



Opening New Spectrum Bands

Consultation Document

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1. Introduction

- 1.1 The Utilities Regulation and Competition Authority (URCA) publishes this public consultation document to solicit views on the proposed opening of new spectrum bands and to invite expressions of interest for frequency assignments from interested parties. The spectrum bands under consideration in this consultation are those where there are no existing frequency assignments.
- 1.2 URCA recognizes the rapid evolution of technologies, the convergence of electronic communications services and the demand that this places on making new spectrum bands available for such services. In keeping with the principle of technology neutrality, URCA will not mandate any specific technology to be adopted for the provision of services with the use of any of the frequency blocks it proposes to open consequential to this consultation. So long as the technology to be used by operators conforms to recognised open standards and is compatible with URCA's National Radio Spectrum Plan¹ and any frequency band plan as published by URCA from time to time. URCA therefore wishes to implement regulatory measures that will promote the policy objectives of the Communications Act, 2009 (Comms Act), particularly the optimal use of radio spectrum.
- 1.3 This consultation document also proposes general procedural guidelines to be followed by URCA when determining to open new spectrum bands and for the issuance of frequencies in such bands. The guidelines endeavour to streamline and expedite the process for the opening of new spectrum bands in response to industry demands.
- 1.4 URCA believes that matters related to spectrum as a whole can be complex and may have a significant impact on the sector. For example, issues related to the assignment of spectrum

¹ ECS 06/2010 published 12 March 2010 (which may be amended from time to time)

frequencies on a national versus a per island basis and the equitable pricing of spectrum consequential to such allocation must be balanced. Also, of importance is the vacation of spectrum with or without compensation in accordance with the Comms Act. As such, this consultation is the first of several spectrum related consultations to be conducted by URCA.

1.5 URCA intends to feed comments and submissions to this and subsequent spectrum related consultation documents into URCA's forthcoming review of the existing spectrum fee table as contained in its Fee Schedule². The review will, *inter alia*, seek to address any anomalies in pricing across bands as well as address national, territorial and local use of spectrum and the fees associated with such uses. Once the review has been completed, a Revised Fee Schedule will be published.

1.6 URCA therefore encourages full participation by members of the public, licensees and other interested parties in this consultation process before it issues regulatory and other measures of public significance.

1.7 URCA invites written comments and submissions from members of the public, licensees and other interested parties on this consultation document.

1.8 Written comments or submissions on this public consultation may be sent to the Chief Executive Officer, either:

- a. by hand, to the office of the Utilities Regulation and Competition Authority (URCA) situated at the UBS Annex Building, East Bay Street, Nassau; or
- b. by mail, to URCA at P.O. Box N – 4860, Nassau, Bahamas; or
- c. by fax, to (242) 393-0153; or
- d. by email, to info@urcabahamas.bs.

² ECS 06/2010 Revised 24 March 2010

- 1.9 The deadline for receiving comments and submissions is 5:00 PM on 1 November, 2010.
- 1.10 In the interest of transparency, after the consultation closes, all responses will be published on the URCA website, with the exception of any responses that are clearly marked (in full or part) as being private and confidential. Explanations should be provided to justify any information that is submitted on a private and confidential basis. URCA will publish all comments or submissions at its sole discretion.
- 1.11 Unless comments and submissions are of a general nature, they should clearly refer to the related question number or to the particular section of the document.
- 1.12 URCA will carefully consider all comments and submissions received by 1 November, 2010 in determining the approach to the issues raised in this consultation document. URCA will review all responses and issue a Statement of Results and its Final Decision.
- 1.13 URCA will keep the public informed by announcements in the electronic and print media of all key events relevant to this consultation process.

2. Background

- 2.1 Part V of the Comms Act requires URCA to ensure that radio spectrum is managed in a manner that is open, objective, transparent and non-discriminatory. URCA is also required to ensure that spectrum is used in a manner that is economically efficient and facilitates the evolution of new technologies and electronic communications services whilst taking into account investment in existing equipment configured for specific radio spectrum and the cost of migration to other radio spectrum.
- 2.2 Under the legacy regulatory framework and licensing regime, the regulator issued service specific spectrum licences in line with existing technology. While these licences were

transitioned in accordance with the new licensing regime under the Comms Act, they were essentially without change to technical specifications and the allocation of services. As such, URCA has not opened any new spectrum bands under the current regulatory and licensing regime.

2.3 The general services allocated to spectrum by the legacy regulator that exist under the new licensing regime are:

- (i) amateur operator licences;
- (ii) Government (i.e. military and other uniformed services; emergency services; navigation; marine and aeronautical services);
- (iii) public and private land based services;
- (iv) public and private trunk radio services;
- (v) paging services;
- (vi) broadband wireless access services;
- (vii) fixed radiocommunications services;
- (viii) microwave point to point backhaul services;
- (ix) AM and FM radio broadcast services;
- (x) television broadcast services;
- (xi) cellular mobile services;
- (xii) satellite communications services; and
- (xiii) navigational services for marine and aeronautical industries (radio location/radio navigation).

2.4 The new regulatory regime envisages full liberalisation of the electronic communications sector. Global trends have shown an exponential growth in industry demand for spectrum to provide mobile, fixed, multi-media, wireless high-speed internet, video services, high-speed mobile data and entertainment. URCA expects that the trend towards high-speed connections will also

generate customer expectations, with customers demanding faster data rates for mobile and portable data applications. The spectrum bands under consideration for opening by URCA in this consultation seek to facilitate both demand levels.

2.5 URCA has published its National Spectrum Plan that specifies which frequency bands are premium and standard. The premium spectrum bands as specified in the plan are:

- (i) 850 MHz Band;
- (ii) 1700 MHz Band;
- (iii) 1900 MHz Band;
- (iv) 2100 MHz Band; and
- (v) 2300 MHz Band.

All other spectrum bands in the National Spectrum Plan are standard spectrum³. Not all of these spectrum bands are opened and this consultation therefore addresses opening new spectrum bands exclusively specified as standard spectrum.

3. Procedural guidelines to opening new spectrum bands

3.1 This section of the consultation document addresses the procedural aspects of opening new spectrum bands and provides URCA's thinking on how new spectrum bands may be opened in a manner that is fair, transparent and non-discriminatory. URCA proposes that: (i) It outlines the factors to be used by URCA (on its own volition or consequential to a specific request by an operator) to determine **whether or when** to open a spectrum band and; (ii) if a decision is made to open a new spectrum band, **how** this should be done. These two sequential steps are discussed next.

³ Additional details on spectrum allocation may be found in the National Spectrum Plan: ECS 06/2010 on URCA's website at www.urcabahamas.bs

3.1 Whether and When to Open New Spectrum Bands

3.2 Where the procedure for opening new spectrum bands has been initiated by URCA on its own volition, it proposes to give consideration to the following factors:

- (i) Exhausted capacity in spectrum bands already opened. Where the capacity in an existing band for a particular service or type of service has been exhausted, URCA proposes to take the necessary proactive measures to consult on opening a new spectrum band;
- (ii) Increased competition in the sector. Where there is significant growth in the sector, consequential to competition, for the provision of services requiring new spectrum, URCA proposes to consult on opening a new spectrum band;
- (iii) Consumer demand. URCA may receive an overwhelming interest from the public for services that can be provided more effectively and efficiently by a spectrum band that is not opened to the sector. When this happens, URCA proposes to conduct the necessary market research before consulting to open the new spectrum band;
- (iv) Sector observation by URCA. URCA will closely monitor the electronic communications sector to determine global, regional and local trends. URCA will also monitor the development of innovative technologies that operate in spectrum bands that have not yet been opened. Where URCA anticipates demand for a new spectrum band by the industry or new technologies, it proposes to consult on the opening of such spectrum band; and

3.3 Where the procedure for opening new spectrum bands has been initiated by a specific request from a licensee (or potential licensee), URCA proposes that in addition to factors cited in section 3.2, it will give due consideration to the following factors:

- (i) Reasonable demand from the industry. URCA will gauge industry demands and proposes to respond appropriately by consulting before opening a new spectrum band;
- (ii) Estimating Spectrum demand. URCA acknowledges that it may not always have sufficient information to know the demand in the sector to open a specific spectrum band for an allocated service. There have been instances where URCA received inquiries from the industry and the sector to open a new spectrum band for a specific wireless service. These queries were sometimes vague and often there was a reluctance by operators to indicate the extent of the interest, technical details and proposed timelines that were being considered. In these instances, URCA proposes to estimate spectrum demand by seeking expressions of interest from the sector and then conducting a consultation to open a new spectrum band;
- (iii) Optimum Bandwidth and Spectrum Efficiency. Operators have in the past made requests and inquiries for URCA to award them the entire capacity of an un-opened spectrum band. URCA notes that other jurisdictions awarded multiple licences in the same band, for similar service offerings. These licensed operators were able to provide quality services, using the smaller bandwidths to serve more densely populated areas than The Bahamas. Since spectrum bands are generally configured such that multiple licences may be awarded in a band, URCA proposes not to award an entire spectrum band to a single operator as it has a statutory obligation to manage the spectrum efficiently and to establish a transparent process for the award of all licences in a proportionate and non-discriminatory manner. URCA recognizes that the rules for spectrum management and frequency assignment are different for point-to-point and

point-to-multipoint applications, particularly with respect to frequency use and frequency re-use within a territory or nationally. Special considerations for the use and reuse of frequencies may have to be allowed for back-haul and last mile broadband solutions. URCA therefore will seek to award an optimum amount of spectrum to each licensee to provide the allocated services.

- (iv) URCA has an obligation to encourage competition in the sector, therefore it is concerned that all parties in the sector should have an equal opportunity in obtaining spectrum to offer similar or identical services. The opportunity may be lost if a single operator is able to obtain all of the capacity in a spectrum band. This becomes particularly important for Individual Spectrum Licences since an operator would have exclusive use of frequencies in a specified territory.

Spectrum is a scarce resource with limited capacity, so there is a challenge of awarding an operator his desired amount of spectrum bandwidth, while still being able to accommodate other interested applicants.

- 3.4 Additionally, where the opening of a new spectrum band is initiated through a specific request by an operator, URCA proposes to require the operator to provide the following information. Operators must take all reasonable care to ensure that the information provided to URCA in this regard is not misleading or inaccurate.

3.2 Information that must be provided

- (i) Identify the spectrum band;
- (ii) Define the frequency range of the band;
- (iii) Describe the services proposed to be offered in the band
- (iv) Propose an optimum spectrum bandwidth for use;

- (v) Provide an overview of plans for the use and re-use of frequencies to achieve maximum spectrum efficiency; and
- (vi) Provide a general service deployment schedule and indication of proposed service areas.

3.3 Additional information that may be provided

- (i) Propose a band plan that could be used
- (ii) discuss why URCA should consider opening the spectrum band for the allocated services, in addition to bands already opened for such services;
- (iii) discuss technical specifications including: antenna height, radiated power, harmful interference management, desired bandwidth, system capacity and technical specifications peculiar to the band;
- (iv) discuss any restrictions, technical or otherwise, that should be considered;
- (v) provide any additional information that would assist URCA in evaluating whether the new band should be opened; and
- (vi) other relevant information including issues related to territorial and national use of the band.

Question #1

Do you agree with URCA's proposal of factors to consider when it initiates the process to open new spectrum bands upon its own volition? If not, please provide additional or other factors that should be considered.

Question #2

Do you agree that URCA should also consider specific demands from the industry? If not, please indicate what should stimulate URCA to consider initiating the process to open new spectrum bands.

Question #3

Do you agree with URCA's proposal that licensees should only be awarded an optimum amount of spectrum licences for services to be provided in a territory? If you disagree, please provide a framework for URCA to consider when determining the optimum amount of spectrum bandwidth to award each potential licensee.

Question #4

Do you agree that URCA should not award the entire capacity of a spectrum band to a single operator unless the applicant could prove an exception to best practices? If not, please provide details to guide URCA in considering the award of an entire band to a single operator to the exclusion of others.

Question #5

Do you agree with URCA's proposal on the information to be provided when requesting a new spectrum band to be opened? If not, please provide amendments or a new proposal for consideration.

3.4 How to Open New Spectrum Bands

3.5 The following processes describes how new spectrum bands will be configured, opened and how spectrum licences will be awarded:

- (i) URCA proposes to define the spectrum band to be opened, specifying the upper and lower frequencies;
- (ii) URCA proposes to establish a band plan for each new spectrum band to be opened by using its own calculations along with benchmark data. Consideration will be given to factors peculiar to The Bahamas and recommendations from the industry. Industry and technological trends will also be observed. Cumulatively, this should help to determine the amount and type of spectrum licences that may be awarded per territory or nationally;
- (iii) URCA proposes to consult the public and invite **Expressions of Interest** from the industry for a new spectrum band, based on a corresponding band plan. Expressions of Interest will generally be used by URCA to gauge the level of interest by the sector in a radio spectrum band URCA proposes to open. Before making a decision on the opening a new spectrum band, URCA will carefully consider the Expressions of Interest received and submissions to consultations;
- (iv) URCA proposes to give the sector thirty (30) calendar days in accordance with the Comms Act to respond with comments and/or Expressions of Interest for spectrum bands under the proposed band plan;
- (v) URCA will consider all responses received and proposes to revise its band plan where necessary or expedient, in the interest of satisfying industry demand. When the band plan is revised, a new call for Expressions of Interest would be issued for a period not exceeding thirty (30) calendar days;

- (vi) Following this second round, URCA proposes to accept the Expressions of Interest for further consideration in order to make its final decision regarding the band plan.
- (vii) Subject to point (viii) below, URCA proposes to reserve the right to close the process without awarding any spectrum band;
- (viii) In circumstances where industry demand exceeds the capacity of the band, URCA proposes to stop the process and initiate a competitive method to award the spectrum band. Alternatively, URCA may propose to re-classify the spectrum band as premium spectrum so that the Minister with responsibility for the Electronic Communications Sector may decide the method of allocating such spectrum (which may be a competitive spectrum allocation process).
- (ix) If the Expressions of Interest yields a result that is equal to or less than the capacity of the new spectrum band, URCA proposes to invite applications from Respondents to the invitation for Expressions of Interest for the issuance of new spectrum bands;
- (x) URCA proposes to extend this Call for Application exclusively to the Respondents to the invitation for Expressions of Interest for a period not exceeding three (3) months. At the expiration of this three (3) month period, URCA proposes to accept spectrum licence applications from the sector on a first-come-first-served basis;
- (xi) Where no applications for spectrum licences are received, URCA proposes to reserve the right to close the band and monitor industry and technology trends for future stimulus to restart the process.

Question #6

Do you agree with URCA's proposal on guidelines on how to configure and open a new spectrum band and award licences? If not, please provide amendments or a new proposal for consideration.

4. New spectrum bands to be opened

4.1 There are frequency blocks throughout the spectrum range that are currently opened with frequency assignments; and others that have not been opened for frequency assignments. The capacity in bands already opened may not be able to satisfy demand because of limited spare capacity. New technologies may have also been designed for operation in spectrum bands that have not yet been opened.

4.2 New spectrum bands would therefore have to be opened for the new wireless services to be deployed. The following spectrum bands are now under consideration by URCA for opening:

- (i) 700 MHz;
- (ii) 11GHz;
- (iii) 12GHz; and
- (iv) 40GHz.

4.3 URCA has received inquiries with detailed information to open the 700 MHz band for point to multi-point broadband fixed services in specific territories and for national use.

4.4 Inquiries have also been received to open the 11 GHz band to establish point to point back haul networks in specific territories. Interest has also been expressed in opening other bands in the

12 GHz and 40 GHz ranges for point to multi-point broadband services and Multichannel Video and Data Distribution Services (MVDDS) that is used in the USA for television and internet services. No detailed information was received proposing a band plan for the use of this spectrum.

4.1 700 MHz SPECTRUM BAND

4.5 URCA has received inquiries to open the 700 MHz band for various services including fixed broadband services. As such, this band is presented for comments with regard to the defined frequency range, the band plan and the allocation to services according to the National Spectrum Plan.

4.2 700 MHz Spectrum Band in other Countries

4.6 The 700 MHz band has been defined in the USA as that band between the frequency ranges to 698 MHz to 806 MHz. This band has attracted significant interest in the USA with several auctions, in 2002, 2003 and 2008.

4.7 The FCC made a band plan for the 700 MHz band, dividing the spectrum into an upper and lower band. This is the spectrum that was previously allocated to the television channels 52 to 59 (now the lower 700 MHz band) and channels 60 to 69 (now the upper 700 MHz band). The FCC's recent transition to HDTV released the TV spectrum for the 700 MHz reconfiguration.

4.8 Other countries have also opened the 700 MHz band for various services, including: Canada, the ECTEL Member States, and the United Kingdom. Canada and the ECTEL Member States have band plans harmonized with the USA.

4.3 PROPOSAL FOR THE 700 MHZ SPECTRUM BAND IN THE BAHAMAS

4.9 URCA proposes the following band plan for The Bahamas. The 700 MHz spectrum would be defined as the 698 to 806 MHz frequency range, which is the spectrum that was allocated to the USA television channels 52 through 69.

4.10 It is proposed that the band plan for The Bahamas would be harmonized with the FCC's band plan for the added benefits to be realized by harmonizing the band plan in The Bahamas with the FCC's band plan. This translates into benefits to the end-user by capital expenditure savings through economies of scale pricing realized in the North American market and speed-to-market for end-user products, again because of the size of the North American market. Harmonization of band plan with this large market results in lower prices to end users in The Bahamas.

4.11 URCA proposes that the 700 MHz band would be divided into a Lower Band and an Upper Band as follows:

- Lower Band: 698 to 746 MHz
- Upper Band: 746 to 806 MHz

4.12 URCA further proposes that until further notice, the bands will maintain the 6 MHz RF channel structure as for the TV channel configuration used in the USA. This structure is in keeping with the structure of the North American 700 MHz spectrum band plan.

4.13 URCA further proposes that one or more 6 MHz RF channels in the lower band be split into 1 MHz, 1.5 MHz and/or 2 MHz sub-blocks for the award of spectrum licences with smaller bandwidths to operators.

- 4.14 URCA estimates that the 700 MHz Lower Band offers sufficient capacity to satisfy existing demand while providing a proportionate opportunity for all potential applicants to obtain adequate bandwidth. The Lower Band can accommodate a maximum of 12 licences in each territory. URCA would be able to accommodate new operators needing larger bandwidths in other spectrum bands that are already opened.
- 4.15 URCA proposes to reserve the 700 MHz upper band for future use.
- 4.16 Until such time as URCA conducts a full review of its fee table for spectrum as contained in its Fee Schedule, interim pricing for spectrum bands in the 700 MHz band will be published and used to price this band. URCA proposes to adopt benchmarking as the methodology for the interim pricing.

Question #7

Do you agree with URCA's proposal to split the 700 MHz band into a Lower band and an Upper band as discussed? If not, please state reasons why the band should not be divided and offer other suggestions to structure the spectrum band.

Question #8

Do you agree with URCA's proposal that the 700 MHz Upper Band should be reserved for future use? If not, please give reasons, providing details for the band to be used otherwise at this time.

Question #9

Do you agree with the proposal to maintain a 6 MHz RF channel structure in the 700 MHz spectrum Band? Do you further agree with the proposal to split one or more of the 6 MHz blocks into smaller sub-blocks to offers licences with smaller bandwidths? If not, please propose another structure for consideration.

Question #10

Do you agree with URCA’s proposed interim pricing for the 700 MHz band? If not, please state reasons why and offer other suggestions.

5. Expressions of Interest for the 700 MHz lower band

5.1 URCA specifically invites Expressions of Interest in the 700 MHz Lower Band according to the band plan found in the table below.

Block	TV Channels	Frequencies (MHz)	Bandwidth	Pairing
A	52, 56	698 – 704, 722 – 728	12 MHz	2 x 6 MHz
B	53, 57	704 – 710, 728 – 734	12 MHz	2 x 6 MHz
C	54	710 – 716	6 MHz	No pairing
D	55	716 – 722	6 MHz	No pairing
E	58	734 – 740	6 MHz	No pairing
F	59	740 – 746	6 MHz	No pairing

5.2 This invitation does not represent any opinion or decision by URCA on the issues discussed in this consultation. Information collected through this invitation will be used by URCA in its analysis and only the responses in aggregate may be published. Any respondent submitting an Expression of Interest should clearly identify any commercially sensitive information so that URCA will take reasonable care when presenting the aggregate information contained in any future publication.

5.3 This invitation shall not bind URCA to allocate or assign any spectrum or to grant any spectrum licence.

5.4 Respondents are invited to provide sufficient details for URCA to evaluate their suitability for the award of spectrum in the desired bands. If demand exceeds the capacity of the band, URCA would make its selection based on information provided.

5.5 The following non-exhaustive list of criteria will guide URCA in coming to its decision:

- (a) the frequency blocks(s) preferred;
- (b) the service(s) to be provided with each of the preferred frequency blocks;
- (c) the service deployment schedule with each of the preferred blocks;
- (d) whether deployment will be nationally, to multiple territories or a single territory; and
- (e) the technical and financial capacity to deploy the service(s).

5.6 URCA welcomes alternative proposals for the use of the 700 MHz Lower Spectrum Band and to the proposed band plan.

Expression of Interest #1

URCA invites Expressions of Interest from the industry on the use of the 700 MHz spectrum band for broadband fixed services.

6. Proposal to open the 11, 12 & 40 GHz bands

- 6.1 URCA has received general inquiries to open the 11 GHz spectrum band for backhaul services. This band is typically defined to be in the frequency range of 10.7 to 11.7 GHz.
- 6.2 URCA invites the sector to submit proposals in accordance with the guidelines set out in section 3.
- 6.3 Until such time as URCA conducts a full review of its fee table for spectrum as contained in its Fee Schedule, interim pricing for spectrum bands in the 11 GHz band will be published and used to price this band. URCA may adopt benchmarking as the methodology for the interim pricing.

7. Proposals to open other new spectrum bands

- 7.1 URCA has received inquiries to open other spectrum bands including the 12 and 40 GHz bands for various services. No specific or detailed information was received from the sector for these specific bands and URCA is unable to gauge the extent of the interest in the new bands. Proposals are therefore invited according to the guidelines set out in section 3 to open these bands as new spectrum bands for services in compliance with the National Spectrum Plan.
- 7.2 Comments and proposals are also invited from the sector for other new spectrum bands to be opened. These proposals may be submitted for the use of spectrum in selected territories or for national use. Respondents are requested to follow the guidelines set in the section 3 as the interim guidelines to be used until this consultation process is completed.

Proposals to open new spectrum bands

URCA invites the industry and the sector to offer proposals to open the 11 GHz spectrum band for backhaul services.

URCA invites the industry and the sector to offer proposals to open the 12 GHz spectrum band for various services in accordance with the National Spectrum Plan.

URCA invites the industry and the sector to offer proposals to open the 40 GHz spectrum band for various services in accordance with the National Spectrum Plan.

URCA invites the industry and the sector to offer proposals to open any other new spectrum band for services in accordance with the National Spectrum Plan.

Proposals are to be submitted according to the guidelines set out in section 3.

8. Summary of questions

Question #1

Do you agree with URCA's proposal of factors to consider when it initiates the process to open new spectrum bands upon its own volition? If not, please provide additional or other factors that should be considered.

Question #2

Do you agree that URCA should also consider specific demands from the industry? If not, please indicate what should stimulate URCA to consider initiating the process to open new spectrum bands.

Question #3

Do you agree with URCA's proposal that licensees should only be awarded an optimum amount of spectrum licences for services to be provided in a territory? If you disagree, please provide a framework for URCA to consider when determining the optimum amount of spectrum bandwidth to award each potential licensee.

Question #4

Do you agree that URCA should not award the entire capacity of a spectrum band to a single operator unless the applicant could prove an exception to best practices?

If not, please provide details to guide URCA in considering the award of an entire band to a single operator to the exclusion of others.

Question #5

Do you agree with URCA's proposal on the information to be provided when requesting a new spectrum band to be opened? If not, please provide amendments or a new proposal for consideration.

Question #6

Do you agree with URCA's proposal on guidelines on how to configure and open a new spectrum band and award licences? If not, please provide amendments or a new proposal for consideration.

Question #7

Do you agree with URCA's proposal to split the 700 MHz band into a Lower band and an Upper band as discussed? If not, please state reasons why the band should not be divided and offer other suggestions to structure the spectrum band.

Question #8

Do you agree with URCA's proposal that the 700 MHz Upper Band should be reserved for future use? If not, please give reasons, providing details for the band to be used otherwise at this time.

Question #9

Do you agree with the proposal to maintain a 6 MHz RF channel structure in the 700 MHz spectrum Band? Do you further agree with the proposal to split one or more of the 6 MHz blocks into smaller sub-blocks to offers licences with smaller bandwidths? If not, please propose another structure for consideration.

Question #10

Do you agree with URCA's proposed interim pricing for the 700 MHz band? If not, please state reasons why and offer other suggestions.

9. Summary of invitation for Proposals to Open new Bands & Expressions of Interest

Expression of Interest #1

URCA invites Expressions of Interest from the industry on the use of the 700 MHz spectrum band for broadband fixed services.

Proposals to open new spectrum bands

URCA invites the industry and the sector to offer proposals to open the 11 GHz spectrum band for back haul services.

URCA invites the industry and the sector to offer proposals to open the 12 GHz spectrum band for various services in accordance with the National Spectrum Plan.

URCA invites the industry and the sector to offer proposals to open the 40 GHz spectrum band for various services in accordance with the National Spectrum Plan.

URCA invites the industry and the sector to offer proposals to open any other new spectrum band for services in accordance with the National Spectrum Plan.

Proposals are to be submitted according to the guidelines set out in section 3.