prices of telecommunications services;
- e. Foster competition within the telecommunications market;
- f. Streamline regulatory procedures relating to rates;
- g. Facilitate pricing flexibility and responsiveness to evolving technological, legal and market conditions.

23. One respondent to the public consultation stated that the main objective of the price cap plan should be to achieve lower retail prices for consumers in the absence of competition. Whereas the Commission agrees that there is a need to prevent excessive pricing where competitive pressures alone do not achieve this outcome, consumers' interests are best met by setting prices taking account of the efficient cost of service provision. Prices set at too low a level will distort competition and could reduce the incentive to maintain investment in the network, leading to reductions in consumer welfare in the longer term. The Commission believes that the objectives set out above provide an appropriate balance between short and long term consumer welfare.

24. In its consultation response, the Company queried the Commission's approach which it believed could effectively result in rate of return regulation, controlling the Company's overall return, rather than incentive regulation providing incentives for the Company to become more efficient and then passing these efficiency gains onto consumers. The Commission believes setting a multi-year price cap in itself provides incentives for the Company to make efficiency savings as this will result in increased profitability compared to not making these efficiency savings. The approach

adopted also attempts to ensure that consumer prices are set at as low a level as possible consistent with the objectives of the price control by setting the price cap such that the Company has the opportunity to achieve a reasonable return relative to its cost of capital by the end of the price control period.

25. **The Commission has determined that the current objectives of the price control (as set out in paragraph 22) remain valid for the Price Cap Plan 2012.**

## **DURATION OF THE PCP2012**

26. Respondents to the public consultation generally indicated that they had no objections to the proposed three - year duration of the next price cap period.
27. **The PCP2012 will therefore be based on the following three reporting periods, which are aligned with the Company's financial year:**

**Period 1: April 1, 2012 through to March 31, 2013**

**Period 2: April 1, 2013 through to March 31, 2014**

**Period 3: April 1, 2014 through to March 31, 2015**

## **SCOPE AND STRUCTURE OF THE PCP2012**

### **Service scope**

28. The services to be regulated under the PCP2012 will continue to be the retail services specified by the Telecommunications (Regulated Services) Order 2006.

### **Basket structure**

29. As under previous price cap plans and given the predetermined service scope, the price control should focus on those regulated services where the competitive constraint is limited, whilst providing more flexibility on services where there are other companies in the market. The price cap (or basket) structure plays an important role in meeting this objective.
30. Previously the prices of residential fixed line access services (land line service with unlimited local calls and residential installation) had been placed in a separate basket for price control purposes to ensure a fair distribution of benefits and price reductions. In the consultation an alternative methodology for achieving this objective was proposed whereby an additional control is applied on given services within a basket, that is a sub-cap. Sub-caps provide greater flexibility than separate caps by allowing price decreases below the sub-cap to be offset by price changes in other services within the overall cap. This provides more incentive to reduce the prices of the selected services further than required by the sub-cap.
31. The consultation paper set out three potential options for the structure of the price cap, with the Commission stating a preference for the second option:
  - (i) Single basket covering all regulated services, plus a sub-cap on residential access services,
  - (ii) Separate baskets for 'competitive' and 'non-competitive' services, plus a sub-cap on residential access services; and
  - (iii) Separate baskets for 'competitive', 'non-competitive' and residential access services (i.e., the structure used for the PCP2008).
32. Only the Company commented on the basket structure options set out in the consultation paper. The Company preferred a single basket structure (i.e. Option 1), but considered that the Commission's proposal to move to a two

basket structure (i.e., Option 2) also met the objectives of the price control and provided a clear indication of those services where competition was effective in constraining the Company's pricing.

33. **The Commission has determined that the price cap will be based on two service baskets for 'competitive' and 'non-competitive' services, plus a sub-cap on residential access services (i.e., Option 2).**
34. The regulated services for which the Commission has deemed that there is sufficient competition to prevent excessive pricing by the Company under the current Price Cap Plan (i.e. those contained in Basket 3 of the PCP2008) are included in a separate basket for competitive services.
35. The Company argued in its response that it faces competitive constraints on the fixed access services due to increasing fixed-to-mobile substitution and potential further market entry. The Company also argued that there was effective competition for domestic private leased circuit (DPLCs) services. The Commission determined that the evidence provided by the Company did not provide sufficient reason to add these services to the basket of 'competitive' services.
36. All other regulated services that are not included in the 'Competitive' basket are allocated to Basket 2. This effectively merges Basket 1 and Basket 2 in the PCP2008 into a single basket.
37. **The two baskets are as set out in Table 1**

**Table 1: Basket structure under PCP2012**

Basket	Services
<b>Basket 1:</b> <b>'Competitive' service basket</b>	Fixed international outgoing calls International calling cards International calls from Payphones International operator assistance International Private Leased Circuits
<b>Basket 2:</b> <b>'Non-competitive' service basket</b>	All remaining regulated services including residential access, business access, voicemail , domestic leased circuits

## PRICE CAP FORMULA

38. The price cap formula sets the allowable (weighted) average annual price change across the capped services (i.e. those contained in Basket 2).
39. In the consultation paper the Commission stated its preliminary view of applying the same price cap formula to the PCP2012 as contained in the PCP2008. The proposed price cap formula allows the Company to change its retail prices on average within each basket (i.e., the Actual Price Index, API) only by less than or equal to the predetermined Price Cap Index (PCI).
40. The PCI for each year (t) is then calculated as

$$PCI_t = PCI_{t-1} (1 + I_t - X_t + Z_t), \text{ where}$$

- I is the inflation factor;
- X is the productivity factor; and
- Z is the exogenous factor.

41. In its consultation response the Company stated that it concurred with the Commission's proposed price cap formula. Caritel did not comment on this issue.
42. **Given the above, the Commission has determined that it will continue to apply the same price cap formula as currently in place. Under the revised structure, the price cap formula will only be applied to Basket 2 (i.e., the 'non-competitive' service basket) of the PCP2012.**

### **Inflation I-Factor**

43. The inflation factor as included in the price cap formula aims to allow the Company to recover changes to its input prices during the price cap period as well as ensuring that prices for telephony services move in line with those for other services and consumer goods in Barbados.
44. The PCP2008 uses the annualised Barbados Retail Price Index (RPI), computed on a monthly basis by the Barbados Statistical Service.
45. Within its review, the Commission assessed the likely benefits from using an alternative inflation measure in the price cap formula, such as "core" inflation or RPI excluding particular components such as fuel. The Commission's concluded that these alternative indicators do not provide clear benefits, while moving away from RPI as the generally accepted measure of inflation could cause confusion. The Commission recognised that there is no single ideal measure of inflation in the context of price regulation of fixed telephony services,
46. In its consultation response the Company agreed with the use of the Barbados RPI as the inflation factor.

47. **The Commission has therefore determined that the Barbados Retail Price Index will continue to be used to measure the inflation factor in the price cap formula.**

**X-Factor**

48. The X-Factor was set based on a financial model, forecasting the expected demand for controlled services and the expected costs to the Company of delivering these services during the PCP2012 as well as efficiency gains.
49. Additional information on the price cap model, the determination of the X-Factor and the productivity studies is provided in Section 3 of this Decision.

**Exogenous Z-Factor**

50. The Z-Factor is a specific, cost pass-through variable, intended to address instances where the regulated company faces extreme variations in input prices outside of the inflation factor, which are not accounted for in the X-factor, and which are beyond the control of the company. The Z-Factor will increase or decrease the PCI thereby restricting or increasing the Company's ability to vary its prices in response to exogenous shocks.
51. Under the current price cap plan a Z-factor adjustment will be considered for inclusion in the PCI where any of the following conditions are satisfied:
- a. The event is a legislative, judicial or administrative action which is beyond the control of the company; or
  - b. The event relates specifically to the telecommunications industry; or
  - c. The event has a material impact on the regulated segment of the Company which is subject to the Price Cap Plan.
52. There were no filings for the Z-factor during the PCP2008.

53. In the consultation paper, the Commission proposed to continue to include the Z-Factor in the price cap formula going forward. The Company welcomed this proposal and Caritel did not comment on this issue.
54. **Thus, the Commission has determined that a Z-factor adjustment will be considered for inclusion in the PCI based on the conditions set out in paragraph 50 above.**

#### **PRICE CONTROL APPLIED TO EACH BASKET**

55. In line with previous Price Cap Plans, the price control applied to each basket will vary reflecting the degree of competitive constraint on the Company's pricing behaviour.
56. The Commission has sought to minimise the effect of price increases and the Company will place a moratorium on all prices in the first year of the price control - that is no prices will be increased in the first year of the PCP2012 from April 2012 to March 2013.

#### **Basket 1 - 'Competitive' regulated services**

57. For the services within Basket 1 the Company's pricing flexibility is driven primarily by competitive forces. The competitive service basket will include competitive services and other retail services not accounted for in the non-competitive basket.
58. As under the PCP2008, the basket of 'competitive' services will not be subject to an overall price cap such that the average price changes in this basket will be constrained by a price cap index. The Company will be required to provide advance notification of price changes to the Commission as set out in the price cap administrative rules.

## **Basket 2 - 'Non-competitive' regulated services**

59. Under the PCP2008 which ends on March 31, 2012 the 'non-competitive' services are allocated to two baskets (i.e., Basket 1 and Basket 2), which are subject to different price controls:
- Basket 1 - After an initial price freeze, prices for residential access services were allowed to increase by up to 4.5% per annum since January 2010.
  - Basket 2 - All remaining 'non-competitive' services were subject to price cap based on the retail price index (RPI) and a productivity factor of 7.12% (i.e., RPI - 7.12%).
60. In the PCP2012 all 'non-competitive' services will be included in a single basket with a price cap index control. Further controls will be applied to residential fixed access service by applying a sub-cap to this service.

### Overall control on 'non-competitive' services

61. There will be a moratorium on all price increases in this basket in the first year of the price control - April 1 2012 to March 31 2013. Given that most recent RPI reported by the Barbados Statistical Service is 9.4%, this is equivalent to an 'RPI - 9.4%' control in the first year.
62. For the following two years the average change in prices in this basket will be constrained by a standard "RPI-X" price control, where the inflation rate is measured by the Retail Price Index (RPI) for Barbados and the X-factor is set such that the expected revenues for all 'non-competitive' services reflect the forecasted costs of delivering these services at the end of the PCP2012.
63. The Productivity (X)-factor for the basket for the last two years of the PCP2012 will be set at 5.25%. The X was derived from the Price Cap Model

(see Section 3) based on expected developments in demand and the company's cost base, including expected efficiency gains. The prices of the services in this basket must be set such that on average the price change is no greater than the rate of inflation minus the X-factor (i.e. RPI - 5.25%). The X has been set at a level which, in conjunction with the moratorium will result in the forecasted return on capital employed for the capped services in the basket converging to a reasonable estimated cost of capital.

64. In the Consultation the Commission proposed to allow the Company to 'carryover' any unused headroom from one period to the next. Only the Company responded on this issue, supporting the Commission's proposal. Given the length of the price control and the agreed moratorium in the first year, this means that if the price changes implemented by the Company in the second year of the price control result in price changes of less than RPI - 5.25% any difference may be carried over into the third year of the price control.
65. The price control for non-competitive services (i.e., those contained in Basket 2) under the PCP2012 can be summarised as follows:
  - a. In Period 1 (i.e., April 2012 to March 2013), the Company will not increase prices in this basket;
  - b. A price cap of RPI - 5.25% applies in the second and third year of the price control;
  - c. For the third year, actual price changes will be measured with respect to Period 2, 2013/14 (i.e., allowing for a carry-over of any headroom); and
  - d. The Company is permitted to increase the tariffs once in each price control period.

Sub cap on residential access services

66. In addition to these price controls applicable across all services in Basket 2, further pricing constraints apply specifically to residential access services taking account of the importance of these services to consumers.
67. Setting the price control for fixed access services requires balancing the distortions that could occur to the Company and the market in maintaining the prices of these services significantly below costs against the objective of ensuring a basic telephone service that is affordable to the general public.
68. Respondents to the consultation paper expressed different interpretations of the recent price trends for residential access services.
  - a. In its consultation response, Caritel expressed a view that the main objective of price cap regulation should be to lower retail prices in the absence of competition. It concluded that the PCP2008 had failed to meet this objective, as prices for residential access services had increased under the current control. Caritel further believed that prices for these services should fall during the next price control period.
  - b. In contrast, the Company indicated that the allowable price increase for residential access services had been below inflation due to the RPI-X control. The Company further stated that increasing competitive pressure (especially from fixed-to-mobile substitution) would constrain its ability to increase residential access prices going forward.
69. As set out in paragraph 61, as part of the wider moratorium the Company will not be able to increase residential access prices in the first year of the PCP2012.
70. In order to ensure that the affordability of basic telephony services is maintained, for the second and third year of the price control, residential

access prices will only be allowed to increase in line with inflation. However the Commission has determined that if inflation is greater than 5.00% the maximum allowable price increase for these services will be capped at 5.00% each year. This level would be in line with the current IMF inflation forecasts for Barbados.

71. There will be no carry over allowance provided in between periods (i.e., in case the Company decides against using its allowable price increase in Period 2, this will have no impact on prices in Period 3).
72. The combination of a price freeze in the first year of the price control with a capped maximum allowable increases in the next two years implies that the level of prices at the end of the price control will be lower in real terms (i.e. adjusted for inflation) than the current prices.
73. The additional price control for residential access services under the PCP2012 can be summarised as follows:
  - a. No price increase in Period 1 (i.e., April 2012 to March 2013);
  - b. Allowable price increases in line with inflation (i.e. RPI), subject to a maximum increase of 5% each year in Period 2 and Period 3;
  - c. No carry-over provision in between Period 2 and 3; and
  - d. The Company is permitted to increase the tariffs once in each price control period.

## SECTION 3 PRICE CAP MODEL

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### OBJECTIVE AND APPLICATION OF THE PRICE CAP MODEL

74. In the development of the PCP2012, the Commission utilised a Price Cap Model which was built and populated with the assistance of the Commission's consultants and input from the Company.

### APPROACH

75. The Price Cap Model forecasts the costs and revenues resulting from the regulated services under a range of assumptions. This requires, amongst others, forecasting the expected volume of demand for the regulated services and the expected costs to the Company to deliver these services going forward.
76. The level of costs for the regulated services is determined taking into account the demand forecasts, expected inflation and expected efficiency gains over the PCP2012. The expected efficiency gains are informed by, amongst others, historic trends in the Company's total factor productivity, international benchmarking of efficiency and the review of financial information provided by the Company.

### Main inputs & modelling parameters

77. The Price Cap Model contains two main forms of input data:
- a. Financial and operational data for the base year 2011/2012 sourced from the latest available Enhanced Allocation Model (EAM) which separates the profitability of regulated services and the Total Factor Productivity (TFP) study; and

- b. Forecasting assumptions for PCP2012 period, informed by historic trends.
78. In addition to the input data set out above, the Price Cap Model allows the input of a range of parameters to reflect potential options for the PCP2012 (such as, the basket structure, the level of X and price control duration). Revenues are forecast under the assumption that the Company will set prices as high as allowed under the PCP2012.

### **Main calculations**

79. Based on the input data and forecast assumptions, the Price Cap Model performs the following main calculations:
- a. Volume forecasts. Service level volume forecasts are calculated for each regulated service by applying demand growth assumptions to base year volume data.
  - b. Revenue forecasts. Future service revenues are calculated by combining the volume forecasts and the maximum price charges allowed under the applied price control structure and X factors.
  - c. Cost forecasts. Total operating expenditure forecasts are projected from the base year levels in the EAM based on a combination of inflation, efficiency assumptions, costs of sales and the changes in volumes.
  - d. Mean Capital Employed (MCE) and depreciation forecasts. Depreciation is projected from base year levels in the EAM under the assumption that it increases in line with the increase in net book value. Net book value is projected based on a forecast of capital expenditure less projected depreciation and disposals. Working capital is projected forward from the base year values in the EAM.

- e. Returns On Capital Employed (ROCE) forecasts. Forecasts of the ROCE for the capped services are calculated based on the revenue, cost and MCE forecasts.

### **Main outputs**

- 80. By varying the level of X in the price control assumptions the model forecasts how revenues and hence the forecasted ROCE will vary, thus allowing an appropriate level of X to be determined.
- 81. Once the structure of the price control was determined, including the moratorium on prices in the first year and the sub-cap on residential access services, the level of X applied in the second and third year was varied until the ROCE for the services in Basket 2 in the third year was at a level consistent with the Company's estimated cost of capital that the Commission considers reasonable.

### **Cost of capital**

- 82. In order to determine the appropriate cost of capital, the Commission and consultants reviewed a 2011 Weighted Average Cost of Capital (WACC) Study by Price Waterhouse Coopers (PWC) LLP. The study was similar to a study prepared by PWC in 2008.
- 83. The quality and accuracy of the study and its results were carefully considered and compared to the previous estimate allowed by the Commission, as well as to recent precedent within the region. The WACC study was further discussed with the Company. The Commission considered that PWC's estimate of 16.4% was above a reasonable estimate of the pre-tax WACC given the Company's capital structure, and the attendant commercial, financial and economic risk and trends of the Barbados economy.

Additionally, on reviewing the interest rates in Barbados since 2008 the Commission recognises that there has been a downward trend in loan rates in Barbados. This trend would also be applicable to the debt side of the WACC.

84. The Commission judged that based on the information available, 15% is a reasonable WACC for the Company.
85. The Commission is of the view that the Company's rate of return should be equal to the cost of capital. Therefore, the Commission determined that at this time a price control which results in the ROCE for the capped services of 15% in the final year of the price control period would be reasonable to meet the objectives of the price control. An X-Factor of 5.25% will achieve this.

#### **Total Factor Productivity Study**

85. The Company provided a study estimating the total factor productivity (TFP) over the period from 2000 to 2011 which was reviewed by the Commission. Total factor productivity can be defined as the growth of real output beyond what can be attributed to increases in the quantities of labour and capital employed. The study provided TFP estimates for both the Company as a whole and its regulated business only, based on the attribution of costs in the EAM.
86. The results of this study were used to inform the operational expenditure efficiency assumptions and a capital expenditure forecast used as input to the model.

## SECTION 4 - PRICE CAP ADMINISTRATION

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87. The revision of the price cap plan requires that there be some revisions to the Price Cap Compliance Rules to take into consideration the principles of PCP2012 as described in Section 2.

**88. The Price Cap Compliance Rules and Procedures 2012 will be issued in a separate document at a later date.**

# SCHEDULE 1 - LIST OF SERVICES

## Basket 1 - Competitive services

<u>Price Cap Service Name</u>	<u>Detailed Description</u>	<u>Rate Element</u>
Fixed outgoing international	Residential and Business Fixed Line International Direct Dial (IDD) Call Revenue	Day Evening Weekend
Fixed outgoing international	Inmarsat	Day Evening Weekend
Fixed outgoing international	IDD 1010335	Day Evening Weekend
Fixed outgoing international	International Direct Dial (IDD) Credit Card	Set-up 3 Minute Min. Add. Min.,Day Add. Min.,Evening Add. Min., Weekend
Fixed outgoing international	International Prepaid Card Payphone International-Standard Rates IDD Smart Choice Residence Discount IDD Talkaway discounts Call Centre IDD International 1-800 Corporate Choice PSTN International Station to Station & Person to Person	
International Private Leased Lines	International Private Leased Circuits	
Operator Assistance-Domestic Voice Calling	Operator Service	
Emergency-Domestic Voice Calling	Emergency Service	
Business internal voice network service	Comnet Band 1	
Business internal voice network service	Comnet Band 2	
Business internal voice network service	Comnet Band 3	
Business internal voice network service	Comnet Band 4	
Business internal voice network service	Line - Comnet Band 1 Stepping	
Business internal voice network service	Line - Comnet Band 2 Stepping	
Business internal voice network service	Line - Comnet Band 3 Stepping	
Business internal voice network service	Line - Comnet Band 4 Stepping	
Business internal voice network service	Centrex	
Business internal voice network service	Pabx Trunk Line via T1	
Business internal voice network service	Pabx Ext - Via T1	
Business internal voice network service	DID PABX Ext	
Business internal voice network service	Line - Key System Stepping via T1	
Business internal voice network service	Sub-Owned Trunk Lines	
Business internal voice network service	Pabx Trunk Line	
Business internal voice network service	Direct Inward Dialling Trunk (PBX)	
Business internal voice network service	Business Exchange Line Conn to Pabx	
Non-residential fixed-line access	Install Authorisation Code	
Fixed outgoing international	International Operator Assistance	

## Basket 2 – Non-competitive services

<u>Price Cap Service Name</u>	<u>Detailed Description</u>	<u>Rate Element</u>
Residential fixed-line access	Residence Exchange Line	MRC
Residential fixed line installation	Installation	NRC
Non-residential fixed-line access	Business Exch. Line	MRC
		NRC
Non-residential fixed-line access	Business Exch. Only	MRC
		NRC
Non-residential fixed-line access	Business Exch. Stepping	MRC
		NRC
Non-residential fixed-line access	DEL Line ( Direct Exchange Line )	MRC
		NRC
Non-residential fixed-line access	DEL Line ( Direct Exchange Line ) ( Business )	MRC
		NRC
Non-residential fixed-line access	Business Automatic Universal Line	MRC
		NRC
Non-residential fixed-line access	112 Emergency Lines	MRC
		NRC
Non-residential fixed-line access	Smart Ring Line Only-Business	MRC
		NRC
Non-residential fixed-line access	Smart Ring Line Only-Residence	MRC
		NRC
Non-residential fixed-line access	800 Service Line	MRC
		NRC
Non-residential fixed-line access	800 Service Pilot	MRC
		NRC
Non-residential fixed-line access	800 Service Stepping	MRC
		NRC
Non-residential fixed-line access	Charity Exchange Line	MRC
		NRC
Non-residential fixed-line access	Directory Number Hunt Exchange Line	MRC
		NRC
Non-residential fixed-line access	Direct Inward Dialing Channel via T1	MRC
		NRC
Non-residential fixed-line access	Voice Channel Stepping via T1	MRC
		NRC
Non-residential fixed-line access	Voice Channel via T1	MRC
		NRC
Non-residential fixed-line access	Line Residence Exchange (Installation)	NRC
Non-residential fixed-line access	Line Residence Stepping (Installation)	NRC
Non-residential fixed-line access	Public Pay Station (Sub-owned)	MRC
Non-residential fixed-line access	Business Extension	MRC
		NRC
Non-residential fixed-line access	Direct Exchange Line Company	MRC
Non-residential fixed-line access	Facsimile Line	MRC
		NRC
Non-residential fixed-line access	Facsimile Line Stepping	MRC
		NRC
Non-residential fixed-line access	Change Number Advisory (Business)	MRC
	Change Number Advisory (Business)	NRC
Non-residential fixed-line access	Change Number Advisory (Residence)	MRC
	Change Number Advisory (Residence)	NRC
Non-residential fixed-line access	Additional Directory Listing	MRC
Non-residential fixed-line access	Change of Address	MRC

<u>Price Cap Service Name</u>	<u>Detailed Description</u>	<u>Rate Element</u>
Non-residential fixed-line access	Unlisted Number	MRC
Non-residential fixed-line access	Fixed Call forwarding (Business)	MRC
		NRC
Non-residential fixed-line access	Fixed Call forwarding (Residence)	MRC
		NRC
Non-residential fixed-line access	Change Unlisted to Listed	NRC
Non-residential fixed-line access	Callback Service Overseas per Line	MRC
		NRC
Non-residential fixed-line access	Debar Overseas Calls per Line	MRC
Value Added Service	Cancel Call Waiting	NRC
Non-residential fixed-line access	Tracing Nuisance Calls	NRC
Non-residential fixed line installation	Other Telecoms -Reconnection	NRC
Non-residential fixed line installation	Temporary Disconnection	MRC
Domestic payphone	Coin Phone Calls	Per minute
Domestic payphone	Pay and Card Phones Calls	Per minute
Value Added Services	Micro Telemax ( Business )	MRC
		NRC
Value Added Services	Micro Telemax ( Residence )	MRC
		NRC
Value Added Services	Call Name, Number (Business )	MRC
		NRC
Value Added Services	Call Name, Number ( Residence )	MRC
		NRC
Value Added Services	Magic Touch Silver Max ( Business/Residence )	MRC
		NRC
Value Added Services	Magic Touch Platinum Max ( Business/Residence )	MRC
		NRC
Value Added Services	Magic Touch Gold Max ( Business/ Residence )	MRC
		NRC
Value Added Services	Anonymous Call Rejection ( Business )	MRC
		NRC
Value Added Services	Anonymous Call Rejection (Residence)	MRC
		NRC
Value Added Services	Distinctive Ring Call Waiting (Business)	MRC
		NRC
Value Added Services	Distinctive Ring Call Waiting ( Residential )	MRC
		NRC
Value Added Services	Selective Call Acceptance (Business)	MRC
Value added services		NRC
Value Added Services	Selective Call Acceptance (Residence)	MRC
		NRC
Value Added Services	Selective Call Rejection (Business)	MRC
		NRC

<u>Price Cap Service Name</u>	<u>Detailed Description</u>	<u>Rate Element</u>
Value Added Services	Selective Call Rejection (Residence)	MRC
		NRC
Value Added Services	Auto Busy Call Back ( Business )	MRC
Value Added Services	Auto Busy Call Back ( Residence )	MRC
		NRC
Value Added Services	Auto Recall ( Business )	MRC
		NRC
Value Added Services	Auto Recall ( Residence )	MRC
		NRC
Value Added Services	Selective Call Forwarding ( Business )	MRC
		NRC
Value Added Services	Selective Call Forwarding ( Residential )	MRC
		NRC
Value Added Services	Vanity Name ( Business )	MRC
		NRC
Value Added Services	Vanity Name ( Residential )	MRC
		NRC
Value Added Services	Call Wait,Forward,3way,Speed,3Smart Ring	MRC
		NRC
Value Added Services	Call Wait,Forward,3way,Speed,2Smart Ring	MRC
		NRC
Value Added Services	Call Wait,Forward,3way,Speed,1Smart Ring	MRC
		NRC
Value Added Services	Call Wait, Forward, 3-Way, 3 Smart Ring	MRC
		NRC
Value Added Services	Call Wait, Forward, 3-Way, 2 smart Ring	MRC
		NRC
Value Added Services	Call Wait, Speed Call, 1 Smart Ring	MRC
		NRC
Value Added Services	Call Wait, Forward, 3 Smart Ring	MRC
		NRC
Value Added Services	Call Wait, Forward, 2 Smart Ring	MRC
		NRC
Value Added Services	Call Wait, Forward 1 smart Ring	MRC
		NRC
Value Added Services	Call Wait, 3-Way, 3 Smart Ring	MRC
		NRC
Value Added Services	Call Wait, 3-Way, 2 Smart Ring	MRC
		NRC
Value Added Services	Call Wait, 3-Way, 1 Smart Ring	MRC
		NRC
Value Added Services	Call Forward, 1 Smart Ring	MRC
		NRC
Value Added Services	3-Way Calling, 1 Smart Ring	MRC
		NRC

<u>Price Cap Service Name</u>	<u>Detailed Description</u>	<u>Rate Element</u>
Value Added Services	Call Wait, 3 Smart Ring	MRC
		NRC
Value Added Services	Call Wait, 2 Smart Ring	MRC
Value Added Services	Call Wait, 1 Smart Ring	MRC
		NRC
Value Added Services	Smart Ring 3	MRC
		NRC
Value Added Services	Smart Ring 2	MRC
		NRC
Value Added Services	Smart Ring	MRC
		NRC
Value Added Services	Call Wait, Forward, 3-Way, Speed Call	MRC
		NRC
Value Added Services	Call Wait, Call Forwarding	MRC
		NRC
Value Added Services	Call Wait, Speed Calling	MRC
		NRC
Value Added Services	Speed Call, 2 Smart Ring	MRC
		NRC
Value Added Services	Speed Call	MRC
		NRC
Value Added Services	3-Way Calling	MRC
		NRC
Value Added Services	Call Forward	MRC
		NRC
Value Added Services	Call Waiting	MRC
		NRC
Value Added Services	Speed Call, 2 Smart Ring	MRC
		NRC
Value Added Services	Call Wait, 3-Way Calling	MRC
		NRC
		NRC
Value Added Services	SmartChoice Plan A	MRC
		NRC
Value Added Services	SmartChoice Plan B	MRC
		NRC
Value Added Services	SmartChoice Plan C	MRC

<u>Price Cap Service Name</u>	<u>Detailed Description</u>
Voicemail	Customer Mail Box
Voicemail	Voice Mail, Call Forward Don't Answer (CFDA), With Number
Voicemail	Voicemail Express Message (Residence)
Voicemail	Voicemail Access Directory Number
Voicemail	Voice Call Forward Busy
Voicemail	Voice Menu
Voicemail	Voice Announcement
Voicemail	Voice Call Forwarding Don't Answer
Domestic private leased circuits	National Leased Circuit (DPLC)
Domestic private leased circuits	All Private Wire
Non-residential and residential fixed line installation	PBX/Key Systems Line Installation

The Price Cap Plan 2012 shall take effect from the 1<sup>st</sup>. day of April 2012.

Dated this 28<sup>th</sup> day of March 2012

*Original signed by*

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Neville V. Nicholls  
Chairman

*Original signed by*

\_\_\_\_\_  
Andrew Downes  
Deputy Chairman

*Original signed by*

\_\_\_\_\_  
Trevor T. Welch  
Commissioner

*Original signed by*

\_\_\_\_\_  
Gregory Hazzard  
Commissioner