



Guidelines for the Opening of New Radio Spectrum Bands

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1. Introduction

1.1 Background and Purpose

This document sets out the processes and procedures to be applied by URCA when opening new spectrum bands to the market. With these guidelines URCA aims to increase transparency in the market by providing all stakeholders with a clear view of the overall process and steps URCA will follow.

The spectrum bands addressed in this document are the standard spectrum bands, as specified in the National Radio Spectrum Plan for The Bahamas (ECS 06/2010), which may be found on URCA's website¹. The Minister with responsibility for the Electronic Communications Sector is primarily responsible for opening premium spectrum bands.

1.2 URCA's Approach to Spectrum Opening

In order to further the objectives of the Communications Act (Comms Act), URCA intends to develop and follow a strategic approach to the opening of certain bands which are of particular value to the development of electronic communications services offered to the public in The Bahamas. To that end, URCA proposes to formulate a Spectrum Opening Plan which will:

- i. Seek to offer a level of certainty and predictability (regarding spectrum availability) to persons wishing to offer electronic communications services to the public using spectrum, by providing a road map for the medium term as to how and when URCA will, on its own initiative, seek expressions of interest for spectrum in given bands, focusing in particular on those bands which can be used to provide wireless access services;
- ii. Seek to ensure that the bands are opened in a manner which will ensure optimal development of electronic communications services;
- iii. Where necessary, address any spectrum re-farming that may be required within the identified bands;
- iv. Propose any additional conditions to be placed on specific bands, where appropriate; and

¹ See www.urbahamas.bs

- v. Afford interested persons an opportunity to comment on URCA’s proposals.

URCA will publish on its website a schedule indicating the status of all spectrum bands (including whether each band is open and the available capacity in each band) and the Schedule will be revised periodically (at least every six (6) months).

URCA acknowledges that the current pricing regime for spectrum in The Bahamas may not encourage efficient use of the country’s spectrum, particularly having regard to the geographical features of The Bahamas. For this reason, URCA has started a process to review and revise the current spectrum fees to ensure that the fees are fit for purpose. URCA will publish and invite comments on its proposed Spectrum Pricing Methodology and revised Spectrum Fee Schedule alongside the publication of the first Spectrum Opening Plan.

Together, the procedural guidelines in the Guidelines for the Opening of New Radio Spectrum Bands, the Spectrum Opening Plan, the Spectrum Pricing Methodology and the Spectrum Fee Schedule, are intended to provide a clear, objective, and transparent framework within which stakeholders can plan their spectrum related activities. Therefore, whilst the Guidelines for Opening New Radio Spectrum Bands describe the procedures URCA will follow to allocate standard spectrum, and are being published now to provide greater clarity to the industry on URCA’s proposed approach, stakeholders should not expect URCA to commence the process for allocating wireless access spectrum prior to the completion and publication of its Spectrum Opening Plan.

1.3 Legislative Framework

URCA is required to implement various statutory objectives, which are set out in section 4 of the the Comms Act and the Electronic Communications Sector Policy (ECS Policy), relating to the development of the sector to the benefit of persons in The Bahamas. It is URCA’s responsibility to ensure that spectrum resources are applied toward furthering the objectives of the Comms Act and the ECS Policy.

In particular, Part V of the Comms Act, which deals with Radio Spectrum Management, sets out the following specific principles to which URCA must have regard:

Section 31 sets out the requirement and principles under which URCA shall publish and maintain a spectrum plan, which must be approved by the Minister².

Section 32 provides as follows:

“32. Objectives of radio spectrum management.

² National Radio Spectrum Plan for The Bahamas (ECS 06/2010)

(1) *In performing functions and duties and exercising powers under this Part, the Minister and URCA must ensure that radio spectrum is managed and used in a manner that -*

(a) is open, objective, transparent and non-discriminatory;

(b) is economically efficient and facilitates the evolution of new technologies and electronics communications services whilst taking into account in particular investment in existing equipment configured for specific radio spectrum and the cost of migration to other radio spectrum; ...”

Finally, section 34(2) provides that URCA *“shall conduct public enquiries and consult with electronic communications service providers and network operators in The Bahamas about the use and management of radio spectrum”*.

1.4 Structure of this Document

The remainder of this document is as follows:

- Section 2 describes the general principles URCA will follow when opening new spectrum bands; and
- Section 3 describes the overall process for opening up new spectrum bands.

Finally, the annexes to these guidelines give an overview of the information to be submitted in an Expression of Interest (Eoi).

2. Principles

2.1 Overarching Principles

URCA is mindful that spectrum is a finite national resource. It is an essential input for many electronic communications services that may be provided in The Bahamas. The process by which spectrum is awarded can therefore have a major impact on the effectiveness of the electronic communications sector and its ability to deliver benefits to Bahamian consumers. One of URCA's responsibilities is to encourage sustainable competition. This duty has an important implication for how spectrum is awarded, recognizing that competitive markets will drive long term benefits for consumers and the Bahamian economy.

With this in mind, URCA will be guided by the following overarching principles when opening new spectrum bands and awarding spectrum licences:

- URCA will adopt a fair, transparent, non-discriminatory and proportionate approach to the opening of new spectrum bands and the process for awarding spectrum;
- Spectrum is a finite national resource and URCA will seek to encourage its economically efficient use, facilitating the evolution and introduction in The Bahamas of new technologies and electronic communications services;
- URCA will implement a technology neutral approach when opening new bands and awarding spectrum, in that URCA will not dictate the technology choice of licensees. However, where URCA undertakes a competitive process for the award of spectrum, URCA may consider the efficiency of the proposed technology as a factor in determining the final award of spectrum. As indicated below, URCA will also consider available technologies when determining the optimal amount of spectrum to be awarded;
- URCA will seek to encourage use of spectrum in a manner which facilitates the achievement of the ECS Policy Objectives.

2.2 Specific Guidelines

In furtherance of the overarching principles identified above, and in accordance with the provisions of the Comms Act, URCA will adopt the following approach in relation to the opening of new spectrum bands.

It should be noted that the principles outlined below are not solely addressed in this document, but will also guide other documents produced by URCA that relate to spectrum management.

Fairness, Transparency and Non-Discrimination

URCA will adopt processes and policies which ensure that all persons have an equal opportunity to participate in those processes and to obtain spectrum.

URCA also considers it important to ensure that there is a reasonable level of information and certainty within the electronic communications sector regarding the availability or likely availability of spectrum for licensing. URCA will therefore ensure its intentions regarding spectrum opening are sufficiently publicised, and that there is sufficient time for planning processes within the processes related to opening new spectrum bands.

Amount of Spectrum to be Awarded

URCA considers that an essential factor in ensuring efficient usage of spectrum by stakeholders is that it must avoid instances in which spectrum awarded to a licensee remains unutilised or underutilised for an unreasonable period of time. URCA also considers that it should take steps to ensure that licensees seek to use spectrum as efficiently as possible. URCA has powers under the Comms Act to recover (vacate) spectrum in specific circumstances, however URCA considers it important that it seeks to grant only that amount of spectrum which can be justified in the context of the purpose for which the licensee will use the spectrum. Accordingly, URCA will, when opening new spectrum bands, seek to award only the amount which URCA is satisfied is “optimal”, having regard to the relevant circumstances surrounding the award.

Determination of the optimal amount of spectrum to be awarded in a particular band will require an assessment and balancing by URCA of the following factors:

- i. The characteristics of the spectrum band to be licensed;
- ii. Services to be provided, including the type of service and the anticipated network capacity and usage;
- iii. The currently available and anticipated technologies and equipment, including consideration of the cost and pervasiveness of equipment using different technologies, and the extent to which particular technologies have been adopted worldwide;
- iv. Geographic and population characteristics of the area within which services are to be provided (including the number of islands that the network is proposed to cover), and the expected market size;
- v. The amount of spectrum available in the band under consideration and the level of interest in that band; and
- vi. Any other factor which URCA considers relevant based on international best practices in spectrum management.

URCA may assess the optimal amount of spectrum to be awarded on a case by case basis, or where appropriate may review bands and establish “spectrum caps” applicable to one or more bands. In addition, URCA will periodically review the quantum of spectrum awarded to licensees, particularly in bands in high demand or used for the provision of electronic communications services to the public, in order to ensure that the quantum awarded remains appropriate for the services provided. Where necessary, URCA will use its powers to address any instance where spectrum is being inefficiently utilised by a licensee.

Similarly, URCA’s research has determined that save in exceptional circumstances, the award of an entire spectrum band to a single operator would not be optimal, and therefore URCA would not typically award an entire spectrum band to a single operator.

Selection of Bands

As stated above, URCA will, for bands which are in high demand, and/or which are used for wireless access purposes, be guided by its Spectrum Opening Plan, to be published separately.

URCA will adopt a more reactive approach to the opening of bands which are not addressed in its Spectrum Opening Plan, in that such bands are likely to be opened in response to approaches by interested parties, rather than at URCA’s own initiative.

Where spectrum bands are related (that is, where two or more bands could be used for the same radio communications services) URCA will consider opening those bands at the same time in order to facilitate better spectrum planning by interested parties.

Use by URCA of Competitive Processes

Where there is anticipated to be insufficient spectrum to meet demand, URCA will use a competitive process to award spectrum in order to ensure fair and efficient spectrum use. Competitive processes may involve auctions, “beauty contests” or a combination of both. If well designed, competitive processes are considered to be more transparent, objective, non-discriminatory, and less susceptible to legal challenge.

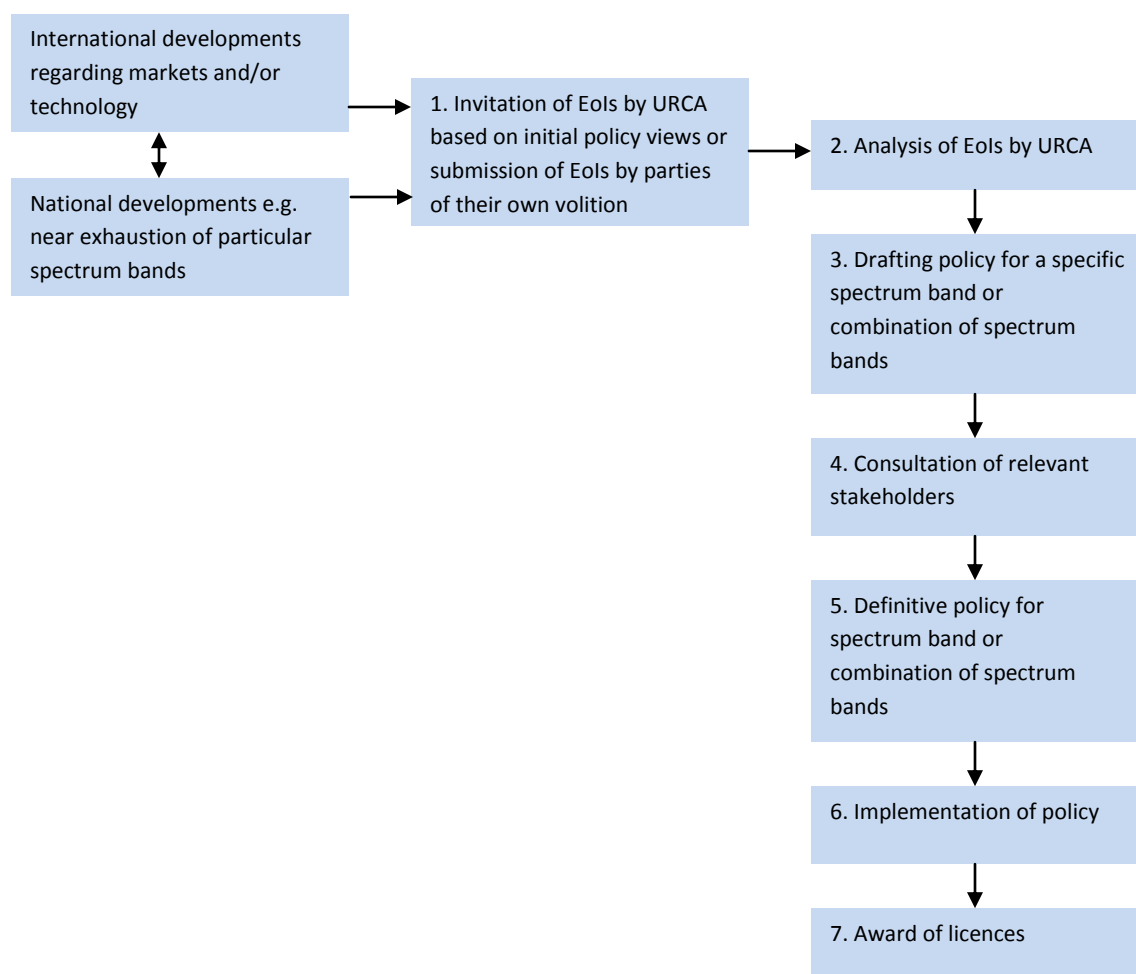
Where the competitive process involves an auction or similar process, it often leads to a more economically efficient outcome, since spectrum is awarded to the party who values it most (and hence who should make most productive use of the spectrum), and at a price which reflects the spectrum’s true value.

Competitive processes which do not involve an auction can help to ensure that spectrum is awarded to the party or parties which are most qualified or capable of efficient use, and which will be most likely to benefit consumers and the electronic communications sector in The Bahamas.

3. The Process for Opening New Spectrum Bands

This section presents the overall process for opening up new spectrum bands. The process outlined in this section is applicable to all standard spectrum bands. It also provides guidance on how URCA will develop policies for allocating specific spectrum bands and/or combinations of spectrum bands. The figure below illustrates the overall process.

Figure 1. A seven step process for opening spectrum bands



The process for opening a band can be triggered by:

- URCA inviting interested parties to submit an Expression of Interest (“Eoi”) to URCA for its consideration;
- Interested parties submitting an Eoi of their own volition.

URCA envisages these actions could be triggered by international developments in technology or services, or specific national factors such as exhaustion of particular spectrum bands or the demands of new services. For the avoidance of doubt and subject to step 6 (described below), it is possible for a party to submit, of its own volition, an EoI to URCA at any point in time.

The key parts of each step are as follows:

Step 1: Submission of Expressions of Interest

URCA will closely monitor developments in technology and electronic communications both on a global and regional level. These developments will be taken into account as appropriate in the formulation of URCA's Spectrum Opening Plan. Consistent with that plan (and otherwise as URCA considers appropriate), URCA shall from time to time invite EoIs for opening a specific spectrum band. Given the fact that The Bahamas is a relatively small economy, URCA will typically reflect best international practice and emerging trends in spectrum usage, and make use of the lessons learned by early adopters.

Also, as stated above, parties may submit on their own volition an EoI. Any EoIs submitted by parties on their own volition can have a free format. However, these EoIs must contain the information described in Annex A and may contain the information as described in Annex B.

In cases where URCA invites parties to submit an EoI, URCA will specify its exact information needs in the invitation and will also provide guidance on the following:

- the frequency range of the band;
- the band plan to be used;
- the number of licences which may be issued;
- the amount of spectrum per licence;
- potential licence conditions, such as:
 - licence duration;
 - licence fees;
 - coverage and roll-out obligations;
 - quality of service requirements; and
 - any technical parameters attached to the licence;
- the time schedule to be applied to the licence award; and

- the relation between the spectrum band under consideration and other spectrum bands. This might apply in particular to broadband wireless access services since these services tend to require a mix of low frequency and high frequency spectrum to offer both coverage and capacity in a cost-effective and spectrum efficient manner.

Where URCA invites parties to submit an EoI, it will give them up to 60 days to respond.

Step 2: Assessment of Expressions of Interest

Following the submission of EoIs, URCA will, within 30 days, analyse the expressions it receives. In so doing, URCA reserves the right to reject EoIs that are incomplete and/or fail to meet best international or national practice, or which are not in line with the Spectrum Opening Plan published by URCA (discussed above). In that case URCA will inform the parties concerned in writing, setting out its reasons for rejecting the EoI.

It is therefore at the discretion of URCA (regardless of whether it or other stakeholders initiated the process) to continue with step 3 or to stop the process at this stage.

Where URCA decides to proceed with the opening of a band, a general invitation will be issued and all parties will be treated equally in the next process steps (regardless of whether a party had been involved in the process in previous steps).

In the event that URCA decides not to proceed, it will inform the relevant parties of its decision in writing within 30 days of the close of the call for EoIs, again setting out its reasons for not continuing with the spectrum opening process. Save in exceptional circumstances, URCA will not reconsider opening the same band within 12 months of its decision not to do so.

Step 3: URCA to draft initial policy for that band

Based upon international best practice, lessons learned by early adopting countries and its analysis of the EoIs, URCA might decide not to open the band at stake (yet) or to open it. In the latter case URCA will draft an initial policy on the opening of the spectrum band under consideration and follow the next steps of the process. This initial policy will follow the overall principles URCA applies in managing spectrum (as described in Section 2 of this document) and may contain at least the following aspects:

- The frequency range of the band (upper and lower);
- The packaging of the band:
 - amount of spectrum per licence;
 - band plan to be applied, if applicable;
 - the exact location of the different packages within the spectrum band at stake; and
 - technical restrictions;

- The terms and conditions of the licence to be assigned (e.g. duration, coverage (national or regional / island-based), roll out, quality of service, sharing of infrastructure, legal interception, consumer protection, etc.);
- Application procedure:
 - time schedule of the overall procedure;
 - information to be submitted as part of the application. For each specific spectrum band or combination of spectrum bands URCA will define the exact information that has to be submitted. For example and without limitation, this could include some or all of the following: details on the applicant itself, business plan, technical plan, and financial guarantees.
 - process for assessing applications (including eligibility criteria to be used for assessing the applicant as well as the application); and
 - details of the award process to be applied (first-come first-served or competitive process). The choice of assignment instrument is dependent of the number of applicants: generally, no scarcity will lead to first-come first-served, scarcity to a competitive process. In this step of the process URCA will make an assessment of the scarcity. If URCA expects scarcity, it will provide its initial views on the design of the proposed competitive process.
- Time schedule of the application and award process.

URCA will strive to issue its initial policy within 60 days of its decision to continue with the award process.

Step 4: Consultation on the draft policy

URCA will consult on its initial policy proposals, giving all stakeholders no less than 30 days to respond to the consultation.

Step 5: Finalising the policy

Based on responses to the consultation, URCA will amend, finalise and publish the policy.

Step 6: Implementation of the policy

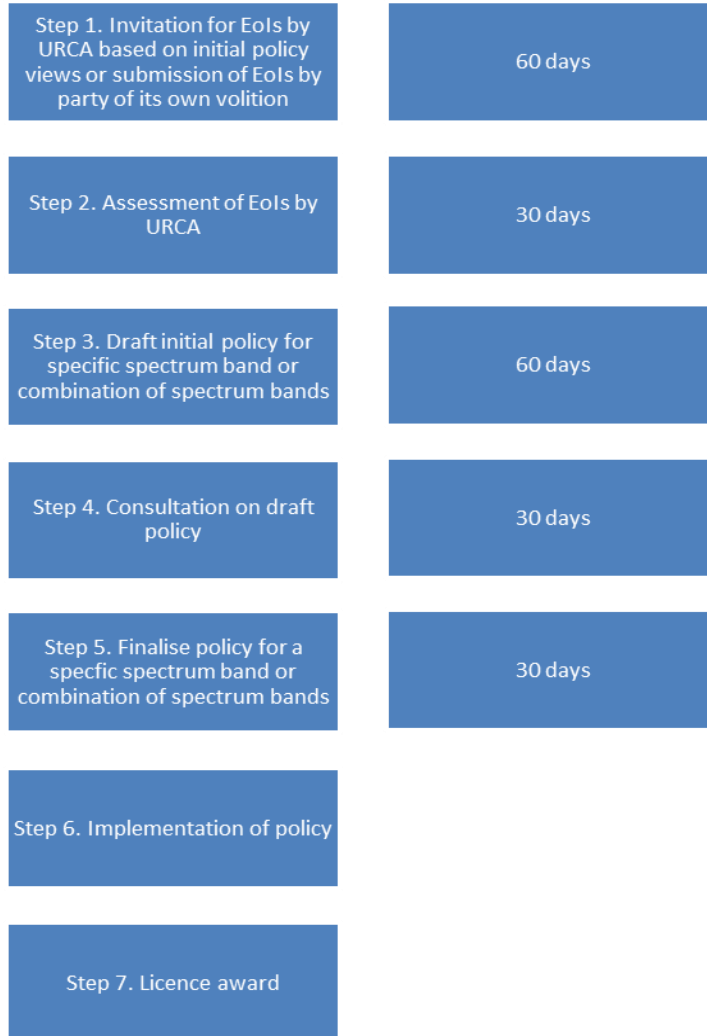
The finalised policy will be implemented for the relevant band(s), in accordance with the timeframes established in the policy.

Step 7: Licence award

The licences for the spectrum band(s) at stake will be awarded in accordance with the finalised policy.

In the figure below the different steps and their timing are shown:

Figure 2. Process – Opening of New Radio Spectrum Band



Annex I – Information that must be provided in an EoI

1. Interested party's name and contact details;
2. Identify the spectrum band;
3. Define the frequency range of the band;
4. Describe the services proposed to be offered in the band and whether these services will be national (covering the entire Bahamas) or territorial (covering one or more Islands);
5. Propose a band plan, including the bandwidth of the carrier, the spectrum mask and necessary guard bands with other radio-services;
6. Propose an optimum spectrum bandwidth for use;
7. Provide an overview of plans for the use and re-use of frequencies to achieve maximum spectrum efficiency; and
8. Provide a general service deployment schedule and indication of proposed service areas.

Annex II – Additional information that may be provided in an EoI

1. Indicate why URCA should consider opening the spectrum band for the allocated services, in addition to bands already opened for such services;
2. Identify technical specifications including: antenna height, radiated power, harmful interference management, desired bandwidth, system capacity and technical specifications peculiar to the band;
3. Discuss any restrictions, technical or otherwise, that should be taken into consideration by URCA;
4. Provide any additional information that would assist URCA in evaluating whether the new band should be opened; and
5. Any other information that the interested party may deem relevant to URCA.