Office of Utilities Regulation

**PROVISION OF NUMBER PORTABILITY**

**ADMINISTRATION SERVICES IN JAMAICA**

**TECHNICAL & PRICE PROPOSAL REQUIREMENTS**



**October 2014**

**TABLE OF CONTENTS**

SECTION A: TECHNICAL AND PRICE PROPOSALS REQUIREMENTS 4

Proposals Submission Notice 4

SECTION B: INFORMATION TO APPLICANTS 9

Preamble 9

1. General 10

2. Clarification and Amendment of TPPR 11

3. Preparation of Proposals 12

4. Submission, Receipt and Opening of Proposals 13

5. Evaluation of Proposals 15

6. Negotiations and Company Registration 16

7. Grant of Licence 17

8. Confidentiality 17

SECTION C: TERMS OF REFERENCE REGARDING THE PROVISION OF NUMBER PORTABILITY ADMINITRATION SERVICE IN JAMAICA 18

PART 1: General Requirements and Considerations 18

1. Introduction 18

2. Number Portability Implementation Approach 20

3. System Requirements for Central Reference Database Solution 26

4. Facilities management 33

5. Installation and Commissioning 34

6. Cost Recovery and Billing 35

PART 2: Evaluation and Selection Criteria 35

Purpose 35

Selection Cycle 36

Evaluation of Proposals 36

Stage 1 Evaluation – Applicants’ Ability to Implement Project 37

Evaluation Criteria 37

Evaluation Scores 38

Stage 2 Evaluations– Technical Evaluation 39

Evaluation Criteria 39

Evaluation Scores 39

Stage 3 Evaluations- Price Evaluation 40

Reporting Relationships 41

LIST OF PROPOSALS SUBMISSION FORMS (ANNEXURES) 43

FORM TECH-1 Proposal Submission Form 43

FORM TECH-2. Respondent’s Organization and Experience 43

FORM TECH-3 Comments and Suggestions 43

FORM TECH-4. Team Composition and Task Assignments 43

FORM TECH-5. Curriculum Vitae (CV) For Proposed Professional Staff 43

PRICE PROPOSAL FORMS 43

LIST OF APPENDICES 43

PROCEDURES FOR PROCESSING APPLICATIONS FOR LICENCES 43

LICENCE APPLICATION FORM 43

OUR APPLICANT VERIFICATION FORM 43

CONDITIONS TO BE INCLUDED IN THE LICENCE 43

# SECTION A: TECHNICAL AND PRICE PROPOSALS REQUIREMENTS

## Proposals Submission Notice

The Office of Utilities Regulations (the Office/ the OUR), on behalf of the Ministry of Science, Technology, Energy and Mining (the Ministry), is inviting suitably qualified persons to apply for a Service Provider Licence to provide Number Portability Administration Services to licensed telecommunications carriers and service providers in Jamaica by means of a Central Reference Database (CRDB) and an automated Order Handling process for inter-operator communications.

The Ministry has portfolio responsibility for the telecommunications sector and as such has the role of formulating, promulgating and implementing Jamaica’s telecommunications policy.

In that regard, and to further enhance consumer convenience and create a more competitive environment in the sector, and pursuant the powers conferred by section 37 of the Telecommunications Act, 2000, the portfolio Minister has called for, and taken steps to facilitate, the introduction of number portability in Jamaica, in the form of service provider portability, to enable subscribers to keep the same telephone numbers when changing service providers.

The OUR is a multi-sector regulatory agency which was established in 1995 by the Office of Utilities Regulation Act (OUR Act). Under the OUR Act, the OUR has regulatory authority over the telecommunications, electricity, and water and sewerage sectors. Section 37(1) of the Telecommunications Act, vests the OUR with the responsibility to advise the Minister on the making of rules imposing on public telecommunications carriers the responsibility to offer number portability. Number portability is expected to increase competition in the telecommunications sector.

Competition in Jamaica is "facilities-based" as it depends primarily on operators running their own competing networks. There are two mobile operators (this number is expected to increase in the near future):

* Cable & Wireless Jamaica Limited (trading as LIME), the first network to offer mobile service, which uses GSM and 3G broadband wireless network standards and technologies;
* Digicel Jamaica Limited, which entered the market after LIME but has established the larger market share and also uses GSM technology. Digicel has deployed WiMAX technologies to provide 4G broadband wireless access.

LIME, the incumbent fixed-line operator, operates the largest fixed network. A significantly large number of telecoms licences to provide fixed-line services have been issued by the portfolio Minister but only twelve operators have been issued with numbers by the OUR, and not all of these operators are currently offering service. There are however indications for increased competition and subscriber growth in this market.

The largest of the fixed-line competitive providers is Columbus Communications Jamaica Limited (trading as Flow) whose business includes cable TV distribution based on the hybrid fibre/coax DOCSYS standards with support of telephony.

The current telecommunications network and operations infrastructure comprises a mix of traditional circuit-switched and state-of-art IP-based network technologies, and a variety of brand-name Business and Operations Support Systems. These are summarised as follows:

1. **Network Equipment:**

Fixed Line**:**

* Genband (formerly Nortel) DMS and CS2K switches, NEC NEAX-61 switches, Aloe Systems (Formerly MERA Systems) RTU Class 5 Switch, Alcatel – Lucent, Asterisk.
* Genband Next Generation Network
* Fixed line over cable: Safari Soft-switch

Mobile**:**

* Huawei and Ericsson, Cisco and Mpathix

1. **Major Telecommunications Standards Environments for Fixed and Mobile Switching and Signalling Technologies**

* ETSI
* ANSI
* ITU

1. **Billing /Operations Support Systems:**

* Redknee
* A proprietary “Customer Information System (CIS)”
* Cerillion
* Intec
* IBM

The population of Jamaica at the end of 2011 was estimated at 2.69 million (Source: Statistical Institute of Jamaica) at an average annual rate of growth of 0.36 per cent since 2001. Thus the mobile penetration rate in the country currently is over 100%. The rate for fixed-line has remained below 15% for some time now.

Jamaica is part of the North American Numbering Plan (NANP) area and has the area code 876. The numbering capacity is approaching exhaustion and there is a plan to introduce a second area code in the very near future. This will necessitate a move from 7-digit to 10-digit local dialling.

The table below provides detail on numbering range allocations in Jamaica.

|  |  |  |
| --- | --- | --- |
| **NUMBER RANGE** | **ALLOCATION** | **COMMENTS** |
| N00 | Special Services | Easily Recognizable Codes |
| 1XX | Access Codes |  |
| 20X-23X | Growth |  |
| 24X-29X | Mobile |  |
| 3XX | Mobile |  |
| 4XX | Mobile |  |
| 444 | Special Services | Premium Rate – Mobile |
| 5XX | Mobile |  |
| 60X-63X; 66X-69X | Geographic |  |
| 64X-65X | VoIP |  |
| 70X-76X | Geographic |  |
| 77X-79X | Mobile |  |
| 8XX | Mobile |  |
| 9XX | Geographic |  |
| 976 | Special Services | Premium Rate – Fixed |
| YYY (222, 333, etc) | Special Services | Easily Recognizable Codes |

Number allocations as at 31/12/13

Jamaicans tend to regard numbers as important and as a form of personal identification – they would not favour number changes, even if they are facilitated, because they like to minimise hassle. Since many Jamaicans emigrate, people will fear losing touch with old friends, who have emigrated, if they change numbers, i.e., there are a significant number of valued calls from people who may not have called for several years. This distinct cultural attitude to numbers favours number portability.

The proposed licence, which has been advertised, will be granted on a competitive basis and all interested persons (local and international) have been invited to submit applications. Applications shall be completed using the Office’s standard application procedure guide and on the standard application form for Carrier and/or Service Provider Licence attached as Appendices to this, Technical & Price Proposal Requirements document (TPPR). Applicants are also required to submit to supplementary requirements and to supply additional information, the details of which are set out in this document.

Each application must be accompanied by a non-refundable application fee of US$2,000.00. This payment shall be made by certified cheque, direct deposit or wire transfer made payable to the Office of Utilities Regulation. The Banking Information can also be found on our website at [www.our.org.jm](http://www.our.org.jm) under: Licensing → Application.

To assist with completion of applications, the Office has included the following links to both the OUR Act (<http://www.our.org.jm/ourweb/about/our-act>) and the Telecommunications Act (<http://www.our.org.jm/pdf/telecomsact.pdf>). Applicants are encouraged to pay special attention to the regulatory obligations that the relevant legislation imposes on licence holders.

The Office was also directed to recommend to the Minister conditions to be imposed on the licensee including:

* Specific provisions requiring the licensee to achieve performance targets in accordance with a published schedule;
* The conditions specified in section 11 of the Telecommunications Act;
* Such additional conditions as shall ensure the effective provision of number portability.
* Such additional conditions as shall require the licensee to comply with the laws of Jamaica including, inter alia, any order, directive, memorandum, rules and regulations as issued by the Minister and/or the Office issued under the Telecommunications Act, the OUR Act, and any other applicable statutory provision.

The following documents are appended to this TPPR:

1. Procedures for Processing Applications for licences (Appendix 1);

2. Application for Carrier Licence and /or Service Provider Licence (Appendix 2);

3. OUR Applicant Verification Form (Appendix 3);

4. Conditions to be included in the licence (Appendix 4)

In assessing applications for the licence in question, the Office will adopt the following procedure:

1. Each application will first be examined for compliance with the information requirement and conditions stipulated in the Office’s standard application form for carrier and/or service provider licences and the procedures for processing such applications.
2. Those applications satisfying the foregoing requirements shall then be assessed against the supplementary information and technical and price proposal requirements set out herein, and ranked using the prescribed weightings.

Pursuant therefore to the requirements of section F of the licence application form in Appendix 2 of this document (FORM 1 of the Telecommunications (Forms) Regulations, 2000: Application for Carrier or Service Provider Licence), applicants are required to submit competitive sealed Technical and Price Proposals with respect to the neutral number portability administration services to be provided to telecommunications carriers and service providers in Jamaica, in accordance with the terms, conditions and requirements set forth in this document.

This TPPR provides sufficient information for interested parties to prepare and submit Proposals for consideration by the OUR. Proposals submitted in accordance with this TPPR will be evaluated in accordance with the criteria specified herein.

Requests for additional information may be submitted in writing via email or post to:

Curtis Robinson - Manager, Technical Services (Regulation & Policy)

Office of Utilities Regulation

Third Floor, PCJ Resource Centre

36 Trafalgar Road

Kingston 10

Jamaica, W.I.

Telephone: (876) 968 6053

Facsimile: (876) 929 3635

E-mail: npas@our.org.jm

The completed Technical and Price Proposals (first sealed in separate envelopes and appropriately labelled) must be placed in a plain sealed envelope, marked “Technical and Price Proposals for Number Portability Administration Service Licence Evaluation”, and delivered at the address below, by 3:00 pm Eastern Standard Time (EST) on December 1, 2014:

Office of Utilities Regulation

Third Floor, PCJ Resource Centre

36 Trafalgar Road

Kingston 10

Jamaica, W.I.

Electronic submission of Proposals via electronic mail (email), facsimile (fax) or any other data stream is not permitted and late Proposals will be rejected.

Curtis Robinson

Manager, Technical Services (Regulation & Policy)

**OFFICE OF UTILITIES REGULATION**

# SECTION B: INFORMATION TO APPLICANTS

## Preamble

The OUR is the regulatory authority responsible to regulate specified services and facilities, make recommendations to the Minister in relation to the granting of licences, promote the interests of customers, and ensure fairness and efficiency, within the telecommunications sector.

Among its core functions are the development and administration of the National Numbering Plan and the development of rules and guidelines for the allocation, assignment and use of numbers in Jamaica.

Rules for the implementation of number portability were made by the Minister, in consultation with the OUR and industry players. Pursuant to the Number Portability Rules (NP Rules), the OUR is facilitating arrangements to ensure that number portability is introduced and administered in a manner that will produce pro-competitive outcomes on a fair and equitable basis. The Minister has set a target date of May 31, 2015 for the implementation of number portability.

Number portability administration is the administrative processes (ordering, provisioning and notification), as described in the Terms of Reference (Section C), for managing and porting numbers between Operators.

The proposed Number Portability Administration Service is to be delivered using a centralized architecture. Typically two logical systems are implemented as part of a centralized solution: A Central Reference Database (CRDB) which is responsible for storing the raw service provider ownership data for numbering plan resources, along with ported number information, and a Central Order Handling System (COHS) which is responsible for the facilitation of communication between service providers for the purpose of “porting” numbering plan resource between themselves. The Number Portability Administrator will be responsible for both the provisioning and management of a CRDB and COHS services.

The purpose of the TPPR, therefore, is to provide prospective applicants with essential information to enable them to prepare and submit Technical and Price Proposals to operate a number portability central reference database and the automated order handling system, to provide the Number Portability Administration Service (NPAS), as the Number Portability Administrator (NPA), under a renewable Telecommunications Service Provider Licence to be granted by the Minister in accordance with sections 10 through 13 of the Telecommunications Act.

The Technical and Price requirements for the Proposals to be submitted to the OUR for evaluation are set out in Section C hereof.

## 1. General

**1.1** The OUR will make its selection for recommendation to the Minister for the grant of a licence, from among the applicants that submit complete Proposals, in accordance with the method of selection outlined in this TPPR.

**1.2** Applicants are required to submit Technical and Price Proposals as two separately sealed items as detailed in section 4 below.

**1.3** Any expenses and costs incurred by an Applicant in responding to this TPPR is the sole responsibility of the Applicant and the OUR assumes no liability to compensate any Applicant for any costs or expenses so incurred.

**1.4** Each Applicant must furnish the information and documents required by the TPPR document. Failure to submit all required information may deem a Proposal as non-responsive.

Conflicts of Interest

**1.5** Applicants are expected to avoid conflicts of interest involving dealings with persons involved in the licensing process or any person to whom an Applicant may provide number portability administration services if granted the licence to provide such services.

**1.6** Applicants must therefore ensure, to the extent practicable, that relevant actions and decisions are clearly seen to be free from any conflicts of interest.

**1.7** A conflict of interest is deemed to exist when an Applicant is engaged in a matter or encounters a circumstance that might raise the question of undue or unfair influence or advantage (in the Applicant’s favour) in the work reported or the conclusions stated during the selection process.

**1.8** Applicants have an obligation to disclose any situation of actual or potential conflict that impacts their capacity to provide number portability administration services, or that may reasonably be perceived as having this effect. Failure to disclose said situations may lead to the disqualification of the Applicant.

Fraud and Corruption

**1.9** The OUR requires that Applicants (including its personnel, agents and assigns), observe the highest standard of ethics during the licensing process. In pursuance of this policy:

* + 1. the terms set forth below for the purposes of this provision, are defined as follows:

“**corrupt practice**” means the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the action of a public official in the licensing process;

“**fraudulent practice**” means a misrepresentation or omission of facts in order to influence the licensing process, to the detriment of the OUR and the Government of Jamaica and includes collusive practice among Applicants (prior to or after the submission of proposals) designed to establish proposal prices at artificial non-competitive levels and to deprive the OUR and the Government of the benefits of free and open competition;

“**collusive practice**” means a scheme or arrangement between two or more Applicants, with or without the knowledge of the OUR or the Government of Jamaica, designed to establish prices at artificial non-competitive levels or to influence the action of any party in the licensing process; and

“**coercive practice**” means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the licensing process;

* + 1. the OUR will reject a proposal for licence if it determines that the Applicant recommended for the licence has, directly or through an agent, engaged in corrupt, fraudulent, collusive or coercive practices in the licensing process;
    2. the OUR will sanction an Applicant or an individual, including declaring them ineligible, either indefinitely or for a stated period of time, if the OUR at any time determines that they have, directly or through an agent, engaged, in corrupt, fraudulent, collusive or coercive practices in competing for a licence; and

**1.10** Applicants shall furnish information on commissions and gratuities, if any, paid or to be paid to agents relating to this proposal and during the provision of the number portability administration services if the Applicant is recommended for the licence.

## 2. Clarification and Amendment of TPPR

**2.1** An Applicant may request a clarification on any aspect of the TPPR up to seven (7) days before the closing date for applications. Any request for clarification must be sent in writing by post, fax or email to the respective OUR’s address indicated in Section A. The OUR will respond by email to the requests and will make available such responses (but without identifying the source of the inquiry) to all parties who intend to submit or have submitted applications.

**2.2** The OUR may amend the TPPR for any reason, at any time before the submission of Proposals, whether at its own initiative or in response to a request for clarification. Any amendment will be issued in writing through addendum. Addenda will be posted on the OUR’s website and sent also by mail, to the originator of the query, and will be binding on them.

## 3. Preparation of Proposals

**Technical Proposals**

**3.1** All documents submitted as part of the response to the TPPR must be in English language. Applicants are required to submit their proposals both in hard (paper) copies and a soft copy (on a compact disc) preferably in a PDF format.

**3.2** Persons preparing the Technical Proposal are expected to examine the documents constituting this TPPR in detail. Material deficiencies in providing the information requested may result in rejection of a Proposal.

**3.3** While preparing the Technical Proposal, persons are advised to give particular attention to the following:

(i) If an Applicant desires to, it may associate with other firms or entities in a joint venture as appropriate.

(ii) All Applicants must give the estimated number of professionals to be engaged in the provision of the services indicated in Section C. It is desirable that the majority of the key professional staff proposed be permanent employees of the firm or have an extended and stable working relationship with it.

(iii) Proposed professional staff must as a minimum, have the experience indicated for undertaking the relevant aspects of the provision of the said services.

**3.4** The Technical Proposal shall provide the following information using the Standard Form provided in SECTION C of this TPPR:

1. A brief description of the firm and an outline of recent experience on assignments of a similar nature. For each assignment the outline should indicate inter alia, the profiles of the staff utilized, duration of the assignment, contract amount if applicable and the firm’s involvement.
2. Any comments or suggestions on the Technical Specifications and methodologies required in Section C, and details on the facilitation required either from the OUR or other parties in the provision the proposed facilities and service.
3. A detailed description of the proposed methodologies, and the work plan and time schedule.

1. The list of the proposed staff team by specialty, the tasks that would be assigned to each staff team member.
2. CVs recently signed by the proposed professional staff and the authorized representative submitting the proposal. Key information should include number of years working for the firm/entity and degree of responsibility held in various assignments during the last ten (10) years.
3. Estimates of the total staff input (professional and support staff-time) needed to carry out the assignment supported by bar chart diagrams showing the time proposed for each professional staff team member.
4. An outline of the proposed training, as specified in Appendix “A”.
5. Any additional information requested in Appendix “A”.

**3.5** The Technical Proposal must not include any price information.

**Price Proposal**

**3.6** The Price Proposal should to the extent possible follow the Proposals Submission Forms provided in SECTION C. Applicants must submit their price proposals in US Dollars.

## 4. Submission, Receipt and Opening of Proposals

**Sealing and Labelling of Proposals**

**4.1** The original Technical and Price Proposals must be prepared in indelible ink. They must contain no interlineations or overwriting except as necessary to correct errors made personally by the Applicant. Any such corrections must be initialled by the person or persons authorized to sign the Proposals.

**4.2** For each Proposal, the Applicant must submit one original document and one copy of the same. Each Proposal document must be marked “ORIGINAL” or “COPY” as appropriate. If there are any discrepancies between the original and the copy of the Proposal, the original shall govern.

**4.3** The original and the copy of the Technical Proposal must be placed in a sealed envelope clearly marked “TECHNICAL PROPOSAL”. The original and the copy of the Price Proposal must be placed in a sealed envelope clearly marked “PRICE PROPOSAL” and with the warning: “DO NOT OPEN WITH THE TECHNICAL PROPOSAL”. Both envelopes shall be placed the larger outer envelope and sealed.

**4.4** The outer envelope must be addressed to the OUR as follows:

Office of Utilities Regulation

Third Floor, PCJ Resource Centre

36 Trafalgar Road

Kingston 10

Jamaica, W.I.

**4.5** Below the above address the following must be written in bold letters:

“NUMBER PORTABILITY ADMINISTRATION SERVICE”

“SEALED PROPOSAL – DO NOT OPEN PRIOR TO 3:00 P.M. ON December 1, 2014”

**4.6** If the outer envelope is not sealed and marked as instructed, the OUR will assume no responsibility for any misplacement or premature opening of the submitted Proposals.

**Deadline for Submission of Proposals**

**4.7** Proposals marked as specified above shall be delivered at the address below by 3:00 p.m. Eastern Standard Time on December 1, 2014; electronic submission of Proposals will not be permitted:

Office of Utilities Regulation

Third Floor, PCJ Resource Centre

36 Trafalgar Road

Kingston 10

Jamaica, W.I.

**Treatment of Late Proposals**

**4.8** It is the sole responsibility of the Applicants to ensure that the OUR receives its Proposals by the date and time specified above as the deadline for submission of Proposals. Any Proposal received after the deadline for submission of Proposals will not be considered. Applicants who have submitted late Proposals will be notified and their Proposal returned unopened.

**Modifications and Withdrawals**

**4.9** Applicants may modify or withdraw their Proposal(s) after submission, provided that the modification or notice of withdrawal is received in writing by the OUR prior to the deadline for submission of Proposals.

**4.10** Applicants’ modification or notice of withdrawal shall be prepared, sealed, marked and delivered in accordance with the provisions of the RFP for the submission of Proposals, with the envelopes additionally marked "MODIFICATION" or "WITHDRAWAL" as appropriate.

**Status of Accepted Proposals**

**4.11** Proposals submitted by the Applicants and accepted by the OUR will become the property of the OUR. After the deadline for submission of proposals, the Technical Proposal will be opened by the evaluation committee. The Price Proposal will remain sealed and deposited with a responsible officer of the OUR until, the technical evaluation is concluded. The Price Proposal for the successful Respondent from the technical evaluation will then be opened publicly.

**No Obligation to Accept any Proposal**

**4.12** There is no obligation on the OUR to accept any Proposal or to enter into any contractual arrangements with any Applicant in connection with the TPPR. The OUR will not assume responsibility for any decision by the Applicant(s) to not proceed with any or all of the Proposals submitted.

## 5. Evaluation of Proposals

**Technical Proposals**

**5.1** The evaluation committee will have no access to the Price Proposals until the evaluation of the Technical Proposals is concluded.

**5.2** The evaluation committee appointed by the OUR will evaluate the proposals on the basis of their responsiveness to the TPPR, applying the evaluation criteria shown in SECTION C.

**5.3** After the evaluation of the Technical Proposals, the OUR will notify those Applicants whose proposals did not meet the minimum qualifying mark or were considered non-responsive to the TPPR indicating that their Price Proposals will be returned after the completion of the selection process. The OUR will simultaneously notify the Applicants who have secured the minimum qualifying mark, indicating the date and time set for opening the Price Proposals and stating that the opening ceremony is open to those Applicants who choose to attend. The notification may be sent by registered letter, facsimile or electronic mail.

**Price Proposals**

**5.4** The Price Proposals will be opened publicly in the presence of the Applicants’ representatives who choose to attend. The name of the Applicants, the technical scores and the proposed prices will be read aloud and recorded when the Price Proposals are opened. The OUR will prepare minutes of the public opening.

**5.5** The evaluation committee will determine whether the Price Proposals are complete. In all cases, the total price proposed in the Price Proposal as submitted shall prevail. The method of evaluation is shown in SECTION C.

## 6. Negotiations and Company Registration

**6.1** Negotiations with the selected Applicant from the evaluation process will be held at the OUR, with the aim to reach agreement on all areas of service provisioning, after which recommendations will be made to the Minister for a license will be granted subject to fulfilment of all other licensing requirements.

**6.2** Negotiations will, among others things, touch on the Technical Proposal in general, the proposed methodology and approach, work plans, staffing and any suggestions made by the Applicant to improve the attainment of the main objectives of the Terms of Reference.

**6.3** If negotiations fail, the OUR will invite the Applicant whose proposal received the second highest ranking for negotiations with the OUR and grant of licence by the Minister, subject to fulfilment of all other licensing requirements.

**6.4** Where the selected Applicant is a foreign company, registration, of that company or its agent in Jamaica, with the Companies Office of Jamaica[[1]](#footnote-1) (COJ), will be required before the granting of the licence. To be registered, such foreign company, or its agent in Jamaica, must have an established place of business in the Jamaica, in accordance with section 3 of the Registration of Business Names Act of 1934[[2]](#footnote-2).

**6.5 [[3]](#footnote-3)**The COJ registers local and overseas companies, and individuals carrying on business in Jamaica. It actively encourages voluntary compliance of companies and businesses with the Companies Act of 2004[[4]](#footnote-4) and the Registration of Business Names Act, and strives to maintain up-to-date records of all companies and businesses registered.

## 7. Grant of Licence

**7.1** Upon conclusion of negotiations, the Minister will grant the licence to the successful Applicant as recommended by the OUR.

**7.2** The successful Applicant will thereafter be expected to commence the establishment of the number portability administration services in accordance with the agreed plan of activities.

## 8. Confidentiality

**8.1** Information relating to the evaluation of proposals and concerning an award will not be disclosed to the Applicants who submitted the proposals or to other persons not officially concerned with the process, until the winning Applicant has been notified officially.

**8.2** The OUR reserves the right to solely determine the acceptability of an Applicant and is not bound to take into account any representation or further information provided to the OUR subsequent to the deadline for submission of Proposals regarding the status of any particular Applicant.

# SECTION C: TERMS OF REFERENCE REGARDING THE PROVISION OF NUMBER PORTABILITY ADMINITRATION SERVICE IN JAMAICA

## PART 1: General Requirements and Considerations

## 1. Introduction

**1.1** The Ministry has portfolio responsibility for the telecommunications sector and as such has the role of formulating, promulgating and implementing Jamaica’s Telecommunications Policy.

**1.2** The OUR is a regulatory authority with responsible for the regulation of specified services and facilities, promotion of competition, consumer protection, and ensuring fairness and efficiency in the telecommunications sector.

**1.3** Among the OUR’s core functions are the maintenance and administration of the National Numbering Plan for Jamaica and the development of rules and guidelines related to the allocation and use of numbers. These functions include making assignments of numbers to Service Providers on a fair and equitable basis.

**1.4** Jamaica participates in the NANP which is the basic numbering scheme for the Public Switched Telephone Network for the United States and its territories, Canada, Bermuda, the Bahamas and sixteen Caribbean Countries. The 20 countries, which share **Country Code 1**, share the NANP numbering resources cooperatively.

**1.5** The area served by the NANP is divided into smaller **Numbering Plan Areas** (***NPA***s), each identified by a three-digit ***NPA*** code, commonly called an area code. The basic NANP number is ten digits in length, consisting of the three-digit area code (a national destination code ) followed by a seven-digit local number, in the format:

NXX-NXX-XXXX (where N is any digit from 2 through 9 and X is any digit from 0 through 9)

|  |  |  |  |
| --- | --- | --- | --- |
| Structure of the NANP Number | | | |
| **DIGIT ID & SEQUENCE ►** | ABC | DEF | GHIJ |
| **FORMAT ►** | NXX | NXX | XXXX |
| **SEGMENT ►** | ***NPA***  (Area Code) | Central Office (CO)Code | Line Number |
| Directory Number  (7-digit Local Number) | |

**1.6** The NANP number format is thus commonly represented as NPA-NXX-XXXX and the term ‘NXX’ has become synonymous with ‘central office code’.

**1.7** Jamaica has been assigned the area code **876** under the NANP. The area code subsumes approximately eight million telephone numbers. This allocated numbering capacity, which typically is assigned to telecommunications operators in blocks of ten thousand numbers (based on service type), is approaching exhaustion[[5]](#footnote-5) and there is a plan to introduce a second area code in the very near future. The introduction of the new area code will result in a change from 7-digit to 10-digit local dialling in Jamaica.

**1.8** The OUR, in accordance with Section 37 of the Telecommunications Act, has assisted the Ministry in the development of rules governing the implementation of number portability in Jamaica, and on which the Ministry has carried out public consultations. Number portability will enable the subscribers to switch their Service Providers and retain their telephone numbers.

**1.9** The OUR, as directed by the Ministry, is facilitating arrangements aimed at ensuring that number portability is introduced in a manner that will produce pro-competitive outcomes on a fair and equitable basis. The Minister has set a target date of May 31, 2015 for the implementation of Service Provider Portability.

**1.10** The proposed Number Portability Administration Service is be provided jointly for both Fixed and Mobile number portability services and delivered through a CRDB method which utilises a central reference database, and number portability order handling applications for the management of porting transactions and message communication between telecommunications Operators. These facilities and their physical location shall hereinafter be referred to as the Number Portability Administration Clearinghouse (NPACH).

**Purpose**

**1.11** These Terms of Reference (TOR) set out the general requirements and considerations for the Provision of Number Portability Administration Service in Jamaica, and the criteria for the evaluation of Technical and Price Proposals from applicants for the respective Service Provider Licence to be granted by the Minister, to establish and operate the service, as the **Number Portability Administrator** (**NPA**) defined in the NP Rules. Applicants must submit Proposals based on the CRDB architecture.

**\**

**Schedule of Events**

**1.12** In order to meet the implementation date set by the Minister, the following timetable has been proposed -

|  |  |  |  |
| --- | --- | --- | --- |
| **ACTIVITY** |  | **START DATE** | **END DATE** |
| **Issue of TPPR** |  | October 1, 2014 | |
| **TPPR Closing** |  | December 1, 2014 | |
| **Evaluation of Proposals** |  | December 2, 2014 | December 31, 2014 |
| **Announcement of Results** |  | January 5, 2015 | |
| **Grant of Licence** |  | TBD | |
| **NP Implementation.** | | May 31, 2015 | |

The OUR reserves the right to change any of these dates prior to submission of the Proposals in accordance with the provisions of the TPPR. Applicants should submit their own project plan and comment on the feasibility of the dates indicated.

**Statement of Capabilities**

**1.13** Applicants are required to provide specific responses regarding their ability to provide the facilities and services specified in this TOR.

**Assessment of Proposals**

**1.14** Applicants’ responses to the TPPR will be evaluated against the criteria set out in Part 2 of this Section. .

## 2. Number Portability Implementation Approach

**The Requirements for the NP Administration Service (Location and Functionality)**

**2.1** The NPA will provide the Number Portability Administration Service which will be a managed service to administer number portability in Jamaica. This functionality will encompass the need to maintain relevant details regarding fixed and mobile subscriber number ranges together with the full history of any porting activity for any particular number and for providing specific statistical information as required by the OUR.

**2.2** This managed solution may be either:

• located within Jamaica being provided and managed from the NPA’s premises or the premises of the NPA’s nominated local partner (which partner must be approved by the OUR); or

• provided by the NPA using a hosted solution securely operated from a remote location outside of Jamaica and is run with processes and software developed for other jurisdictions.

**2.3** The Number Portability Administration Service must be capable of providing, at a minimum, the following functionality:

i. The relaying of messages between Donor Operator and Recipient Operator and the maintaining of state information for each individual and bulk Porting;

ii. Management of the Porting processes for fixed and mobile services, provided to consumers, to meet the target times;

iii. Validation of the Porting request by the subscriber by means of IVR, SMS, email or other code mechanisms;

iv. Communication with the subscriber by IVR, SMS or email to advise the subscriber of the status of their Porting request;

v. The broadcasting to all Operators of information on the identity of the Recipient Operator who is serving a number after it has been ported;

vi. The collection of logs on all Porting activities;

vii. The collection of statistics on Porting;

viii. The storage of information on the history of each Porting but excluding any personal subscriber data;

ix. The maintenance of a reference database of all ported numbers and the provision of downloads of this information to the OUR, any participating Operator, especially new entrants; and

x. Management of ancillary functions, which include but are not limited to, Cooling Off, Emergency Repatriation, Return to Number Range Holder and Porting Database Synchronisation.

**2.4** Applicants must provide an overview of their proposed solution in terms of:

* + Location
  + Physical specifications
* Physical security design
* Ownership and operational responsibility
* Proposed facility operation & maintenance

**Porting Processes**

**2.5** This section provides an outline of the processes that will be involved in number portability in Jamaica, to enable Applicants to present appropriate Proposals in response to this TPPR. Except as specifically identified, the processes set out in this section are summary and indicative only. Final processes are detailed the inter-operator Business Rules prepared by the Number Portability Working Group established by the Minister. Such rules will be provided to the successful Applicant during the course of negotiations for the detailed terms and conditions of the provision of the Number Portability Administration Service for Jamaica.

**2.6** The NP Rules establishes that Number Portability is a Recipient-led process, that is, where the subscriber goes directly to the new service provider (the Recipient Operator) to initiate the porting. The NP Rules explicitly prohibits contact between the Donor Operator and the Subscriber in the context of Number Portability. Consequently the Recipient Operator, through the Number Portability Administrator, will coordinates all communications concerning Number Portability. The typical order flow in the desired deporting process is illustrated and explained below.

**2.7** The proposed role of the NPA is to log and enable the management and delivery of the number portability transactions between the Recipient and Donor Operators, and to ‘Broadcast’ the results of each successful Porting to all participating Operators.

**2.8** The following process diagram and description below it shows only the main elements of the number portability process and summarises the various steps that would be taken during a full number portability process.

NP Request

NP Request

NP Request

NP Request

Confirmation

Confirmation

NP Complete

DB Update

DB Update

Deactivation

Deactivation

Complete

Complete

**Recipient Network/Operator**

***NPA***

**Recipient**

**Donor Network/Operator**

**All Networks**

Donor can disconnect Customer

Recipient connects Customer

1

3

2

4

5a

8

6

7

NP Request

**Customer**

0

5b

Deactivation Request

5c

Porting Advice

0. The subscriber goes to the Recipient Operator and requests to open a new account and retain his existing telephone number

1. The Recipient Operator issues a request for porting to the Donor Operator via the NPA.

2. The NPA forwards the request to the Donor Operator.

3. The Donor Operator validates and accepts the porting request, and sends an NP Request Confirmation via the NPA.

4. The NPA forwards the confirmation response to the Recipient Operator.

5. The Recipient Operator carries out the internal work establishing the new subscriber access. When the activation has been completed this is confirmed by sending an NP Complete indication to the NPA.

6. When the NPA receives NP Complete indication from the Recipient Operator, the NPA sends the deactivation request to the Donor Operator, sends a SMS/ email to the Subscriber advising that their number is about to be ported, updates the central reference database with the new porting information on the number(s) in question and distributes a DB Update to update the number portability database on all participating networks with the new porting information.

7. The Donor Operator deactivates the number on its network; confirms by sending an NP deactivation complete message to the NPA.

8. The NPA forwards the NP deactivation complete indication to the Recipient Operator.

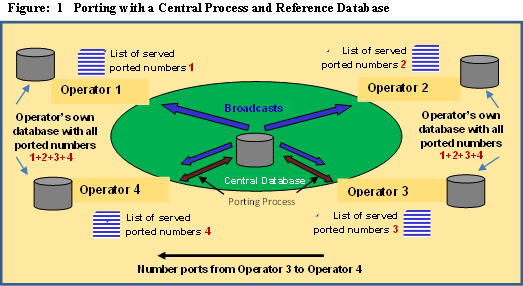
**Porting and Call Routing Obligations**

**2.9** The NP Rules provide that a CRDB method be employed, and that all telecommunications Carriers or Service Providers obliged to implement Number Portability shall share the costs relating to the use of the CRDB and shall also implement the All Call Query (Direct Routing) method. Figure 1 below illustrates the CRDB arrangement to be implemented.

**2.10** Figure 1 shows information flows, the third party central process and reference database that is used for reference information on ported numbers, and also for the order handling and general administration processes. In this diagram, all Operators have implemented All Call Query (ACQ) and all have their own internal NP database with call routing information (down loaded from the central reference database) for all ported numbers on all networks. The “list of served ported numbers” shown as also held by each Operator is a list of the Operator’s existing subscribers whose current numbers are numbers ported in from another network. The list will be used for cross-verification of internal NP database query results that indicate that a called number from a foreign (held by another operator) number block is currently served on the network, and therefore, the call should be terminated there. The messages between operators during the porting process (brown arrows) are passed via the central system. The large blue arrows indicate the broadcast of ported number information from the central reference database to update the internal NP databases of all participating operators. In the illustration a number is ported from operator 3 (donor) to operator 4 (recipient).



**Figure 2: Procurement and operation of the centralised database**



## 3. System Requirements for Central Reference Database Solution

**Service Provision**

**3.1** The CRDB solution is to be provided by the NPA and Applicants must therefore provide a concise overview, with appropriate diagrammatic illustrations, of the architecture of their proposed solution. The solution must provide a common platform with the appropriate service interfaces to support, directly and indirectly, number portability ordering and provisioning, and notification to all telecommunications operators in a fair and equitable manner.

Ordering involves:

* Requesting the porting of a telephone number from another Operator;
* Validation of customers requesting and any relevant credit standing.

Provisioning involves:

Processing of the request by the NPA, the activating/deactivating the ported number in the networks, and updating by operators of their business and operations support systems

**3.2** It is expected that Applicants will be able to provide ordering communication to operators (as per above) notifying them of ‘porting’ events that require their action. This communication must be capable of full automation between the NPA and the operator. The operator will be responsible for implementing an NP “Gateway” solution with the responsibility of managing this automatic communication with the NPA, and the (near) automatic provisioning of the operator’s BSS, OSS and other back office systems. Again, each operator is free to procure this “Gateway” solution from the NPA, should they offer such a solution, or from any other suitable vendor, purely at the operator’s own discretion. .

Notification involves:

Communication of porting information to all Operators so that the networks are synchronised

**3.3** Thus the NPACH must record all relevant data and information related to number portability transactions between the Donor and Recipient Operators for the purposes of auditing, reporting, tracking, and alerting. The NPACH must provide a master database with ported numbers and their associated switch routing information. It must also be flexible in integrating changes in the National Numbering Plan with the ported number database.

**3.4** For each ported number, the CRDB should record, among other things:

• The current serving network

• The Routing Number of the current serving network

• History and details of porting transactions related to the number

• Status (not Ported, Ported, deactivated, etc.)

**3.5** Below is a template of how the number record could be laid out. The intention is that it would be possible to extract statistical information about the amount of times a number has been ported, etc. Applicants should indicate how they would set up the records in their solution and their method of protecting that data (encryption).

|  |  |  |  |
| --- | --- | --- | --- |
| **Field Description** | **Field** | **Size** | **Example** |
| Subscriber Number | 1 | 10 | 8769686035  NPANXXXXXX |
| Status Code | 2 | 1 | 1‐Free to be Ported, 2‐Request to Port in process, 3‐ blocked from subsequent Porting until retention period has ended |
| Current Network Designation | 3 | 10 | NPANXXXXXX  Operators unique identifier |
| Requested Date/Time: that the Request Instruction was sent | 4 | 14 | 20070231142011  8 (yyyymmdd) + 6 (hhmmss) |
| Actual Date/Time: that an Instruction Response  confirming completion of the port was sent | 4 | 14 | 20070231142011  8 (yyyymmdd) + 6 (hhmmss) |
| Port Reference Number | 5 | 13 | 01nnnnnnnnnn  Unique to each operator |
| Counter to indicate the  number of times the number has been ported | 6 | 5 | 0‐99999 |
| Port Reference Number  from previous port | 7 | 13 | 01nnnnnnnnnn |

**3.6** In addition to the main number portability functions, the following functions should be included:

1. Adding new Operators and number ranges;

2. Helpdesk for Operators using Number Portability Administration Service; and

3. Contact point for faults with the Number Portability Administration Service

Number Look‐up Facility

With the introduction of Number Portability it will become increasingly difficult for an Operator to be clearly identified by its central office codes. Should NP participants charge differently for calls that remain on their network (On‐net) versus those that are no longer on their network (Off‐net), it will become more difficult for subscribers to find out how much a particular call will cost. Therefore, Applicants should indicate whether their Number Portability Administration Service can provide a facility accessible over the internet or by SMS or using a voice response system whereby a potential caller can determine which network serves a given number. Applicants should also state whether there would be any additional charge for this facility, providing details on whether this option can be provided from the CRDB.

**Updating of CRDB and Network Operational Databases**

**3.7** The CRDB in the NPACH will not be a network node that will be used for direct queries by Operators for real-time routing of calls, but rather will be used to update each of the participating Operators individual number portability databases. Therefore, each Operator will obtain the correct routing information by using its local copy of ported number information in the CRDB. Updating will be either by real-time updates from porting execution messages, or by regular synchronization with the CRDB. Each operator will be responsible for consequential updating of other switches/data bases within their own networks.

**3.8** The NPA will therefore be accountable for proper maintenance of the database services, ensuring that the information held in the CRDB is accurate and up-to-date where necessary, whilst providing the requisite level of availability to the Operators.

**Dimensions & Scalability**

**3.9** The CRDB should have sufficient capacity at cut-over for the forecast quantity of active numbers for porting services and must be easily scalable and capable of meeting future porting demands.

**Information/Systems Security and Integrity**

**3.10** The information held by the NPACH will be a reference source of information for business and network operational purposes and as such must be maintained with high levels of integrity and security. Applicants are expected to propose strategies for ensuring security and integrity of the systems and data, for example, redundant facilities, duplication of data at separate sites and backup and recovery from failure of hardware elements. The data held should be appropriately available to participating operators and interested third parties in accordance with the relevant provisions in the NP Rules.

**3.11** Applicants should indicate whether they provide support for deposit materials such as customer data (including porting histories) to be placed in technology escrow, and the name of any escrow company that normally provides escrow service to the Applicant.

**Communications Protocols and Network Interface**

**3.12** The NPACH is expected to interface with various network and service environments: fixed; mobile; traditional switch-based; IP-based.

**3.13** Electronic communications between the NPACH and the Operators’ systems should provide for the exchange porting messages in a seamless automated way and must accommodate simultaneous multiple user access. The communication should be based on, but not restricted to, at least the following communication protocols:

• Transaction based communication (TCP/IP)

• File based communication (FTP, SFTP, SCP)

• Web-based communication: HTML, HTTP/SOAP, HTTPS/SSH

• Machine-Machine communication: XML

**3.14** Applicants should describe their proposed communications architecture to interface with the various network and service environments (including details of supported technologies and protocols)

**System Performance Requirements**

**3.15** The operational availability of the Central System should be at least 99.95% during the established working periods of each process or functionality. Regular Support and Maintenance which require downtime to the Central System should be done outside the established porting periods and do not count against the operational availability. These Support and Maintenance activities should be scheduled according to established Service Level Agreements (SLAs).

* 1. The Central System should be recognized as the most accurate and authoritative source of Ported Number information. The accuracy of the CRDB should be at least 99.999 per cent.

**3.17** Completed Porting Requests, including Porting Request history, should be saved in an active database for a period to be agreed with NPA and in a secondary storage device thereafter for a period to be agreed with NPA. All Ported Numbers however, not their transaction history, should be kept in the active database.

**3.18** The Number Portability Administration Service and associated software should allow changes to be made in timings, response reasons and other parameters with minimal additional cost, and shall enable additional Operators to be added to Jamaica’s number portability service (and support mergers or removals of existing operators and the corresponding number ranges) with minimal disruption to existing Operators, minimal additional costs and minimal implementation timeframe

**3.19** Based on the availability levels specified, Applicants shall provide a risk analysis of the proposed design solution.

**3.20** The Mean Time Between Failure (MTBF) of the overall system and where relevant MTBF for essential hardware elements is to be stated. Applicants should also state the typical ‘Mean Time To Repair’ (MTTR), including times for recovery, for major software components.

**3.21** The Applicant shall specify what types of service degradation can occur under fault and/or overload conditions, the design objectives for each type of degradation and the corresponding effect on donor and recipient operators usage of the NPACH.

**3.22** The Central System should be backed up continually. In case of recoverable failures, failure recovery of the system must be completed within a short time frame. It must be possible to back-up the system without disturbing the functionality of the system.

**Service Levels**

**3.23** The table below is a general indication of the service level requirements being sought from the NPA. The Applicants’ Proposals should include service credits for failing to meet an agreed service level.

| **Service Area** | **Specification** | **Minimum Requirement** |
| --- | --- | --- |
| Availability | 24 x 7 | 99% per Month |
| Response time to requests | Interactive - real time | Refer to process documentation |
| Unplanned Outages | Outages in excess of 30 min. | Less than 3 per month |
|  | Outages in excess of 120 min. | Outages in excess of 120 min |
| Reporting | Availability of Administration Service | Weekly |
| Reporting | Reporting % of customers ported in/out against 2 day target | Daily |
| Operational Desk opening hours | To be defined | 100% |
| Progress update | Hourly | 100% |
| Resolution Time | To be defined by Service provider |  |
| Data back-up | Daily | 100% per Month |
| Maintenance window | 0000 – 0600 hours | 100% per Month |
| Notification of planned work | 48 hours | 100% per |
| Notification of emergency work | To be agreed with NPA |  |

**3.24** The Proposal should describe how the NPA will support Fixed and Mobile Operators in the testing of their systems and should outline the tests that the NPA would expect to undertake with each of the Operators individually and jointly.

**3.25** If the Proposal includes the need for an Operator to run an NPA proprietary Number Portability software within its own IT operations, then this section must also cover all the necessary specifications regarding software and hardware that would be required.

**3.26** In addition to the regular operation of the Number Portability Administration Service, the Applicant must include a section on how they would implement and validate a Disaster Recovery process.

**Availability of an NP Administration Service for test purposes**

**3.27** To enable each of the Operators to prepare their own operations for number portability it will be necessary to provide them with independent access to a fully functional test environment.

**3.28** This test environment should allow all of the Operators to, independently of each other, test their interfaces and IT systems with the solution being provided by NPA and to undertake all Porting operations with a "dummy" operator.

**3.29** This test environment should also be available to allow the Operators to test the inter-operator processes and the passing of messages between each combination of real operators.

**Reporting**

**Statistics**

**3.30** The Number Portability Administration Service should produce statistical information related to number portability activities. The statistics should include:

* Number of Porting Approval Requests received by each Donor Operator during the reporting period;
* Number of Porting Approval Requests accepted by each Donor Operator during the reporting period;
* Number of Porting Approval Requests refused by each Donor Operator during the reporting period;
* Number of Porting Approval Responses sent late by each Donor Operator during the reporting period;
* Number of Porting Deactivation Requests received by each Donor Operator during the reporting period;
* Number of Porting Deactivation Requests accepted by each Donor Operator during the reporting period;
* Number of Porting Deactivation Requests refused by each Donor Operator during the reporting period;
* Number of Porting Deactivation Responses sent late by each Donor Operator during the reporting period;
* Number of Porting Approval Requests sent by each Recipient Operator during the reporting period;
* Number of successful Ports to each Recipient Operator during the reporting period;
* Number of uses of each Porting Approval Response Reject reason code by Donor Network;
* Number of uses of each Porting Deactivation Response Reject reason code by Donor Network; and
* Total ported numbers served by each Operator at the end of the reporting period.
* Any other relevant and reasonable measurement required by the OUR
* Hourly transaction reports. These transaction records will include all relevant porting information for all transactions since the last report produced.
* Full DB Dump of all number records (for ad-hoc reconciliation)

**Reporting/Output Format**

**3.31** The Applicants’ Proposals should indicate the level of available customization for “reporting periods” - hourly, daily, weekly and monthly (actual and cumulative basis). Reports and statistics should be:

1. Viewable remotely using a browser (Graphs, tables, etc.); and

2. Downloadable as electronic files (.pdf, .csv, or .xls format).

**Training and Documentation**

**Training**

**3.32** The Proposal must contain proposals for conducting all necessary and appropriate training for relevant stakeholders. The training should be appropriate for:

• Regulatory personnel involved in the monitoring of number portability;

• Operator number portability Sales & Administrative Support teams; and

• Operator IT & Network Management Control teams where applicable.

**3.33** Training should be quoted for, at a minimum, the following two cases:

i. Pre-launch Training – training supplied to the Operators in order to launch number portability to be included in the basic “usage” or annual subscription based pricing; and

ii. Individual Training – training supplied to meet refresher/ update needs of individual Operators following the launch of number portability and/ or to train new Operators who may join and use the Number Portability Administration Service after launch.

**Documentation**

**3.34** Detailed technical and operations manuals for the service should be delivered by the time the initial set‐up has been completed with one hard copy and one soft copy being made available to the OUR and each Operator. Manuals must be in English and must describe actually delivered versions of the service. If modifications have been made to the initial offering, these modifications must be documented and included with any standard documentation.

## 4. Facilities management

**Fault Management Functions**

**4.1** The NPA should produce daily detailed error logs and monthly summaries. This data would be used to determine problem frequency, and would form part of the SLA review process. Applicants should indicate what error logs and reports their solutions provide.

**Hardware & Software Configuration Management**

**4.2** The NPA must follow a structured methodology for installing software patches and/or new functionality in any of the software components, which supply the Number Portability Administration Service. The Applicants should therefore include in their Proposals details of the process they would implement for advising Operators of the need to temporarily suspend operations in order to upgrade the existing system, and how they would plan a reversal should the upgrade not be successful.

**4.3** Applicants should also provide an overview of their systems’ software functionality including: features, and foundation technologies (Oracle, Linux, Windows, MySQL etc).

**Backup, Restore & Disaster Recovery**

**Real-time Backups online**

**4.4** Real time incremental back-ups must be supported as per the SLA.

**Full Backup**

**4.5** The Number Portability Administration Service must support full on-site and off-site (i.e. a support location other than the NPA’s primary operational site/facility) backups. Applicants should indicate how long they estimate it would take to perform a complete backup, where the backup data would be stored and how often off-site backups will be provided. Applicants should also provide details of security plans for the administration service to ensure Jamaican porting data integrity is maintained and protected.

**Restore**

**4.5** It must be possible to restore in no more than six (6) hours but with the restoration being carried out as soon as possible irrespective of the time of day or night.

**4.6 Disaster Recovery**

Bearing in mind the critical nature of this solution, Applicants should describe their experience in designing/providing Disaster Recovery solutions and any experiences they have had when such a recovery was put into action. Applicants should state their disaster recovery/ contingency planning including off site/back-up plans and redundancy/resilience plans.

## 5. Installation and Commissioning

**Provision of Project Plan**

**5.1** Applicants are required to provide a project plan for the installation, commissioning and management of the central reference database and number portability order handling facilities. Applicants shall indicate how the project of installation and commissioning will be managed, including testing.

**5.2**  The activities must include, but are not limited to, the following milestones:

1. Grant of Licence no later than [Date];

2. Specification gathering (including accord on Business Rules) phase sign-off by [Date];

3. Commissioning of the NP Administration Service and initial documentation no later than [Date];

4. Customer acceptance test passed no later [Date] (These tests will need to be defined and agreed during the specification gathering phase of the service implementation plan);

5. Training completed no later than [Date];

6. Final documentation available by [Date]; and

7. Ready to launch by [Date].

**5.3** The final schedule will be agreed between the Number Portability Working Group and the NPA, based on the anticipated timeframes for completion of deliverables indicated by firm dates. All dates will be based on the licence date. Should this date change, the milestones may then be adjusted accordingly. The time schedule must be in accordance with the ability to deliver the required functionality.

## 6. Cost Recovery and Billing

**Charging**

**6.1** The NPA may recover infrastructure and fixed operation and maintenance costs via an annual fee which will be fixed for five (5) years, with no annual price escalators, no transaction volume floor, no transaction volume ceiling, and no recovery or reserve for any unpaid User invoices. This fee will be paid in equal monthly instalments. Thereafter, the NPA will be required to seek the OUR’s approval for any changes in its fees. The NPA will also be allowed to charge the Recipient Service Provider a per port transaction fee, representing the incremental cost associated with the porting transaction. This transactional fee and the annual fee will represent all costs associated with providing this service.

**6.2** The NPA will allocate the annual fixed fee to Service Providers based on their Service Provider Allocation Percentage as determined by the OUR or any other applicable authority. All Service Providers which are not subject to allocable charges will be invoiced an amount to be assessed by the OUR each year, in the form of an annual fee. The NPA shall reduce the overall allocable industry flat fee base with these collected charges.

**Billing of Services**

**6.2** Applicants shall state their proposal for generating accounts to operators for use of the NPACH. A system separate from the reference database could be used, with input of usage information, etc., from the reference database.

## PART 2: Evaluation and Selection Criteria

### Purpose

This Appendix establishes assessment criteria for responses to the *Technical and Price Proposal Requirements Document for the Provision of Number Portability Administration Service in Jamaica.* The assessment criteria are applicable to responses that address the CRDB method.

### Selection Cycle

Applicants are advised that the following cycle of events has been established by the OUR for the selection of the successful Proposal and implementation of the Project:

1. Receipt of Proposals.
2. Preliminary clarifications to address inconsistencies and correct arithmetic errors only.
3. Evaluation by the OUR and identification of the highest ranked Applicant.
4. OUR notifies highest ranked Applicant and informs all others of the ranking of their Proposals.
5. OUR invites highest ranked Applicant to negotiate and finalize Project Agreements.
6. OUR makes recommendation to the Minister for the granting of licence
7. Execution of Project Agreements.
8. Unsuccessful Applicants are informed of completion of the procurement process.

### Evaluation of Proposals

The OUR will evaluate and rank only Proposals that meet the proposal submission requirements of the TPPR. The point-rated criteria method will be used for the evaluation of proposals. Proposals must obtain a required minimum score to be considered responsive.

Acting in its sole discretion, the OUR reserves the right to accept or reject any Proposal and to reject all Proposals, without thereby incurring any liability to the affected Applicants, their agents and/or assigns.

The OUR reserves the right not to recommend any Applicant for grant of Licence to provide Number Portability Administration Services, and may terminate the selection process at any time without thereby incurring any liability to any Applicant, their agents and/or assigns.

The selection process to be used by the OUR will involve the following stages:

* Stage 1: Evaluation of Applicant’s Ability to Implement Project
* Stage 2: Technical Evaluation of Project
* Stage 3: Price Evaluation

Only Proposals which pass Stage 1 will be considered for Stage 2 and only proposals which pass Stage 2 will be considered for Stage 3.

## Stage 1 Evaluation – Applicants’ Ability to Implement Project

### Evaluation Criteria

During Stage 1, a detailed evaluation of corporate and individual qualifications and experiences will be carried out to assess an Applicant’s ability to implement the project. Applicants will be evaluated based on:

1. Experience & Track Record
2. Technical capability and qualifications
3. Ability to implement the project in a timely manner

The OUR wishes to attract Applicants who have a strong track record in the development and implementation, and/or the operation of Number Portability Administration facilities to provide Number Portability Administration Services.

If an Applicant has insufficient experience in any specific area, it may, for the purposes of this project, associate with other individuals or companies who will provide such experience. The qualifications and experience such associate(s) must be demonstrated in the Proposal.

A. Experience & Track Record

Each Applicant must provide information on corporate background, along with a clear account of corporate experience and expertise and a record of actual performance and accomplishment in: the development and implementation of Number Portability Administration Service facilities and/or the operation of such facilities to provide Number Portability Administration Service to telecommunications Operators, in pertinent or comparable small/ medium population jurisdictions. *[Use Form TECH-2]*

B. Technical Capability and Qualification

An Applicant must provide evidence of currently having within its organization the technical capability to manage the anticipated needs for implementation of the proposed project, as well as the operation and maintenance of the various systems.

Curriculum Vitae of key personnel in the areas of project management, engineering, plant construction, and/or operations and maintenance, which the Applicant proposes to employ for technical support and Number Portability Administration Service provision, as well as those to be employed during the negotiation and implementation phases of the project, shall be submitted. *[Use Form TECH-5]*

C. Ability to Implement the Project in a Timely Manner

Each Applicant should provide evidence of its ability to implement the Project within the desired time frame. Where a local facility is to be established, the Applicant should provide any available evidence of relevant design work, local hosting/ support partners/facilities and project execution time frames as well as evidence of previous involvement in similar projects. In the case of a hosted solution the Applicant should provide any available evidence of the availability of the facilities and services. Consideration must be given to the information contained in section 5, in Part 1 above. [*Use own Form and label it TECH-2/2]*

### Evaluation Scores

Each acceptable Applicant's Proposal will be evaluated in accordance with the following criteria and ranked on the basis of the following maximum allocation of points for specific elements of the proposal:

1. Experience & Track Record **[55]**
2. Scale and scope (and period) of engagement in Number Portability Administration facilities development and/or service operations globally.(15)
3. Track record of successful development and management of Number Portability Administration facilities in jurisdictions with similar population and consumer profiles to that of Jamaica. (5)
4. Track record of successful development and management of Number Portability Administration facilities with similar architectural profiles to that being proposed in response to this TPPR; that is, demonstrated ability to offer and manage a hosted solution or demonstrated ability to form local partnerships and deploy a locally based and managed solution (as the case may be) (35)
5. Technical Capability and Qualifications of Key Persons Employed or to be Contracted by Applicant **[25]**
   1. Qualifications of key personnel (as evidenced by CVs) (5)
   2. Experience with existing systems for management of engineering, construction, and/or operations & maintenance of proposed facilities (10)
   3. Experience with existing technologies for Number Portability Administration facilities (10)

1. Ability to Implement the Project in a Timely Manner **[20]**
2. Evidence of workable plans for the development and/or implementation of the proposed or similar Facilities and/or services. (10)
3. Supplier has delivered a similar solution in other jurisdictions on time (10)

Each Applicant will be evaluated based on the above criteria and scores and must achieve a minimum of 75% of the total score for stage 1, to be selected for Stage 2 Evaluation.

The OUR reserves the right to solely determine the acceptability of an Applicant and is not bound to take into account any representation or further information provided to the OUR subsequent to the deadline for submission of Proposals regarding the status of any particular Applicant.

## Stage 2 Evaluations– Technical Evaluation

Proposals of Applicants who achieve or exceed the minimum required score at Stage 1 will be subject to a detailed technical evaluation at Stage 2.

### Evaluation Criteria

Proposals will be evaluated based on technical, operational and physical features and capabilities of the proposed solution. The criteria will focus on, but is not limited to consideration of, information contained in sections 2, 3, 4 and 5 of Section C of this TPPR.

The evaluation will be based on the following:

1. Number Portability Implementation Approach
2. Systems Requirements for CRDB Solution
3. Facilities management
4. Installation and Commissioning

### Evaluation Scores

1. Number Portability Implementation Approach **[20]**

* The Requirements for NP Administration Service (Location and Functionality)
* Porting Processes

1. Systems Requirements for CRDB Solution **[40]**

* Service Provision
* Updating of CRDB and Network Operational Databases
* Dimensions & Scalability
* Information/Systems Security and Integrity
* Communications Protocols and Network Interface
* System Performance Requirements
* Service Levels
* Availability of an NP Administrative Service for test purposes
* Reporting
* Training and Documentation

1. Facilities management **[30]**

* Fault Management Functions
* Hardware & Software Configuration Management
* Backup, Restore & Disaster Recovery

1. Installation and Commissioning **[10]**

* Provision of Project Plan

Each Applicant must achieve a minimum of eighty percent (80%) of the total score for stage 2 to be selected for Stage 3 Evaluation.

## Stage 3 Evaluations- Price Evaluation

The Price Proposals shall be opened for only those Applicants who qualify in the Technical Evaluation. The selection of the winning Applicant shall be based on the lowest quoted overall fees. If more than one Applicant provides the lowest such quoted rate, the OUR will seek the best and final offers from these Applicants. The Applicants will be notified of the date and time in which the best and final offer must be returned. Proposal rankings will be adjusted in light of the new information received in the best and final offer. The lowest valid offer among these Applicants shall be declared successful for the award of the licence. A discount rate of twelve percent (12%) will be utilized for the evaluation of Price Proposals.

The total annual number of ports assumed, **for evaluation purposes**, for the first five years is as follows:

|  |  |  |
| --- | --- | --- |
| **Year** | **Percentage of Subscription Base[[6]](#footnote-6)** | **Total Number of Ports** |
| Year 1 | 5 | 135,564 |
| Year 2 | 4 | 108,451 |
| Year 3 | 3 | 81,338 |
| Year 4 | 2 | 54,226 |
| Year 5 | 2 | 54,226 |

## Reporting Relationships

For administrative purposes the selected Applicant will communicate with the Office through Mr Curtis Robinson **Manager, Technical Services**. Communications from the Office to the selected Applicant will be addressed to the Project Manager.

|  |  |  |  |
| --- | --- | --- | --- |
| **STAGE 1 & STAGE 2 EVALUATION RESULTS** | | | |
| **ITEM** | **EVALUATION CRITERIA** | **WEIGHT** | **SCORE** |
| **STAGE 1 EVALUATION – APPLICANT’S ABILITY TO IMPLEMENT PROJECT** | | | |
| **1** | Experience & Track Record | 40 |  |
| **2** | Technical capability and qualifications | 35 |  |
| **3** | Ability to implement the project in a timely manner | 25 |  |
| **TOTAL--** | | **100** |  |
| **STAGE 2 EVALUATION – TECHNICAL EVALUATION** | | | |
| **1** | Number Portability implementation approach | 20 |  |
| **2** | Systems requirements for CRDB solution | 40 |  |
| **3** | Facilities management | 30 |  |
| **4** | Installation and Commissioning | 10 |  |
| **TOTAL--** | | **100** |  |

# LIST OF PROPOSALS SUBMISSION FORMS (ANNEXURES)

## FORM TECH-1 Proposal Submission Form

## FORM TECH-2. Respondent’s Organization and Experience

## FORM TECH-3 Comments and Suggestions

## FORM TECH-4. Team Composition and Task Assignments

## 

## FORM TECH-5. Curriculum Vitae (CV) For Proposed Professional Staff

## PRICE PROPOSAL FORMS

# LIST OF APPENDICES

## PROCEDURES FOR PROCESSING APPLICATIONS FOR LICENCES

## LICENCE APPLICATION FORM

## OUR APPLICANT VERIFICATION FORM

## CONDITIONS TO BE INCLUDED IN THE LICENCE

(**Double-Click** the Document Objects on the Following Pages to Open the Corresponding Documents)











**





**APPENDIX 1**

**PROCEDURES FOR PROCESSING APPLICATIONS FOR LICENCES**

(Double-Click Document Object on Next Page to Open Document in Microsoft Word)



**APPENDIX 2**

**LICENCE APPLICATION FORM**

(Double-Click Document Object on Next Page to Open Document in Microsoft Word)



**APPENDIX 3**

**OUR APPLICANT VERIFICATION FORM**

**ADDENDUM TO LICENCE APPLICATION**

**OUR APPLICANT VERIFICATION FORM**

**Please print or type when completing Form ADDENDUM NO. 2 TO LICENCE APPLICATION**

Name of Entity:

Address of Registered Office:

Telephone: Telefax: Email:

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *Full Name of Current Shareholders* | | | *Address* | *Share-*  *holding* | *Date of Birth*  *D M Y* | | | *Place of Birth*  *Parish District Other* | | | *National ID* | *TRN* | *Nationality* |
| *Surname* | *First* | *Middle*  *Initial* |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Name of Directors | | Middle  Initial | Address | Share-  holding | Date of Birth  D M Y | | | Place of Birth  Parish District Other | | | National ID | TRN | Nationality |
| Surname | First |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Name of Verifying Officer:

Secretary Managing Director / General Manager

Print Name Print Name

Public Liability companies need not record shareholdings of less than 10%

**For OUR use only**

Approval: The Application has been approved by:

Signature

OFFICE OF UTILITIES REGULATION

**APPENDIX 4**

**CONDITIONS TO BE INCLUDED IN THE LICENCE**

(Double-Click Document Object on Next Page to Open in Microsoft Word)



1. http://www.orcjamaica.com [↑](#footnote-ref-1)
2. http://moj.gov.jm/sites/default/files/laws/Registration%20of%20Business%20Names%20Act.pdf [↑](#footnote-ref-2)
3. http://www.orcjamaica.com/profile/ [↑](#footnote-ref-3)
4. http://www.miic.gov.jm/Companies\_Act\_2004\_v1.pdf [↑](#footnote-ref-4)
5. [http://www.our.org.jm/index.php?option=com\_content&view=article&id=1138:NPA-area-code-relief- planning&catid=223:other](http://www.our.org.jm/index.php?option=com_content&view=article&id=1138:npa-area-code-relief-%20%20%09planning&catid=223:other) [↑](#footnote-ref-5)
6. Total Subscriptions as at December 2012: 2,711,276. [↑](#footnote-ref-6)