



**CANADIAN NUMBERING ADMINISTRATION CONSORTIUM INC./  
CONSORTIUM DE GESTION DE LA NUMÉROTATION CANADIENNE INC.  
(CNAC)**

Request For Proposals

Perform the Functions of  
Canadian Numbering Administration (CNA)  
For the Period  
1 January 2024 to 31 December 2028

**Proposal Due Date: 13 January 2023**  
(See full RFP Deadlines and Key Dates in Section 1.9)

7 October 2022

## **CONFIDENTIALITY**

This Request for Proposals (RFP) and any other information furnished hereunder, regardless of the medium, is to be used solely for the purposes of responding to this RFP. All such documents and information issued with this RFP and submitted in response to this RFP shall remain the property of Canadian Numbering Administration Consortium Inc./Consortium de Gestion de la Numérotation Canadienne Inc. (CNAC). CNAC may identify some information as confidential and, in such case, prospective Bidders shall have a fiduciary obligation to keep all such information confidential and to return or destroy any such confidential information upon request of CNAC. Reproduction of any part of this RFP is authorized only for the preparation of your response to this RFP. Any confidential information shall not be disclosed to any of your employees who do not have a “need to know” or to any third party without the prior written consent of CNAC. All copies of any such confidential portions (in all forms and media) are to be destroyed when no longer required in connection with this RFP.

Any information included in a proposal submitted in response to this RFP that is proprietary or confidential must be clearly marked as such. Such information should be submitted in a format that will allow CNAC to separate the parts of the proposal that are considered proprietary or confidential from other parts of the proposal. All pricing information in a proposal should be marked confidential. Any information or document that is not clearly marked as confidential shall be considered by CNAC to be non-confidential and treated as such.

CNAC will use its reasonable best efforts to ensure that information submitted in a proposal which is marked proprietary or confidential will not be disclosed to any person other than the directors, officers, employees, agents, and contractors of CNAC or its respective shareholders who have a “need to know” such information or its professional advisors for the purposes of assisting in the Bidder selection process. Such information will not be shared with the Bidder that currently performs the Canadian Numbering Administration (CNA) function.

Information included in a proposal which is marked proprietary or confidential but which:

- is or becomes generally available to the public;
- CNAC or its directors, employees, agents, and contractors receive from a third party who had obtained the information lawfully and was under no obligation of secrecy; or
- CNAC or its directors, employees, agents, and contractors can show was in its possession before receipt of such information in the proposal;

shall not be regarded as proprietary or confidential information by CNAC.

CNAC will have the right in any event to make public the names of all persons or entities submitting proposals in response to this RFP.

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# **1 GENERAL INFORMATION**

## **1.1 Invitation to Bid**

Qualified Bidders (see Section 1.3 below) are invited to submit proposals to operate as the Canadian Numbering Administrator (CNA) for the five-year period from 1 January 2024 to 31 December 2028 following the expiry of the current agreement with the existing Bidder on 31 December 2023. For the purposes of this RFP, qualified Bidders shall be referred to as “Bidders”.

Once a proposal is submitted it may only be amended by Bidders during the evaluation period on the consent of CNAC. A proposal may be withdrawn by a Bidder, at any time on notice to CNAC. Proposals that are withdrawn will no longer be considered by CNAC and may not be resubmitted in any form.

This RFP is not a request for tenders, and proposals submitted in response to this RFP are done on a voluntary basis and shall not constitute tenders. CNAC is not obligated to accept any proposal or to enter negotiations for an agreement with any person submitting a proposal.

The tasks and requirements of the CNA are set out in Article 2 of this RFP and include those currently being performed by the existing CNA as well as additional tasks that are expected to be required during the next agreement term.

## **1.2 Notice of Intent**

Bidders are requested, but not required, to send notice of their intent to respond to this RFP to CNAC by the Due Date as specified in the CNA RFP Schedule (see Section 1.9 below). Only Bidders that have notified CNAC of their intent to respond to this RFP shall be entitled to receive any notices issued by CNAC concerning this RFP, including, but not limited to, any changes made to the RFP schedule.

## **1.3 Eligibility to Submit Proposals**

To be eligible to be awarded an agreement pursuant to this RFP, the Bidder must satisfy each of the following criteria at the time of the execution of the agreement (the “**Eligibility Criteria**”):

The Bidder must:

- 1) not be: (i) a telecommunications service provider (TSP); (ii) affiliated,<sup>1</sup> by common ownership or otherwise, with a TSP;<sup>2</sup> or (iii) employed by or an independent contractor with or for a TSP;<sup>3</sup>

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<sup>1</sup> The definition of “affiliated” shall be based on the definition of “affiliate” and the meaning of “affiliated body corporate” set out, respectively, in subsections 2(1) and 2(2) of the *Canada Business Corporations Act*.

<sup>2</sup> A TSP is an entity, which provides telecommunications services to the public for compensation.

<sup>3</sup> A Bidder that is providing incidental business services to one or more TSPs as part of its general business shall not be considered a violation of the Eligibility Criteria.

- 2) not be a governmental body<sup>4</sup> nor owned by or affiliated with, any governmental body; and
- 3) be a Canadian entity<sup>5</sup> resident in Canada.

Non-Canadian entities that otherwise satisfy the above Eligibility Criteria may submit responses to this RFP; however, they must create Canadian entities with staff and premises in Canada for the purpose of executing an agreement with CNAC and for performing the functions of the CNA.

#### **1.4 RFP Process Information**

This RFP was developed, approved, and released by CNAC. In addition to other rights identified elsewhere in this RFP, CNAC reserves the rights to, at its sole discretion: (i) add, delete and/or amend the terms of this RFP, including the RFP schedule and terminating the RFP process completely; (ii) accept or reject, in whole or in part, any or all proposals; and (iii) require any documents submitted by a Bidder to be reviewed and evaluated, at the Bidder's cost, in confidence by any party, including independent consultants.

CNAC may conduct negotiations with multiple Bidders to select a final Bidder with which to enter a contract. The evaluation of proposals will be based upon a combination of the Bidders' abilities to comply with the requirements contained in this RFP and the value proposition proposed by the Bidder.

#### **1.5 Evaluation Process**

The evaluation of proposals by CNAC will be based upon multiple factors, including a combination of the Bidder's abilities to comply with the requirements set out in this RFP and the value proposition proposed by the Bidder.

#### **1.6 No CNAC Liability**

The costs of preparing and filing questions, responses to questions, and the proposal in response to this RFP, including the costs of meeting and liaising with CNAC and participating in evaluations of the proposal and any system components described in the proposal, shall be the sole responsibility of the Bidder.

No contractual or other obligations or liability are assumed by CNAC or any of its directors, officers, employees, agents, contractors, and shareholders in issuing the RFP, responding to Bidder questions, receiving, accepting, and evaluating proposals, and/or making a preliminary or final Bidder selection.

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<sup>4</sup> e.g., government department, commission or agency.

<sup>5</sup> i.e., a person, partnership or corporation established or recognized under the laws of Canada, or any province or territory thereof.

This RFP should not be construed in any manner to give a right to Bidders, for any claim whatsoever to CNAC for reimbursement of cost for any efforts expended by any person in preparation of a proposal.

### **1.7 Agreement Negotiations**

Upon CNAC selecting one or more preferred proposals, CNAC shall commence negotiations with the applicable Bidder(s) the terms and conditions of the formal agreement. This RFP and the Bidder's proposal will be included by reference in the formal agreement together with such terms and conditions as may be agreed to between CNAC and the Bidder. CNAC will be required to notify the CRTC prior to execution of the agreement with the Bidder as CNAC operates under the delegated authority from the CRTC and as a result the CRTC has final control and authority to make changes to this RFP and the contractual terms of the formal agreement.

### **1.8 Publicity**

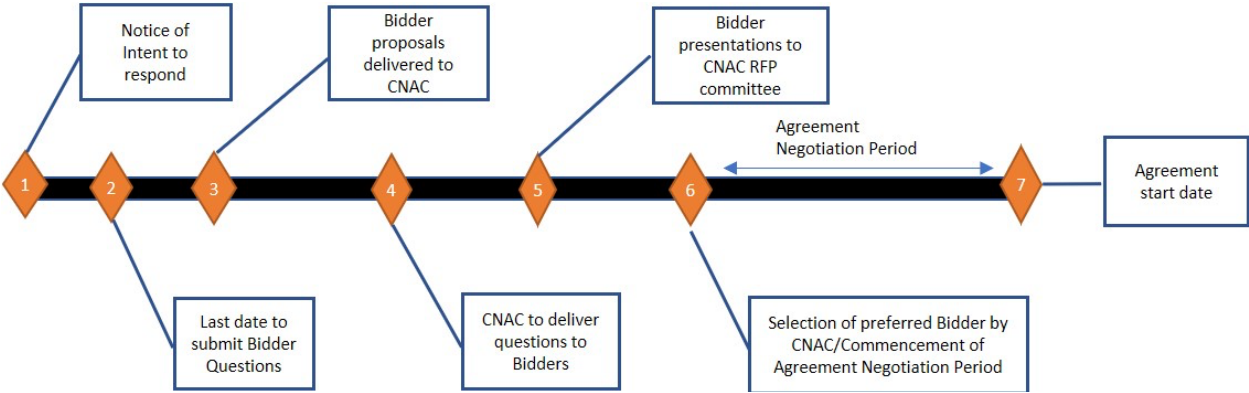
No publicity or news releases pertaining to this RFP, a proposal submitted in response to this RFP, discussions of any kind regarding this RFP, or agreement negotiations may be released by a Bidder or its subcontractors without the prior written approval of CNAC.

**1.9 RFP Deadlines and Key Dates**

The due date for important activities under this RFP is set out in the table below. CNAC reserves the right to change the activities and/or due dates set out in the table below at any time. In the event of any change, CNAC will send a notice of the change to all Bidders that submitted a Notice of Intent to Respond as well as publish a notice on [www.cnac.ca](http://www.cnac.ca) (the CNA website).

<b>CNA RFP SCHEDULE (RFP Released to public – 07-10-22)</b>		
#	Event/Activity	Due Date/Completion Date
<i>Pre-Bid Phase</i>		
1	Notice of Intent to Respond	04-Nov-22
2	Last date to submit Bidder questions, if any, regarding the RFP to be delivered to CNAC <sup>I</sup>	18-Nov-22
3	Bidder Proposals to be delivered to CNAC	13-Jan-23
<i>Post Delivery of Bid Stage</i>		
4	CNAC to deliver questions to Bidders regarding proposals submitted <sup>II</sup>	10-Feb-23
5	Bidder presentations to CNAC RFP Committee (in person or video conference)	01-Mar-23
6	Selection of Preferred Bidder by CNAC RFP/ Commencement of Agreement Negotiations	01-Apr-23
7	Agreement start date	1-Jan-24

- Notes: I. CNAC will generally respond to Bidder questions within five business days  
 II. Bidders will be required to respond to CNAC questions within five business days.





The proposal in response to this RFP as well as any notices, documents, administrative inquiries or questions related to this RFP should be directed to CNAC at the following address:

CNAC  
21 – 5480 Canotek Road  
Ottawa, Ontario  
K1J 9H7

Attention: Gary Jessop, Corporate Secretary  
Telephone: (613) 627-0727 x100  
e-mail: [rfp@cnacexec.ca](mailto:rfp@cnacexec.ca)

### **1.10 Disclaimer**

This RFP may include unintended errors, omissions, and/or deficiencies. Therefore, the accuracy and completeness of this document and related documents are not guaranteed. If such errors, omissions, and/or deficiencies are discovered by the Bidder, the Bidder shall notify CNAC promptly. CNAC will attempt to clarify any such errors, omissions, or deficiencies to all Bidders who have indicated an interest in responding to this RFP.

Each Bidder is expected to examine the specifications and instructions contained in this RFP carefully. Calculation errors shall be the Bidder's risk. In the event of a Bidder's error in price, time, or calculations, if such error is in favour of CNAC, at CNAC's option the error shall prevail without recourse or liability against CNAC. Bidders shall indemnify and hold CNAC harmless from any claim, demands, or actions in the event of any such Bidder errors.

### **1.11 CNA - Background**

The CNA is responsible for the administration of Canadian numbering resources for the Canadian telecommunications industry.<sup>6</sup> The CNA also works cooperatively with the North American Numbering Plan Administrator (NANPA), the Canadian Radio-television and Telecommunications Commission (CRTC), iConnectiv, LLC (iConnectiv), and Canadian telecommunications service providers (TSPs) to ensure the effective and efficient use of North American Numbering Plan (NANP)<sup>7</sup> and International Telecommunications Union (ITU) resources in Canada.

Pursuant to CRTC directive, the costs to administer Canadian numbering resources are funded by the individual Canadian TSPs that use and obtain a benefit from Canadian numbering resources. The total

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<sup>6</sup> The administration functions expected to be performed are more fully set out elsewhere in this RFP.

<sup>7</sup> NANP is the basic addressing scheme for the Public Switched Telephone Network (PSTN) in the following countries currently in Country Code 1 (formerly known as World Zone 1): Anguilla, Antigua & Barbuda, Bahamas, Barbados, Bermuda, British Virgin Islands, Canada, Cayman Islands, Dominica, Dominican Republic, Grenada, Jamaica, Montserrat, Sint Maarten, St. Kitts & Nevis, St. Lucia, St. Vincent & the Grenadines, Trinidad & Tobago, Turks & Caicos Islands, and the United States (including Puerto Rico, the U.S. Virgin Islands, Guam, Northern Mariana Islands and American Samoa). The format of the NANP follows International Telecommunications Union (ITU) standards as detailed in Recommendation E.164.

numbering administration cost is collected annually from the TSPs by CNAC through a funding mechanism.<sup>8</sup>

Separate from the CNA administrative duties, the selected Bidder may offer Enterprise Services<sup>9</sup> and/or Industry Notification Services to TSPs that request the same. Enterprise Services offered by the selected Bidder will not be included as part of the fee payable by CNAC and the CNA will be responsible for billing and collecting such amounts directly from individual TSPs on a fee for service basis.

Please see Schedule 1.0 for additional information regarding Canadian numbering administration history and related information.

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<sup>8</sup> The current funding mechanism was proposed by the Canadian Steering Committee on Numbering (CSCN) and approved by the CRTC.

<sup>9</sup> Enterprise services (Enterprise Services) are any services related to numbering provided by the CNA to TSPs that are not identified in this RFP and are not specifically addressed in the agreement with CNAC.

## **2 REQUIREMENTS**

Bidders must address each of the requirements set out below in their proposals. When formulating proposals, Bidders can assume cooperation from the existing CNA during the implementation stage. A failure to address one or more of the below may be held against the Bidder in the consideration by CNAC of its proposal.

### **2.1 General**

#### **2.1.1 Subcontractors**

Bidders may engage the services of subcontractors to provide one or more elements of its proposal. However, the Bidder shall be the single point of contact for CNAC and must remain responsible for the work of any subcontractor. Proposals must clearly state the names and the roles and responsibilities of all subcontractors that are expected to provide parts of the total solution. All subcontractors must also satisfy the Eligibility Criteria. If no subcontractors are to be used, this should be stated in the Proposal.

#### **2.1.2 Neutrality**

Each Bidder must identify in its proposal, both in respect of itself and in respect of any subcontractors to be engaged by it, the nature and extent of existing or pending corporate, financial, contractual, or other material relationships with:

- 1) CNAC and its respective directors, officers, employees, agents, contractors, and shareholders (see Schedule 5.0), and
- 2) Canadian TSPs and/or non-Canadian TSPs or any of their affiliates, including telecommunications common carriers and resellers, who may make use, directly or indirectly, of Canadian numbering resources and the CNA's services as defined in this RFP, including, but not limited to, information regarding any agreements between the Bidder and its affiliates with such TSPs and their affiliates.

In addition, all proposals are required to provide in a separate and clearly identified section, a detailed description of the operational, administrative, and procedural practices proposed by the Bidder to ensure that CNA services will be provided to all TSPs in Canada without undue discrimination or preference. This section should also include how the Bidder's non-CNA operations that provide services to TSPs will be kept separate and distinct from the CNA operations.

### **2.2 CNA Functions and Requirements**

The mandate of the CNA is to provide numbering administration services to the Canadian telecommunications industry under the supervision of CNAC. The functions to be performed by

the CNA are described in number administration and other guidelines and documents developed or adopted by the CSCN, agreed by the CISC, and approved by the CRTC from time to time. The CSCN, the CISC and the CRTC may modify some and/or all these guidelines and documents in the future, including during the next term of the agreement. Current copies of applicable guidelines and related documentation are identified in Article 5 of this RFP and they may be obtained from the CNAC web site. <https://cnac.ca/>.

CNAC has examined the volume of work associated with performing numbering administration functions in Canada during past years and has estimated the volume of work expected during the next five (5) year term. CNAC does not warrant the accuracy of these estimates, as the historical work volumes have varied significantly from year to year and the impact of the changing economic, competitive, and regulatory environment is uncertain. The estimates provided in this RFP should be used solely as a guideline to assist Bidders in preparing their proposals and the information provided is not a guarantee of the future work to be expected.

The functions required to be performed by the CNA are split into five primary categories:

- 1) CSCN Secretary & Chair.
- 2) CO Code Administration.
- 3) NPA Relief Planning.
- 4) Canadian Numbering Resource Administration.
- 5) NANPA-Administered Resources.

Each of these 5 primary categories are summarized below. This is a non-exhaustive list of functions that CNAC would expect to include in any agreement with a Bidder, and these functions are in addition to the terms and conditions specified in other parts of this RFP. Any agreement negotiated and executed by CNAC and a Bidder may encompass additional functions and may contain other terms and conditions as may be negotiated between CNAC and the Bidder.

### 2.2.1 CSCN Secretary & Chair

#### 2.2.1.1 *CSCN Secretary*

The CNA shall perform the duties of the CSCN Secretary in accordance with the CSCN Administrative Guidelines, as may be amended from time to time. Such duties include but are not limited to:

- 1) Attend all meetings of the CSCN.
- 2) Assign a number to each CSCN “TIF” (short for “Task Information Form” which sets out how work is to be managed and performance tracked) upon acceptance of the TIF by the CSCN and confirm that number when the TIF has been accepted by the CISC.
- 3) Assign a number to each TIF Report (a report prepared on the completion of a task) approved by the CSCN and forward to the CISC.

- 4) Maintain a centralized file of the following documents:
  - a) numbering administration guidelines applicable in Canada;
  - b) TIFs, TIF-related documents and TIF Reports; and
  - c) other documents requested by the CSCN (e.g., incoming, and outgoing correspondence, CNA Reports).
  
- 5) Record the minutes of all CSCN meetings and distribute them in “draft” form to the CSCN preferably within five, but no later than 10, business days after the meeting. If any concerns are raised within 10 business days of the date that the CNA distributes the draft minutes to the CSCN, the CSCN Chair will attempt to resolve the concern with the assistance of the CSCN Secretary and the parties involved. If necessary, the CSCN Chair shall convene a CSCN conference call to resolve any concerns about the minutes. The CNA shall submit the approved minutes to the CRTC for posting on the CRTC CISC website. The minutes of CSCN meetings shall include:
  - a) list of participants;
  - b) list of Agenda items (e.g., TIFs) discussed;
  - c) summary of discussion of each Agenda item;
  - d) points noted at the request of participant(s) including attribution if requested;
  - e) agreements reached (e.g., meeting agenda(s), acceptance of new TIFs, change in status or deletion of TIFs, TIF Reports, meeting/conference call dates and locations, outgoing CSCN correspondence, etc.); and
  - f) action Items including clear statements of what is to be done, who will do it, and applicable deadlines.
  
- 6) Establish and maintain a CSCN Participant List, including any special lists requested by the CSCN.
  
- 7) Maintain and edit draft documents (e.g., numbering administration guidelines, correspondence) at CSCN meetings, upon request.
  
- 8) Submit electronic copies of all CSCN meeting minutes and documentation to the CRTC at [procedure@crtc.gc.ca](mailto:procedure@crtc.gc.ca) for publication on the CRTC website at [www.crtc.gc.ca](http://www.crtc.gc.ca).
  
- 9) Perform such other duties as may be prescribed from time to time by the CSCN.

CSCN meetings may be of two types: (i) face-to-face meetings, and (ii) conference calls or via Video Conferencing.

Face-to-face meetings are held in locations where CSCN participants volunteer to host them, normally held in major Canadian cities. The full CSCN (excluding task forces) generally meets about three times each year for one to three days at a time; however, the quantity of meetings may vary depending upon the workload at the CSCN.

In accordance with the CSCN Administrative Guidelines, establishment of CSCN meeting agendas will be conducted by teleconference at a minimum of two weeks prior to a coinciding

CSCN meeting. The CSCN may also hold conference calls as necessary to address numbering issues as they arise. Such CSCN conference calls are generally scheduled at the request of the chair or participants to address issues that must be addressed prior to the next scheduled face-to-face or video conference call meeting of the CSCN. CSCN conference calls generally last from one to three hours depending upon the quantity of issues under discussion and the nature of those issues.

CSCN minutes are to be issued in accordance with the requirements contained in the CSCN Administrative Guidelines.

The CNA may be required to provide professional editorial services upon request of the CSCN to assist in the final stages of preparation of new guidelines and revisions of existing guidelines.

#### 2.2.1.2 *CSCN/RPC Chair*

The CNA is required to act as Chair of the CSCN, CSCN Task Forces and Relief Planning Committees in accordance with the CSCN Administrative Guidelines, as may be amended from time to time. The duties of the CSCN and RPC Chair include but are not limited to:

- 1) Providing the chair for all CSCN, CSCN Taskforce and RPC meetings.
- 2) Naming a secretary for all the above meetings.
- 3) Obtaining a task force champion to further the work of all task forces.
- 4) Ensuring the development of a meeting agenda.
- 5) Ensuring a venue for each meeting or make available a process for virtual meetings.
- 6) Maintaining control of the meeting by moderating and directing discussions, and conclude meetings with future dates and straw agreements.
- 7) Holding agenda setting conference calls two weeks before each CSCN meeting and finalize agendas.
- 8) Resolving issues with respect to meeting minutes.

#### 2.2.2 Central Office Code Administration

The CNA is required to perform the following tasks with respect to the administration of Central Office Codes (CO Codes) within the Canadian Geographic Numbering Plan Areas (NPAs) in accordance with the Canadian Central Office Code (NXX) Assignment Guideline and other related tasks where necessary.

The duties of the CNA related to the administration of CO Codes include, but are not limited to:

- 1) Ensuring applicants for CO Codes have obtained CRTC regulatory approval to be assigned a CO Code.
- 2) Assigning CO Codes to Service Users in accordance with the Canadian Central Office Code (“NXX”) Assignment Guideline (“Guideline”).
- 3) Inputting CO Code data into the iConnective database system (i.e., ACD screen data) coincident with the assignment of each CO Code.
- 4) Updating CO Code data in the iConnective database system upon request by the service user.
- 5) Reclaiming CO Code Assignments and notifying the industry in accordance with the Guideline.
- 6) Following the process to reassign CO Code(s) assigned to service users that cease operation in an exchange area.
- 7) Conducting the Reserved and Held Telephone Numbers Report process and other activities required by the Guideline and its appendixes.

### 2.2.3 NPA Relief Planning

The CNA shall perform the following tasks with respect to NPA Relief Planning within the Canadian Geographic Numbering Plan Areas (NPAs) in accordance with the Canadian NPA Relief Planning Guideline and other related tasks where necessary by:

- 1) Conducting annually the Canadian Numbering Resource Utilization Forecast in accordance with the Canadian Numbering Utilization (C-NRUF) Guideline.
- 2) Performing Relief Number Resource Utilization Forecasts (R-NRUF) for NPAs where the C-NRUF indicates that the NPA will exhaust within a 6 year time frame.
- 3) Performing Jeopardy Number Resource Utilization Forecasts (J-NRUF) for NPAs where the R-NRUF indicates that the NPA will exhaust within the time frames listed in Section 9 of the NPA Relief Planning Guideline.
- 4) Developing the Initial Planning Document (IPD) as a straw plan for implementing relief in the affected NPA.
- 5) Forming, chairing and providing the secretary and relief planning manager for the Relief Planning Committee (RPC) to develop the relief Planning Document (PD) and Relief Implementation Plan (RIP).
- 6) Forwarding the PD and RIP to the CISC and CRTC for approval.

- 7) Requesting the North American Numbering Administrator to assign the chosen NPA Code to the affected area in accordance with the Canadian Adjunct to the INC NPA Allocation Plan and Assignment Guidelines, following CRTC approval.
- 8) Developing and issuing the Planning Letter (PL) following CRTC approval.
- 9) Overseeing the implementation of the plan in accordance with the CRTC Decision.
- 10) Maintaining a list of NPAs in relief and their predicted exhaust dates.

#### 2.2.4 Administration of Canadian Numbering Resources

The CNA shall perform the following administrative tasks in relation to Canadian numbering resources in accordance with the associated assignment guidelines:

- 1) Receive, validate, and process requests and maintain records for NPA 600 NXX Codes (including reclamations and other administrative tasks where necessary).
- 2) Receive, validate, and process requests and maintain records for NPA 6YY NXX codes (Canadian nongeographic NPAs used for Machine to Machine (M2M) or Internet of Things (IoT)) (including reclamations and other administrative tasks where necessary).
- 3) Receive, validate, and process requests and maintain records for Canadian Geographic and Non-Geographic NPA NXX Codes (including reclamations and other administrative tasks where necessary).
- 4) Receive, validate, and process requests and maintain records for Emergency Service Routing Digit Blocks (ESRD Blocks) (including reclamations and other administrative tasks where necessary).
- 5) Receive, validate, and process requests and maintain records for International Mobile Station Identity codes (IMSI) (including reclamations and other administrative tasks where necessary).
- 6) Receive, validate, and process requests and maintain records for System Identification Number (SID) codes (including reclamations and other administrative tasks where necessary).
- 7) Receive, validate, and process requests and maintain records for MIN Block Identifier (MBI) Codes (including reclamations and other administrative tasks where necessary).
- 8) Maintain and publish the assignment information for Canadian numbering resources including approved applications of N11 codes in Canada.
- 9) Prepare and publish the CNA annual report on the status of Canadian numbering resources (see past annual reports at [www.cnac.ca](http://www.cnac.ca)).



- 10) Seek clarification of industry guidelines from the CSCN, as necessary (e.g., to assist the CNA in applying the guidelines where guidelines are not clear).
- 11) Provide reports to CSCN on various numbering topics upon request.
- 12) Identify to interested parties which numbering resource guidelines are applicable in Canada and provide clarification with respect to the application of any such guidelines.
- 13) Participate in the CNA performance review process.
- 14) Investigate number assignment and administration issues as requested by the CSCN and CNAC.
- 15) Seek resolution, as necessary, from CSCN and/or the CRTC of number assignment and administration issues including interpretation of industry guidelines of concern to the CNA.
- 16) Participate in and provide informational support to the CSCN and any special CSCN task forces on request (in addition to CSCN Secretary/Chair role).
- 17) Liaise and coordinate the CNA's activities with the NANPA to ensure effective and efficient use of NANP resources in Canada.
- 18) Establish and maintain continuing relationships with TSPs, NANPA, iConnective, and the CRTC on numbering administration matters.
- 19) Attend Industry Numbering Committee (INC) meetings (when determined necessary) to develop and maintain knowledge of numbering activities at the INC and provide a written report to the CSCN after each INC meeting, identifying issues and assessing the potential impacts of any INC activities on Canadian numbering and on the CNA functions.
- 20) Respond to requests from Canadian TSPs, Innovation, Science and Economic Development Canada (ISED), the CRTC and the media with respect to Canadian numbering resources and their administration.
- 21) Be the primary repository for numbering information for the Canadian telecommunications industry.
- 22) Be able to communicate, both orally and in writing, in the two Canadian official languages, English and French.
- 23) Communicate with the media (e.g., newspapers, radio, television, etc.) as directed in various guidelines in a cost-effective manner to provide basic information on numbering administration matters such as NPA relief planning and implementation.

The CNA generally prepares reports for each CSCN meeting that includes an update on NPA relief planning activities and on INC issues. It is anticipated but not guaranteed that such

requests for reports will be made about four times per year. In addition, the CNA may be required to provide further reports from time to time in addition to the above.

The CNA is required to attend all CSCN and related task force meetings and conference calls. Historically the CSCN has conducted all meetings as CSCN meetings and avoided the use of special task forces; however, should the CSCN choose to use a special task force during the agreement period, the CNA will be expected to attend the meetings of such task force and the CNA will be required to run the Task Force meetings.

It is not expected nor required that the CNA attend INC and INC Task Group or Working Group meetings, however, the CNA is required to develop and maintain knowledge of numbering activities at the INC and assess the impacts of any INC activities on Canadian numbering and CNA functions. The CNA has the discretion to determine how to accomplish this task. CNAC expects that this task could be done, at a minimum, by monitoring the INC minutes, reports, and other outputs. Nevertheless, the CNA may attend INC meetings at its discretion if it determines attendance is necessary to performing its duties as CNA.

#### 2.2.5 NANPA-Administered Resources

The CNA shall perform the following tasks with respect to the NANP number resources administered by the NANPA:

- 1) Receive, validate, and forward applications from Canadian entities to the NANPA for assignment of:
  - a) NPA 900 NXX Codes;
  - b) NPA 800-855-XXXX line numbers; and
  - c) Carrier Identifications Codes (CICs).
- 2) Other service codes as directed by regulatory or industry requirements.
- 3) Initiate reclamation of numbering resources when required in accordance with numbering guidelines.

#### 2.2.6 CCS / SS7 Point Codes

The CNA shall perform the following tasks with respect to the CCS / SS7 Point Codes:

- 1) Maintain the current iConnective application Guidelines and Forms on the CNA website.
- 2) Maintain a copy of the GTT Point Code Industry Notification Process document on the website.
- 3) Maintain a copy of the GTT Point Code Industry Notification Nondisclosure Agreement on the website.
- 4) Maintain the Recipient Point Code Distribution List.

- 5) Forward a copy of the Recipient List to eligible requesters upon request.

#### 2.2.7 Additional requirements

As of the date of this RFP, the CSCN has submitted a report to the CRTC dealing with number exhaust issues. Specifically, this report deals with potential measures to mitigate NPA exhaust in Canada. There is a potential for an additional role for the CNA due to the anticipated CRTC decision. CNAC has been monitoring the outcome of this process/decision for potential changes to the CNA activities and how this may impact CNA operations. As no final decision has been made by the CRTC, CNAC includes this for your awareness to a role that the CNA may be fulfilling in the future.

### 2.3 **Impacts of Governmental and Industry Changes**

During the term of the agreement, there may be changes required to be made to the tasks and responsibilities of the CNA based on governmental, regulatory and guideline and administrative changes. These changes may increase, decrease, or otherwise impact the functions to be performed by the CNA, including a change that materially alters the scope, nature and type of numbering services required to be provided by the CNA (“Material Change”).

Proposals must set out a process to deal with Material Changes including negotiations with CNAC to amend the agreement to deal with such changes. The process proposed must set out a defined timetable to consider and implement Material Changes.

Proposals are required to include a default billing rate for services required to be performed that are outside current expectations or not provided for in the agreement to be entered, which default would apply for such additional work as identified by CNAC to be necessary until such time as a new rate is negotiated and agreed to between CNAC and the selected Bidder.

### 2.4 **Performance Standards, Review and Problem Management Processes**

Proposals are required to set out detailed performance standards, a review process and a problem management process.

#### 2.4.1 Performance Standards

Proposals are required to include performance standards for each of the CNA functions identified in this RFP. Final performance standards will be negotiated and be included in the agreement between the selected Bidder and CNAC. To assist Bidders in preparing their proposals, Schedule 2.0 sets out suggested performance standards to be considered.

#### 2.4.2 Performance Review Process

Proposals are required to include proposed performance monitoring mechanisms which should provide at a minimum, a quarterly review by CNAC that shall include:

- 1) Review of monitoring of the performance of tasks in accordance with standards.

- 2) Feedback on adherence to performance standards.
- 3) Establishment of a remedial action plan, if required.
- 4) Discussion of issues identified.
- 5) Discussion of upcoming changes to numbering administration identified or anticipated.

The proposed CNA performance review process shall not preclude telecommunications industry participants, CRTC, CNAC or any other person (collectively, “Industry Stakeholders”) from identifying performance problems and reporting the same to the CNA as they occur, and from seeking resolution of such performance problems in an expeditious manner.

The CNA’s performance shall be regularly monitored by CNAC which will include, at a minimum, monthly work volume reports and quarterly in person reviews.

#### 2.4.3 Problem Management Process

Proposals are required to include a description of Bidders proposed problem management system for addressing problems identified by telecommunications industry participants, CRTC, CNAC or any other person. Problem management systems proposed must provide for a defined timetable for actions to be completed and provide for a complete record as to the problem and how it was resolved.

### **2.5 Dispute Resolution**

The CNA shall participate in the appropriate CISC dispute resolution process, as necessary (see CISC Administrative Guidelines for details<sup>10</sup>). Normally, the CNA would only be involved in disputes directly related to its numbering administration responsibilities. However, there can be situations where the resolution of disputes not directly related to numbering administration may impact the ongoing work of the CNA. For example, the CSCN might conclude that a dispute about one of its numbering resource guidelines is best resolved by changing the guideline.

### **2.6 Enterprise Services**

Enterprise services (Enterprise Services) are any services provided by the CNA to TSPs that are not identified in this RFP and are not specifically addressed in the agreement with CNAC, as amended from time to time. At its option, the CNA may provide Enterprise Services to individual TSPs on request, provided that the performance of all Enterprise Services shall be subject to the following conditions:

- 1) Enterprise Services shall be performed without jeopardizing the CNA's performance of its duties and responsibilities in a timely manner as defined in this RFP and any agreement with CNAC.

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<sup>10</sup> The CISC Administrative Guidelines are available at the CRTC CISC site at [www.crtc.gc.ca](http://www.crtc.gc.ca).

- 2) Proprietary/confidential information acquired by the CNA while performing CNA duties shall not be used in the provision or marketing of any Enterprise Service; except for Part 2s (Industry Notification Form) which the CNA does for certain TSP's.
- 3) The CNA shall avoid conflict of interest situations (actual or perceived) in the provision of any Enterprise Service.

Enterprise Services and their associated fees shall be subject to separate agreement between the CNA and its respective enterprise client. The CNA shall be solely responsible for billing and collecting any fees charged for Enterprise Services directly from TSPs. The fee for Enterprise Services shall not be the responsibility of CNAC.

Enterprise Services need not be priced separately and included with the proposal in response to this RFP. However, the Industry Notification Service specified below is a mandatory Enterprise Service that must be offered to Canadian TSPs by the CNA during the term of the Agreement.

#### 2.6.1 Industry Notification Service

Upon request of a Code Holder (the entity to which a Central Office Code has been assigned), the CNA shall input the rating and routing information set out in Part 2 - Routing and Rating Information Forms in the Canadian Central Office Code (NXX) Administration Guidelines into the iConnective Traffic Routing Administration (TRA) Business Integrated Routing and Rating Database System (BIRRDS) database (Industry Notification Service). Such service shall be performed at a price to be negotiated with and paid directly by the Code Holder making the request. While the CNA is required to offer this service to all Code Holders, individual Code Holders may instead perform the function themselves or have the function performed by an entity other than the CNA. CNA shall be solely responsible for billing and collecting any fees charged for Industry Notification Services as an Enterprise Service directly from the TSPs that request such service.

### 2.7 **Hours of Operation**

The CNA shall be required to maintain hours of operation of at least four hours of the normal business day<sup>11</sup> in each province or territory in Canada (i.e., between 8:00 AM to 5:00 PM) from Monday to Friday.

In addition, the CNA must provide several alternative mechanisms (i.e., voice-mail, e-mail, and/or facsimile) to receive messages on a 24-hour per day basis. The CNA shall be required to respond within one (1) business day to all messages received outside the hours of operation identified above.

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<sup>11</sup> The CNA is required to provide services at all times on all business days that TSP's are operating and statutory holidays will be determined by the Canada Labour Code.

## 2.8 Communications, Computer and Data Management Requirements

All proposals must contain a detailed description of the systems (communications, computer, and data management) it proposes to use to perform the CNA functions.

Bidders are encouraged to submit as part of their proposals suggestions as to how the systems to be used could be utilized to improve the efficiency and effectiveness of the CNA's operations (e.g., Logging into an on-line automated numbering resource application system).

The Canadian Numbering Administration System Software (CNAS Software) utilized by the current CNA to support CNA operations will be made available to the new Bidder for use during the next five-year agreement period. The Bidder may at its option use this software or use other software to support the provision of its services under the contract. A description of the CNAS Software currently being utilized is set out in Schedule 3.0.

The following additional resources to perform the CNA function which will also be available for use by the new Bidder:

### 1) CNA Internet Website

The CNA Public Internet Website was developed and is maintained using Microsoft Expression Web and published to primary and backup locations using an on-demand implementation of the WinSCP utility, an open-source Secure Copy Protocol (SCP) client.

As a rule, Word and Excel documents are converted into Portable Document Format (PDF) using the Microsoft Save-as-PDF MS Office add on or Adobe Acrobat Professional prior to publishing to the web site.

The following additional software is used in the development of the public website:

- a. Bootstrap v5 – “is a free and open-source CSS framework directed at responsive, mobile-first front-end web development. It contains HTML, CSS and JavaScript-based design templates for typography, forms, buttons, navigation, and other interface components.”
- b. JavaScript frameworks and libraries: Vue.js, jquery, termsbar.js, tablefilter.js. (provides various graphical/functional user experience).
- c. ExportStatusPages – is a utility created by CNA staff to export files/data from the CNA database that is displayed by pages on the public website. (E.g., code status pages) and the website is dependent on these dynamic files. This utility is installed on the Automation Cloud Servers. (see Automation Server in Virtual Machines Section).

2) CNAS Works

Refer to Schedule 3.0 for a description of the CNAS system.

3) Mailing Lists

A Microsoft .Net 2005 (.Net framework 1.1) application has been developed that allows for the maintenance of various mailing lists that are maintained on a Mercury/32 (commercial) mail server which also uses FTPSync to upload the CSCN and CSCN ENUM distribution lists to the web site.

## **2.9 Security Requirements**

Due to the proprietary nature of certain information that is routinely received by the CNA during its duties, proper security measures are required to be always maintained. The CNA is also required to comply with any personal information and privacy laws that are applicable in Canada. Proposals are required to provide a description of the privacy and data security systems and procedures proposed to be implemented by the Bidder.

## **2.10 Disaster Recovery Plan**

Proposals are required to include a description of the disaster recovery plan and procedures that are proposed to be implemented. The disaster recovery plan must address all potential types of disasters including but not limited to fire, flooding, power outages, cyber ransom, server failure, software failure among others.

## **2.11 Transfer of Information and Technology on Termination**

All industry documentation, website information and any other telecommunications industry information (the Information) developed, obtained and/or used by the CNA in performing its duties will be required to be transferred to CNAC if the agreement between the CNA and CNAC expires or is terminated for any reason. The CNA will also be required to take all steps necessary to transfer ownership of the Information to CNAC as well as any software licences, custom developed software, CNAC website information and “www.cnac.ca” URL domain name, or any other rights of the CNA in any computer database, used or acquired by the CNA, to perform the functions of the CNA.

## **2.12 The CNA Internet Website**

The CNA shall provide and maintain an Internet website using the URL “www.cnac.ca”. Bidders may visit [www.cnac.ca](http://www.cnac.ca) to view the current content. The CNA Internet website shall contain numbering information that is unique to Canada.

The CNA shall:

- 1) Ensure the form and content available on the CNA website is satisfactory to CNAC, acting reasonably.
- 2) Update the information available to CNAC and the service users on the CNA website on a timely basis, but at a minimum at least once per week; and ensure that the CNA website is accessible by CNAC and the service users on a 24 hour a day basis to the satisfaction of CNAC, acting reasonably.

More specifically, the following information shall be made available on the CNA website:  
(Concerns around privacy on the info below)



- 1) Privacy Policy  
[https://cnac.ca/CNAC\\_Privacy\\_Policy.pdf](https://cnac.ca/CNAC_Privacy_Policy.pdf)
- 2) Website Terms of Use  
[https://cnac.ca/CNAC\\_Website\\_Terms\\_of\\_Use.pdf](https://cnac.ca/CNAC_Website_Terms_of_Use.pdf)
- 3) CNA Information
  - a) Mandate.
  - b) Mailing address.
  - c) Contact names.
  - d) Contact e-mail, telephone and facsimile numbers.
- 4) Canadian Geographic NPA Information  
Map of Canada showing Canadian geographic NPAs.
- 5) CO Code Availability and Assignment Status for each Canadian Geographic NPA
  - a) For each Canadian geographic NPA, a list of CO Codes and the status of each (e.g., assigned, reserved, protected, test, available for assignment, in-service, special use, etc.), as well as the name of the exchange area where the code is assigned, the Code Holder's name and OCN (Operating Company Number), and remarks, in a downloadable spreadsheet file format as well as any other file formats required by the CSCN and/or CRTC.
  - b) Easily readable on a wireless device.
- 6) All current Number Resource Assignment Guidelines applicable in Canada
  - a) A List of all Numbering Guidelines applicable in Canada (including the CSCN Adjunct to the CRTC Industry Steering Committee Administrative Guidelines) (CSCN Administrative Guidelines).
  - b) Access to all Numbering Guidelines applicable in Canada (copies of the current applicable guidelines and related forms must be provided on the CNA website by the CNA).
- 7) Other CNA information or reports as directed by CNAC or the CSCN.
- 8) Copies of the CNA annual reports for the last five years.
- 9) CSCN Information
  - a) CSCN mission statement.
  - b) Current schedule of future full CSCN meetings and conference calls (including task force meetings).

- c) Past full CSCN meeting minutes (including file attachments when available).
- 10) Other CNA information or reports as directed by CNAC or the CSCN.
  - 11) CNAC Information
    - a) CNAC description, history, and mandate (what is it, when was it created, what it does, major historical events and dates).
    - b) List of CNAC Shareholder entities (organization names only, not individual names and numbers).
    - c) CNAC Board Chair, President, Business Manager, Corporate Secretary and Billing & Collection Agent contact names, telephone numbers, e-mail addresses, geographic addresses, and fax numbers if applicable and in accordance with CNAC Privacy rules.
    - d) CNAC News Releases (copies of all past and any new future releases).
    - e) CNAC public documents (CNA and CNAC Service User Agreement s, CNAC CNA RFP, CNAC Unanimous Shareholder Agreement (USA), CNAC Funding Mechanism).
    - f) Other information requested by CNAC (e.g., CNA annual performance survey questionnaire and summary results).
  - 12) C-NRUF Aggregate Results and related documentation (including past five years' historical CNA C-NRUF Reports and C-NRUF Results).
  - 13) NPA relief planning documentation (meeting minutes, planning documents, relief implementation plans, progress reports, special C-NRUFs for relief area codes, etc.).
  - 14) CNA website map.
  - 15) Frequently asked questions and responses about numbering matters.
  - 16) Links to other sites of interest (e.g., CRTC, ATIS, ANSI, NANC, NANPA, NECA, iConnectiv (Telecom Routing Administration), CLNPC, CISC, etc.).

This information shall be updated on a timely basis, but at a minimum of no less than once every week except where otherwise noted and/or at the request of CNAC or the CRTC.

Bidders shall describe the security measures they will take to ensure that the website and the information contained on it are adequately safeguarded (i.e., only the CNA should have the capability to create and alter the information).

The CNA should contact the site managers for the following websites, and others as appropriate, to request that Internet links be provided to the CNAC web site: CRTC, ATIS, ANSI, NANC, NANPA, NECA, iConnectiv (Traffic Routing Administration), CLNPC, CISC, and ITU.

## **2.13 Insurance**

Proposals are required to set out a detailed description of the types and amount of insurance proposed to be obtained, which at a minimum shall include:

- 1) worker's compensation insurance;
- 2) employer's liability insurance;
- 3) comprehensive general liability insurance;
- 4) cyber and data protection; and
- 5) motor vehicle insurance.

The final insurance requirements will be subject to negotiation with CNAC.

## **2.14 Bond/Letter of Credit**

The successful Bidder will be required to provide CNAC with a performance bond and/or letter of credit issued by a reputable Canadian bank in an amount of not less than \$2 million to support the Bidder's performance under the agreement. The terms of the performance bond and/or letter of credit shall be to the satisfaction of CNAC.

### **3 ADDITIONAL CONTRACTUAL TERMS**

This section provides a non-exhaustive list of contractual terms and conditions that CNAC will likely include in any agreement entered with a Bidder. CNAC reserves the right to exclude any of the terms listed below and/or to include such other terms and conditions that are customary for transactions of a similar nature to that as described in this RFP. The following list is in addition to the terms and conditions specified in other parts of this RFP.

1) Term and Renewal

The term of the agreement shall be five (5) years commencing on January 1, 2024, and CNAC shall have the option to renew the agreement for an additional five (5) year renewal term.

2) Governing Law

The agreement shall be governed by and construed in accordance with the laws of the Province of Ontario and the laws of Canada as applicable.

3) Indemnification

The agreement shall require the Bidder to indemnify CNAC and its officers, directors, and shareholders for damages due to the breach by the Bidder of the agreement and for damages, death, or personal injury due to the Bidder's acts or omissions as CNA.

4) Trademarks and Publicity

The Bidder in carrying out its duties as CNA shall have no rights to use any trademarks, trade names, business names, designs, logos, or other marks which the Bidder does not own or for which the Bidder is not an authorized licensee including, without limitation, those owned by CNAC, without prior written authorization.

5) Confidentiality

The agreement shall include standard confidentiality provisions.

6) Limitation of Liability

CNAC and any of its directors, officers, employees, agents, contractors, or shareholders shall have no liability whatsoever for any losses, damages or other injury incurred or suffered by the Bidder.

7) Representations, Warranties and Covenants

The agreement shall provide for standard representations, warranties and covenants of the Bidder including, but not limited to, the following: authority to enter the contract, corporate existence, and eligibility to enter an agreement to perform the CNA services, system operation, and approvals.

8) Intellectual Property

The Bidder shall provide an unlimited intellectual property representation, warranty, and indemnity in favour of CNAC and the Agreement shall require that at all intellectual property developed and/or acquired by the Bidder in fulfilling its duties as CNA shall be the property of CNAC both during and after the term of the agreement

and a copy of the intellectual property shall be required to be placed in escrow with CNAC's Corporate Secretary.

9) Ownership of Data

All data delivered to the Bidder by TSPs under this agreement shall remain the property of the respective TSPs and, upon termination of the agreement for any reason, will be delivered by the Bidder to CNAC in a medium acceptable to CNAC.

10) Most Favorable Rates

The agreement will require the Bidder to ensure that at all times during the term of the Agreement, the rates charged to CNAC by the Bidder shall be no higher than rates charged by the Bidder to other clients for similar services.

11) Dispute Resolution

The agreement shall provide for a formal dispute resolution process utilizing binding third-party arbitration.

12) Assignment/Change of Control

The agreement shall not be assignable by the Bidder without the prior written consent of CNAC. The Bidder must also provide notice to CNAC of any proposed change of control of the Bidder, and CNAC shall have the right to accept or reject such change of control.

## 4 **RESPONSE GUIDELINES**

### 4.1 **General Guidelines**

Proposals, complete in all respects, must be delivered to CNAC by the applicable due date (see Section 1.9 of this RFP). Proposals delivered after the applicable due date **will not be** considered by CNAC.

Each Bidder package should contain a cover letter that includes the contact details of the person/persons responsible for dealing with CNAC inquiries regarding the proposal.

All materials submitted to CNAC in respect of this RFP, including questions concerning this RFP and all proposals in response to this RFP shall be submitted to the following address (CNAC Address):

21-5480 Canotek Road  
Ottawa, Ontario  
K1J 9H7

Attention: Gary Jessop  
[rfp@cnacexec.ca](mailto:rfp@cnacexec.ca)

The proposal is required to be in a format that is compatible with Microsoft Word or Excel and **the** proposal must be received by the deadline as established by Section 1.9 of the RFP.

### 4.2 **Proposals**

Proposals should be based upon the specifications provided in this RFP. Bidders shall furnish all information as requested per the applicable instructions providing sufficient data to enable CNAC to evaluate the proposal. Any deviations to the RFP should be noted, and the Bidder shall indicate the reasons for non-compliance and provide an alternative solution, if available. Any Bidder who does not completely comply with all requirements of the RFP may be eliminated from consideration at the discretion of CNAC.

Proposals having minor exceptions and deviations shall be considered only if the following conditions are satisfied:

- 1) all exceptions and deviations from the specifications are explicitly stated in the Proposal Summary; and
- 2) all exceptions and deviations are appropriately justified based on performance, schedule and/or relative price.

In each of the sections and subsections of the response to the RFP, the Bidder shall clearly state the roles and responsibilities of all subcontractors that are providing parts of the total solution under the direction of the Bidder.

The proposal shall consist of the separate sections as specified in the Annex A-Template for Responses.

### **4.3 Questions**

All questions concerning this RFP shall be delivered by Bidders to CNAC by the due date for receipt of Bidder Questions (see Section 1.9). All such questions shall be clearly identified as “CNA RFP Questions” with this RFP title and the Bidder's name. Only questions received by the Due Date will be responded to.

All Questions should include the specific section of the RFP being inquired about.

CNAC will distribute all “CNA RFP Questions” submitted by Bidders and responses thereto to the Bidder asking the question as well as to all Bidders that have given notice to CNAC of their intent to respond to this RFP in accordance with the procedure set out in Section 1.2. Telephone inquiries will not be permitted or accommodated. CNAC will generally respond to Bidder questions within five business days and the CNAC responses to Bidder questions will not identify the author of the questions.

### **4.4 Bidder Responses to CNAC Questions**

CNAC may issue questions to specific or individual Bidders. All responses to questions posed by CNAC shall be delivered to CNAC address by the date specified in Section 1.9 of this RFP for receipt of Bidders' Responses to CNAC Questions. Bidders shall be required to provide answers to CNAC questions within five business day. Failure to deliver a response to CNAC questions in a timely manner may result in the response not being considered as part of the evaluation process or the disqualification of the Bidder’s proposal.

## 5 TELECOMMUNICATIONS INDUSTRY DOCUMENTS/GUIDELINES

Many of the functions of the CNA are defined by the requirements set out in various telecommunications industry documents/guidelines. The following documents/guidelines contain the descriptions of various functions to be performed by the CNA and these documents/guidelines should be utilized by all Bidders for the purpose of submitting proposals under this RFP process (unless advised otherwise in writing by CNAC) (Bidders shall be responsible for obtaining copies of the documents/guidelines from the addresses noted below):

- 1) Canadian documents are available via the CRTC/CISC web site <http://www.crtc.gc.ca/cisc/eng/cisf3f.htm>, or CNAC web site <http://www.cnac.ca/>.
- 2) Current versions of INC documents are available from the Alliance for Telecommunications Industry Solutions (“ATIS”) web site <https://www.atis.org/standards-and-specifications/> and will require a membership and/or fee.
- 3) ANSI documents may be obtained from the American National Standards Institute (“ANSI”) of [www.web.ansi.org](http://www.web.ansi.org). Bidders may have to use <https://webstore.ansi.org/Standards/ATIS/ATIS10001112005R2015> or perhaps use this [https://cnac.ca/other\\_codes/ss7/ss7\\_network\\_codes.htm](https://cnac.ca/other_codes/ss7/ss7_network_codes.htm). (All ANSI documents are copyrighted and are available from the ATIS store).
- 4) The guidelines set out in Schedule 4.0.



**6 ESTIMATED CNA WORK VOLUMES**

The following charts contain estimates of certain, but not all, activities related to the functions to be performed by the CNA. Its purpose is to provide guidance to assist Bidders in responding to the requirements contained in this RFP. Actual quantities may, and likely will, be different than as estimated below.

**6.1 Projected Volume of Work**

The forecast volumes listed below are for each year of the next five (5) year term and the forecasts are based on the most recent five-year annual average.<sup>12</sup>

<i>FUNCTION</i>	<i>Annual Forecast</i>
<b><i>CSCN SECRETARY &amp; CHAIR</i></b>	
Number of CSCN face to face or virtual meetings & minutes	3
Number of CSCN conference calls & minutes (including agenda setting conference calls)	15
Number of INC Meeting Reports submitted to CSCN	4
Number of CISC meetings & Reports submitted	5
<b><i>CO CODE ADMINISTRATION</i></b>	
Number of requests for New CO Codes <sup>1</sup>	1100
Number of requests to change existing CO Code data - Part 1 Form Data Updates	300
Number of CO Codes returned voluntarily by code holder or reclaimed by CNA	30
CIGRR – iConnective & Canadian	12

<sup>12</sup> Historical data is contained in the CNA Annual Reports that are available on the CNA web site [www.cnac.ca](http://www.cnac.ca) for your perusal

<b><i>Numbering Resources Utilization Forecast</i></b>	
Number of General NRUF	1
Number of Relief NRUF	20
Jeopardy NRUF	4
Number of Special-NRUF	2
<b><i>NANPA ADMINISTERED RESOURCES</i></b>	
Number of NPA 900 NXX Code requests received, validated & forwarded to NANPA	2
Number of NPA Requests made to NANPA	3
Number of CIC Code requests received, validated & forwarded to NANPA for assignment, amendment, or reclamation	22
<b><i>CANADIAN NUMBERING RESOURCE</i></b>	
Number of NPA 6YY NXX Code requests received, validated & processed <sup>II</sup>	150
Number of ESRD Block Code requests received, validated & processed	30
Number of IMSI Code requests received, validated & processed	10
Number of requests for NPA 600 Non-Geographic Codes <sup>III</sup> received, validated & processed	2
Number of requests for New MBI Codes/Blocks	150

Notes:

I. These values may change to an ongoing CSCN TIF-110 related to the CRTC requirements

II. These values are under review due to a new TIF at the time of this RFP

III. This pertains to SAC 600 service which is under review pending outcome of TIF-110

### 6.1.1 CSCN Secretary / Chair Function

The CSCN Secretary work volumes are based on a projection that there will be three CSCN face-to-face meetings per year with each meeting lasting one to three days, thus requiring about six meeting days and three CSCN Agenda Setting conference calls per year lasting from 30 minutes to one hour in length. It is expected, but not guaranteed, that the meetings will be held in either Toronto, Montreal, or Ottawa, based on most recent practice; however, meetings could be located anywhere in Canada. The number of CSCN conference calls is projected to be about 24 calls per year lasting from one hour to three hours in length. The face-to-face meetings in 2020 and 2021 were all virtual due to Covid.

### 6.1.2 CO Code Administration Function

New Code requests means a Part 1 Form request for initial codes, growth codes and reserved codes. Part 1 Form Data Updates means any change to the data fields on the Assigned Code Record (ACD) screen. CO Code Holders may voluntarily return CO Codes to the CNA using a Part 1 Form, in which case the CNA work required is expected to be higher than that for a new code request. It is expected that the level of effort associated with a CNA initiated reclamation will be higher than that associated with voluntary returns as CNA initiated reclamations will generally require dealing with non-telecom related people (e.g. bankruptcy trustees).

### 6.1.3 MIN Block Identifier (MBI) Codes

MBI Code requests, change requests and returns are fulfilled by retrieving a form from the Guideline using the portal at the CNA. Forms can be extracted from the Guideline for submission to the MBI Administrator and submitted via appropriate process.

### 6.1.4 G-NRUF

On an annual basis, in accordance with the Canadian Numbering Resource Utilization Forecast (C-NRUF) Guideline, the CO Code Manager implements the G-NRUF by requesting all CO Code Holders/TSPs to complete the G-NRUF forms to indicate the number of new CO Codes that the TSP expects to be assigned over the next six years.

When the volume of CO Codes forecasted in the G-NRUF exceeds the remaining volume of assignable CO Codes in a Numbering Plan Area (NPA) within the next six years, the NPA is deemed to be in Exhaust and is required to be relieved by adding more CO Codes by way of an additional NPA. The NPA Relief Planning Manager will then form a Relief Planning Committee and implement a Relief (R)-NRUF.

If the R-NRUF, or the G-NRUF indicates that the NPA will exhaust within the timeframes listed in Section 9 of the NPA Relief Planning Guideline, the CNA will call a jeopardy condition and the Relief Planning Manager will issue a Jeopardy (J)-NRUF, which will be more detailed than the C or G-NRUF.

Special (S)-NRUFs are requested from time to time by either the CRTC, the CSCN, or a particular Relief Planning Committee for specifically designated purposes and as a result, S-NRUFs are not requested often.

#### 6.1.5 Administration of NANPA Administered Resources

The CNA reviews and verifies applications for Carrier Identification Codes and 900 NXX Codes and forwards them to the NANPA for assignment. The application forms are found in the Canadian Adjuncts to the US Industry Numbering Committee (INC) Guidelines found on the CNA website. The assignments are forwarded to the CNA from the NANPA and are listed on the CNA website after informing the applicant.

Following the relief planning process and approval of the Relief Plan by the CRTC, the CNA will request the assignment of the designated NPA by the NANPA.

#### 6.1.6 Administration of Canadian Numbering Resources

The CNA Administers five uniquely Canadian Numbering resources: NPA 6YY Non-Geographic Codes, NPA 600 Non-Geographic Codes, ESRD Block Codes, International Mobile Subscriber Identifier Mobile Network Codes (IMSI MNC) and MIN Block Identifier Codes. The volumes for NPA 6YY Codes may change subsequent to the outcome of CSCN TIF 112.

#### 6.1.7 NPA Relief Planning

The NPA Relief Planning function can be viewed as consisting of four distinct phases of work activity. The four phases are described in the Canadian NPA Relief Planning Guideline and specifically identified in Appendix B of that Guideline. The four phases are:

- 1) R-NRUF and IPD Phase – The Canadian Numbering Administration (CNA) conducts the initial Relief Planning Numbering Resource Utilization Forecast (R-NRUF) and develops the Initial Planning Document (IPD).
- 2) PD & CRTC Decision Phase – The Relief Planning Committee (RPC) develops the Planning Document (PD) and submits it to the CRTC for approval (i.e., Relief Method & Date), and the CRTC issues a Decision.
- 3) RIP & CRTC Approval Phase – The Relief Planning Committee (RPC) develops the Relief Implementation Plan (RIP) and submits it to the CRTC for approval (i.e., detailed industry plan and schedule including Consumer Awareness and Network Implementation Plans).
- 4) Relief Implementation Phase – The Relief Planning Committee (RPC), Telecommunications Service Providers (TSPs) and users implement relief in accordance with the Relief Implementation Plan.

The CNA's Projected Exhaust Dates (PEDs) for all Canadian geographic NPAs are shown in the chart below. Several NPAs are projected to exhaust more than once in the 20-year forecast period used by the CNA.

<b>NPA</b>	<b>Exhaust 2022 G-NRUF</b>	<b>Remarks</b>	<b>Regions</b>
226-548-519	2Q 2024	Area Code 428 assigned	Southwestern Ontario
204-431	4Q 2023	Area Code 354 assigned	Manitoba
236-250-604-778	1Q 2026	Area Code 672 assigned	British Columbia
249-705	3Q 2023	Area Code 683 assigned	Northern Ontario
289-365-905	3Q 2023	Area Code 742 assigned	Southern Ontario
289-365-905	3Q 2033	T.B.D.	Southern Ontario
306-474-639	4Q 2037	T.B.D.	Saskatchewan
343-613	2Q 2023	Area Code 753 assigned	Eastern Ontario
403-587-780-825	3Q 2029	Area Code 368 assigned	Alberta
506	3Q 2024	Area Code 382 assigned	New Brunswick
416-437-647	3Q 2026	Area Code 387 assigned	Toronto Ontario
418-581	4Q 2031	T.B.D.	Eastern Quebec
438-514	1Q 2024	Area Code 263 assigned	Montreal Quebec
450-579	1Q 2024	Area Code 584 assigned	Central Quebec
709	4Q 2028	Area Code 879 assigned	Newfoundland
782-902	4Q 2029	T.B.D.	Nova Scotia / PEI
807	Beyond 2039	988 caused 10D dialing	Northwestern Ontario
819-873	3Q 2023	Area Code 468 assigned	Northern Quebec
819-873	1Q 2037	T.B.D	Northern Quebec
867	3Q 2036	988 caused 10D dialing in Yellowknife LIR	Yukon/Northwest/ Nunavut Territories

## **ANNEX/ SCHEDULES**

## ANNEX A - TEMPLATE FOR RESPONSES

### 1. Cover Page

The cover page should include the name of the Bidder's organization; its contact's name, address, telephone number, and email address; the date; and the signature of a duly authorized representative.

### 2. Proposal Summary & Deviations

This section shall contain two subsections as follows:

#### 1) Proposal Summary

This subsection shall summarize all key features of the proposal including the use of subcontractors, if any.

#### 2) Deviations & Exceptions (if any)

This subsection shall identify all deviations in the Bidder's proposal from the requirements identified in this RFP including a brief justification for each. A more detailed justification may be included in the section of the proposal that covers the subject. Unless specific deviations are noted in this subsection, the Bidder shall be deemed to agree to comply with all the other provisions of the RFP.

### 3. Functional Requirements

This section should contain detailed information about how the Bidder proposes to fulfill the functional requirements of this RFP including confirmation of the Bidder's and subcontractors' abilities to perform each of the functional requirements. The section shall be divided into subsections as follows:

- 1) Organization Structure (i.e., organization chart showing positions and quantity of staff, brief job descriptions of each staff member to be utilized, proposed locations of offices, and staff resumes, if available).
- 2) CSCN Secretary & Chair.
- 3) Central Office Code (CO Code) Administration.
- 4) NPA Relief Planning.
- 5) Canadian Numbering Resources Administration.
- 6) CNA Role in NANPA Administered Resources.
- 7) Performance Standards.

- 8) Periodic Review Process.
- 9) Performance Monitoring Mechanisms.
- 10) Problem Management System.
- 11) Participation in CISC/CSCN Dispute Resolution Process.
- 12) Enterprise Services.
- 13) Hours of Operation.
- 14) Telecommunications and Systems including Bidder intent, if any, to use CNAS Software.
- 15) Security System.
- 16) Disaster Recovery Plan.
- 17) CNA Internet web site.
- 18) Insurance.

#### **4. Terms and Conditions**

The Bidder shall provide any comments on the additional contractual terms listed in Article 3 of the RFP. The Bidder shall also indicate in this section any special terms that it will require be included in the Agreement.

#### **5. Bidder's Qualifications**

- 1) Description of the Bidder's Business

This section shall contain a concise description of the principal business of the Bidder and any subcontractors, including such items as company background, characteristics of business strength and the products and services offered.

- 2) Financial Information

This section shall include a concise description of the financial condition of the Bidder and any subcontractors. Responses should include the most recent annual report and audited financial statements (e.g., income statement, balance sheet), if available, of the Bidder and any subcontractors. This section shall include information by which to assess the Bidder's financial strength.



3) Relevant Experience

This section shall describe the Bidder's telecommunications and number administration skills, experience and knowledge, as well as its capability to develop, operate and maintain database management and computer systems.

4) List of Company Officers (as appropriate)

This section shall include a list of the Bidder's company officers and their titles and responsibilities.

5) Bondable

This section shall include evidence that the Bidder is bondable. The term “bondable” is meant to refer to a form of performance bond, or other appropriate security, which could be obtained by the Bidder to protect against the Bidder's inability or refusal to perform its obligations under the agreement to be entered into with CNAC.

6) Eligibility To Submit Proposals

This section shall include Bidder and subcontractor certification that the Bidder and all subcontractors meet the eligibility criteria specified in Section 1.3 of the RFP.

7) Neutrality

This section shall set out the nature and extent of existing or pending corporate, financial, contractual, or other material relationships with the entities described in Section 2.1.2.

8) Legal Proceedings

The Bidder shall identify any current or threatened litigation or other proceeding, including bankruptcy and related matters, in any judicial court or administrative agency in any jurisdiction, as well as any matter currently in, or expected to be in, arbitration, mediation or other form of dispute resolution, the resolution of which could materially affect the Bidder's and/or subcontractor's financial strength or ability to perform its duties as the CNA, in which the Bidder and/or subcontractor is presently involved or which they reasonably anticipate being involved in, and shall provide a summary description of the liabilities the Bidder anticipates may occur as a result of such proceedings.

9) Corporate References

The Bidder shall furnish references for itself and for any subcontractors, preferably for similar work being performed currently or in the recent past, including the name of the company, contact name, address and telephone number.

10) Bidder Compliance with Governmental and Regulatory Directives

The Bidder must certify that it will comply with the decisions, rules, policies and regulations of the CRTC as well as any Government of Canada policy directives or other regulations affecting the duties of the CNA.

## 6. Pricing

This section shall specify the Bidder's proposed price quote to perform the functions of the CNA as described in this RFP. Prices shall be quoted in Canadian dollars exclusive of the Goods and Services Tax ("GST") and Provincial Sales Tax ("PST"). All pricing information shall be contained in this section of the proposal.

This section should address prices for all requirements set forth in this RFP as well as any other items pertinent to the Bidder's proposal. Pricing shall be firm and based upon an Engineered, Furnished and Installed ("EF&I")<sup>13</sup> basis for all applicable goods, software, and services of the most recent vintage and/or technology available in the telecommunications industry.

The response, including prices, to the RFP shall be valid throughout the RFP process and during the term of the Agreement. As specified in the CNA RFP, proposals, once submitted, may not be amended but may be withdrawn at any time upon notice to CNAC.

The Bidder shall guarantee in its proposal that the prices for the services rendered shall be at least as low as those charged to the Bidder's most favoured customer for like quantities of the same or substantially similar services (i.e., preferred customer pricing). The Bidder shall guarantee that if the Bidder's prices (including the Bidder's prices for similar services for sale to any other customers) decrease during the term of any agreement entered into with CNAC, CNAC shall receive preferred customer pricing in accordance with the intent of the above statement from the date the price decrease becomes effective.

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<sup>13</sup> "Engineered, Furnished and Installed" means that the provision of all applicable goods, software, and services will be provided to CNAC by the Bidder at a price which includes, but is not limited to, any required design, construction, operation, supply, provision, and installation work.

The price quotes should be based upon the volumes of work contained in Article 6. of this RFP and be inclusive of all actual work volumes that may occur over the term of the Agreement.

Payments by CNAC to the selected Bidder shall generally be made monthly on the last day of each month, in arrears, and calculated by dividing the Total Price for each applicable year by 12. Such monthly payments shall commence on January 31, 2024 and end on December 31, 2028.

## SCHEDULE 1.0 - CNAC/CNA ADDITIONAL INFORMATION

### Background

In 1999, the position of the CNA was created by the CRTC and the task of selecting and supervising the CNA was delegated to CNAC. Science Applications International Corporation (SAIC Canada), later renamed to Leidos Canada, was contracted by CNAC to be the CNA for four consecutive five-year terms from January 1, 1999 to December 31, 2018, to be responsible for the administrative and assignment functions associated with Canadian numbering resources which had previously been performed by the CRTC, Industry Canada and incumbent Canadian telephone companies. COMsolve Inc. was contracted to replace Leidos as the CNA on January 1, 2019. CNAC oversees the CNA primarily based upon the regulatory framework adopted by the CRTC respecting the administration of telecommunications resources in Canada.

The provision of number administration services under this RFP is subject to the provisions of the *Telecommunications Act*, particularly Section 46. Section 46 authorizes the CRTC to administer numbering resources and to delegate its powers to a third party. The CRTC has delegated its Section 46 powers to CNAC.

All numbering resources allocated to Canada by any entity (e.g., the International Telecommunications Union (ITU) or NANPA) are national public resources to be managed under numbering assignment guidelines developed or adopted by the Canadian Steering Committee on Numbering (CSCN),<sup>14</sup> as agreed to by the CRTC Interconnection Steering Committee (CISC) and approved and/or mandated by the CRTC.

Pursuant to guidelines<sup>15</sup> the CSCN is responsible for:

- 1) Developing number planning and implementation strategies for the Canadian telecommunications industry.
- 2) Ensuring that numbering resources are always available for Canadian TSPs and customers.

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<sup>14</sup> In response to Telecom Decision CRTC 92-12, the CSCN was formed as an AD Hoc committee comprised of various telecom industry representatives and interested parties. This was done to resolve telecommunications numbering issues, in an open forum, related to long distance competition.

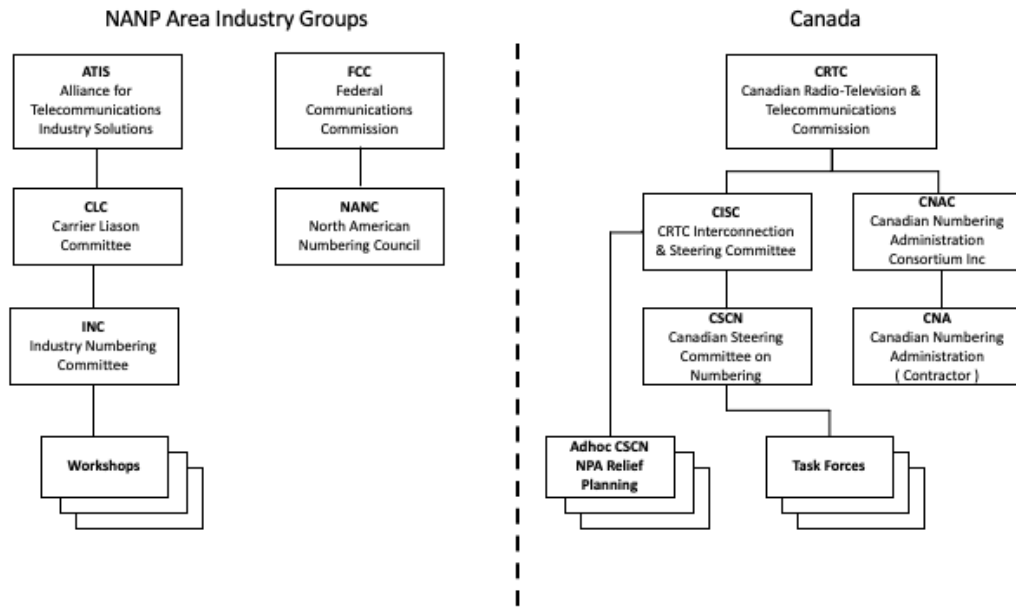
In accordance with Telecom Decision CRTC 97-08 (1 May 1997), item six of Appendix 1 of the CRTC Interconnection Steering Committee (CISC) Administration Guidelines, the CSCN was mandated to undertake tasks related to numbering issues on matters assigned by the CRTC that fall within the scope of CRTC jurisdiction. Upon completion of the tasks assigned, reports are forwarded to the CRTC for consideration and/or further action.

<sup>15</sup> The CSCN Adjunct to the CRTC Industry Steering Committee Administrative Guidelines (CSCN Administrative Guidelines) (see <http://www.crtc.gc.ca/public/cisc/c-docs/CNRE053A.doc>).

- 3) Ensuring that the administration of numbering resources does not confer an undue advantage upon any entity nor inhibit the timely introduction of new telecommunications services or competition in these services in Canada.
- 4) Ensuring the efficient, effective, and equitable administration and use of numbering resources in Canada.
- 5) Providing input on Canadian numbering policies to the CRTC, on request, via the CISC process.
- 6) Monitoring changes to NANP guidelines developed by the Industry Numbering Committee (INC) or North American Numbering Council (NANC) that may affect the administration of numbering resources in Canada.
- 7) Promoting CISC agreed positions on numbering issues in North American telecommunications industry forums.
- 8) Recommending to the CRTC, via the CISC process, acquisition of numbering resources for the Canadian telecommunications industry.
- 9) Liaising with the Alliance for Telecommunications Industry Solutions (ATIS) INC on numbering issues where the CSCN achieves a consensus that such a liaison is required.
- 10) Obtaining CRTC approval for liaison with other North American fora, external agencies, and government bodies (e.g., ATIS, NANPA, NANC, Federal Communications Commission (FCC)) on numbering issues.

Information about the CNA and its activities can be obtained from the CNA web site at [www.cnac.ca](http://www.cnac.ca) and the CRTC web site at <http://www.crtc.gc.ca/cisc/eng/cisf3fg.htm>.

# Industry Numbering Structure



## **SCHEDULE 2.0 - PERFORMANCE REVIEW PROCESS AND STANDARDS**

The services to be provided by the selected Bidder to CNAC and the services users will be required to be performed in accordance with established performance standards, which performance will be subject to a periodic review process between CNAC and the CNA. Proposals shall set out the performance standards proposed to be maintained followed and the periodic review to be followed.

### **I. Performance Standards**

The performance standards set out below is in addition to such other standards and/or guidelines to be set out in the body of the agreement, the documents, applicable law, telecommunications industry guidelines, CSCN Administrative Guidelines and such other recognized industry and regulatory standards and/or guidelines as may be established from time to time during the term of the Agreement and the list set out below should be considered by Bidders as being the minimum standards to be maintained. The ability of the Bidder to suggest standards more stringent than those set out below and elsewhere in this RFP will be considered favorably by CNAC in its consideration of the Bidder's proposal.

The selected Bidder will be required to meet or exceed each of the following standards in the performance of the CNA services:

#### **(a) Staffing and Roles**

The selected Bidder shall employ and/or utilize such number of persons, qualified by education and industry experience, to perform the following functions (for clarity, a person may perform more than one of the functions set out below):

- 1) Program Manager.
- 2) Central Office Code Manager.
- 3) CO Code Specialists.
- 4) Office Administrator.
- 5) Technical Support Staff.
- 6) CNAS and Computer Software Specialists.
- 7) NPA Relief Planning Manager.
- 8) CSCN Administration staff.

#### **(b) CSCN Secretary**

The CNA is required to act as CSCN Secretary and the performance standards in relation thereto include but are not necessarily limited to the following:

- 1) Attend, record attendance and take minutes of all CSCN meetings and conference calls (excluding all CSCN working group meetings except for those where the CNA has been requested to attend).

- 2) Post, within ten business days, minutes of CSCN meetings prepared by the selected Bidder on the CNA web site.
- 3) Distribute, within ten business days of each meeting, a copy of CSCN minutes (including attachments) prepared by the selected Bidder to those parties who attended the meeting as well as such other parties who are listed on the CSCN distribution list.
- 4) Resolve any concerns with the minutes that are raised by any attendee within the 10-day comment period.
- 5) Maintain a CSCN master distribution list.
- 6) Update, within one business day of receipt of requested changes, the CSCN master distribution list (e-mail address list and business card data list), and advise, on at least a weekly basis as necessary, all CSCN participants of such updates via e-mail.
- 7) Maintain and update a TIF list and a TIF report list.
- 8) Maintain a centralized file of the following documents:
  - a) numbering administration guidelines applicable in Canada;
  - b) TIFs, TIF-related documents and TIF Reports; and
  - c) other documents requested by the CSCN (e.g., incoming and outgoing correspondence, CNA Reports).
- 9) Maintain and edit draft documents (e.g., numbering administration guidelines, correspondence) at CSCN meetings, upon request.
- 10) Submit electronic copies of all CSCN meeting minutes and documentation to the CRTC for posting on the CISC website.

(c) CSCN/RPC Chair

The CNA is required to act as Chair of the CSCN, CSCN Task Forces and Relief Planning Committees. The performance standards of the CSCN and RPC Chair include but are not limited to:

- 1) Provide the chair for all CSCN and RPC meetings along with taskforce meeting.
- 2) Name a secretary for all the above meetings.
- 3) Obtain a task force champion to further the work of all task forces.
- 4) Ensure the development of a meeting agenda.



- 5) Ensure a venue for each meeting or make available a process for virtual meetings.
- 6) Maintain control of the meeting by moderating discussions, facilitate that agreements are reached, and conclude with future meeting dates where required.
- 7) Hold agenda setting conference calls two weeks before each CSCN meeting and finalize agenda.

(d) Administration of North American Numbering Plan Resources

The CNA shall perform the following tasks with respect to NPA Relief Planning within Canadian geographic Numbering Plan Areas (NPAs) in accordance with the Canadian NPA Relief Planning Guideline. The performance standards for the administration of North American Plan Resources include, but are not necessarily limited to:

- 1) Receive, validate and forward to NANPA, within one business day of receipt, applications submitted to the selected Bidder for numbering resources administered by the NANPA, with a letter to NANPA, recommending the assignment of the requested numbering resource, where appropriate.
- 2) Provide training on the CNA role in NANPA administered resources for CNA personnel.
- 3) Provide, three months in advance, notification of a relief planning meeting to all affected parties including CSCN participants.
- 4) Provide, at least 18 months prior to the NPA relief date, notification to the NANPA of the approved relief plan.
- 5) Complete, within a minimum of one business day and a maximum of ten business days, modification of any procedures or activities identified as requiring corrective or preventative action.
- 6) Manage, conduct, and coordinate the C-NRUF and submit the C-NRUF Results to the NANPA by NANPA's due dates.
- 7) Develop and submit a C-NRUF report summarizing the C-NRUF results to the CSCN distribution list within 30 business days of submission of C-NRUF Results to the NANPA.

The CNA shall perform the following tasks with respect to NPA Relief Planning within Canadian geographic Numbering Plan Areas (NPAs) in accordance with the Canadian NPA Relief Planning Guideline. The related performance standards include, but are not necessarily limited to:

- 1) Conduct annually the Canadian Numbering Resource Utilization Forecast in accordance with the Canadian Numbering Utilization (C-NRUF) Guideline.
- 2) Perform Relief Number Resource Utilization Forecasts (R-NRUF) for NPAs where the C-NRUF indicates that the NPA will exhaust within a 6 year time frame.
- 3) Perform Jeopardy Number Resource Utilization Forecasts (J-NRUF) for NPAs where the R-NRUF indicates that the NPA will exhaust before an existing or proposed NPA Relief Plan can be implemented.
- 4) Develop the Initial Planning Document (IPD) as a straw plan for implementing relief in the affected NPA.
- 5) Form, chair and provide the secretary and relief planning manager for the Relief Planning Committee (RPC) to develop the Relief Planning Document (PD) and Relief Implementation Plan (RIP).
- 6) Forward the PD and RIP to the CISC and CRTC for approval.
- 7) Request the North American Numbering Administrator to assign the chosen NPA Code to the affected area following CRTC approval.
- 8) Develop and issue the Planning Letter (PL) following CRTC approval.
- 9) Oversee the implementation of the plan in accordance with the CRTC Decision.
- 10) Maintain a list of NPAs in relief and their predicted exhaust dates.

(e) Central Office Code Administration

The CNA shall perform the following tasks with respect to Central Office Code (CO Code) administration. The related performance standards include, but are not necessarily limited to:

- 1) Assign CO Codes to Service Users within the minimum time specified in the Canadian Central Office Code (“NXX”) Assignment Guidelines.
- 2) Input CO Code data into the iConnective database system (i.e., ACD screen data) coincident with the assignment of each CO Code.
- 3) Update the CO Code in the iConnective database system (i.e., ACD screen data) within five business days from receipt of such changes from the CO Code Holder.

(f) Canadian Number Resource Administration

The CNA shall perform the following tasks with respect to Canadian Number Resource Administration. The related performance standards include, but are not necessarily limited to:

- 1) Receive, validate, and process, within ten business days of receipt, requests for NPA 600 NXX Codes and maintain the associated records.
- 2) Receive, validate, and process, within 14 calendar days of receipt, requests for Canadian Non-Geographic NPA NXX Codes and maintain the associated records.
- 3) Prepare and publish annually, on June 30 each year (or such other date determined by CNAC), a CNA Annual Report on the status of Canadian numbering.
- 4) Provide reports, on the due dates requested by the CSCN, on various numbering topics upon request.
- 5) Maintain and update records for N11 Service Codes.
- 6) Maintain: the current iConnective application Guidelines and Forms, the GTT Point Code Industry Notification Process document, the GTT Point Code Industry Notification Nondisclosure Agreement, the Recipient Point Code Distribution List, on the CNA website and forward a copy of the Recipient Point Code Distribution List to eligible requesters upon request.

(g) General

The CNA shall perform other tasks. The related performance standards include, but are not necessarily limited to:

- 1) Acknowledge receipt, within one business day of message reception of information requests received via e-mail, voice mail or the CNA web site.
- 2) Provide, within five business days of message reception, the information requested via e-mail, voice mail or the CNA web site.
- 3) Liaise with the CSCN monthly to determine new performance standards and/or guidelines, if any.
- 4) Update the CNA web site daily to ensure that it contains accurate and up-to-date information.
- 5) Make updates to all CSCN logs within five business days of any changes.

- 6) Document, address and attempt to resolve, within ten (10) Business Days of receipt, any performance problem raised by an industry participant Service User, CSCN or CNAC.
- 7) Submit, within ten business days of identification of a performance problem, either on its own volition or on notice of the same provided verbally or in writing by any third party, including Service Users and CNAC, a report to CNAC summarizing the results of the selected Bidder's investigation of the performance problem and any corrective action taken or to be taken by the selected Bidder.
- 8) Maintain staff in Canada to service requests for a minimum of 4 hours of each business day in each Canadian time zone.
- 9) Respond to requests for information from CNAC and/or the billing and collecting agent related to TSPs and services received from the CNA;
- 10) Carry out requests from CNAC to suspend service to and reclaim resources provided to TSPs.
- 11) Ensure at least one qualified staff member accessible by pager and/or cellular phone outside normal business hours, on a 24 hours per day, seven days per week basis.
- 12) Conduct tests of disaster recovery plan every six months.

## II Periodic Reviews

The Bidder shall include in its proposal details of its proposed periodic review process. Which process shall include, at a minimum, the following:

*Monthly Work Volume Reports* - The selected Bidder shall be required to provide Monthly Work Volume Reports to, which reports shall provide a summary of the quantities of the various numbering resources assigned and other tasks performed by the CNA. To provide the data for this Monthly Work Volume Report, the selected Bidder shall be required to track all relevant work performed and dates (i.e., receipt of applications by resource type, requests for information, industry notification requests), as well as the response dates (i.e., acknowledgment of receipt, action taken, data base updates, the CNA web site updates, due dates met and missed, etc.).

*Annual Report* – The CNA shall also create and publish an Annual Report that shall include comparative summary information on a monthly and annual basis, as appropriate, for all key performance measures including work volumes. The Annual Report shall contain statistics including quantity of applications received and processed by type of numbering resource; average time to process an application, including minimum and maximum time encountered; quantity of applications denied and reason(s); quantity of hard copy documents distributed; quantity of CNA web site accesses; quantity of CNA web site updates; quantity of inquiries

for service information received, and quantity of complaints or concerns received. The Annual Report shall also identify any process improvement opportunities.

*Quarterly Meetings* - The Bidder shall meet with CNAC at least quarterly during each year of the term of the agreement to, among other things:

- 1) Discuss operations under the agreement and provide detailed information regarding the performance of the Bidder.
- 2) Discuss and exchange information about and assess performance of the systems used to carry out the Bidder's responsibilities and proposed regulatory changes, customer service matters and recommend improvements thereto. To facilitate the periodic reviews, a management committee consisting of a representative from the Bidder and a representative from CNAC shall be established and shall be responsible for completing such periodic reviews. The management committee will also be responsible for managing the day-to-day relationship between the parties.

### III Performance Monitoring System

The Bidder shall include in its proposal details of its proposed performance monitoring process. Which process shall include, at a minimum, the following:

- 1) A performance monitoring system for the CNA responsibilities which conforms to the ISO 9001 Standard and which shall have procedures for:
  - a) Verifying the quality of products and services delivered.
  - b) Identifying any product or service which fails to meet stated specifications (a "non-conformity").
  - c) Ensuring appropriate action is taken to prevent recurring non-conformity.
  - d) Ensuring that this action is effective and timely.
- 2) The selected Bidder's quality program shall include procedures for:
  - a) Regularly (but not less than once per year) seeking client feedback on the quality of goods and services which are provided.
  - b) Auditing its performance, or any aspect of that performance, in response to a request by CNAC.
- 3) The selected Bidder's internal quality program shall conduct an internal audit of its performance of its CNA responsibilities on a scheduled semi-annual basis. In addition, the selected Bidder shall conduct an internal audit of its CNA responsibilities on request of CNAC. The following types of audits may be undertaken:
  - a) External audits of the selected Bidder's procedures as the CNA conducted by CNAC or its agent.

- b) Independent audits conducted by a third party. These audits would normally be conducted by the ISO registrar to maintain ISO certification.
- 4) The selected Bidder shall implement the following performance monitoring mechanisms and problem management system in connection with it acting as the CNA:
- a) Staff Meetings - The selected Bidder shall conduct regular staff meetings to analyze and critique its CNA procedures and results.  
The selected Bidder shall conduct regular staff meetings to analyze and critique its CNA procedures and results.
  - b) Input From Affected Parties - The selected Bidder should anticipate direct input from the CSCN, CNAC and CNA Service Users regarding its performance as the CNA. Input may also be derived from the selected Bidder's staff observations or from comments from the Canadian industry or Service Users, regarding the selected Bidder's performance as the CNA. The selected Bidder will seek, on an annual basis, similar input from the NANPA regarding those aspects of the CNA's responsibilities that require cooperation and coordination with that organization. This input should be used by the CNA to identify performance problems and improve CNA performance.
  - c) Industry Questionnaire - The selected Bidder acknowledges that CNAC may distribute a CNA performance questionnaire to the Canadian industry on an annual basis. Upon request, the selected Bidder shall prepare a draft questionnaire for the consideration and use by CNAC. At the discretion of CNAC, the selected Bidder shall consolidate the questionnaire responses into a report to the CNAC.

#### **IV Performance Audits**

The selected Bidder shall be required to actively cooperate with and participate in performance audits, from time to time, deemed appropriate by those entities authorized to audit the CNA (i.e., CNAC, CSCN, CRTC). Deficiencies identified during an audit shall be corrected within the time directed by the auditing authority or, absent such a required time, within a reasonable time to be agreed amongst the affected parties.

#### **V Corrective Actions**

Failure by the selected Bidder, at any time, to strictly adhere to the above standards, other standards as contained in the agreement, documents, telecommunications industry guidelines and other recognized industry and regulatory standards in the performance of its duties and obligations hereunder, shall entitle CNAC, prior to enforcing any of its rights under the agreement to be entered into, to request the selected Bidder to take such corrective action within the time specified by CNAC, to ensure strict compliance by the selected Bidder with such standards. Failure to take such necessary corrective actions in the time specified by CNAC may result in termination of the Agreement.

## SCHEDULE 3.0 – CNAS SOFTWARE

### 1. General

The CNAS is comprised of the CNAS “proper” (number administration system) as well as the integrated and associated components used for reporting, automation and notification etc. CNAS lives in the Microsoft Azure Cloud infrastructure, utilizing a combination of cloud-based virtual servers and networking infrastructure. The main data storage for CNAS is a Microsoft Azure SQL database.

The CNAS architecture provides for one active region (Canada Central Region), and a standby/backup region (Canada East Region) that can become manually active if the current region fails. Each region has its own Azure SQL database.

### 2. Virtual Machine Servers

CNAS utilizes four servers, based on cloud virtual machines:

- Radius
- Application
- Automation
- Development

#### Radius Server

This server provides authentication services, primarily for VPN connections to internal cloud networking infrastructure. A VPN connection is required to gain access to the CNAS GUI. There are 2 Radius servers, one located in each region.

#### Application Server

The application server provides the back-end web-services that present the graphical user interface (GUI) of CNAS proper and those add-on modules that employ a web-based GUI. The primary functionality of the GUI is for number/code administration, reporting, contact/distribution list management and task tracking.

#### Automation Server

The Email and Automation server provides all CNA-to-external distribution list handling. Additionally, as the Automation server, it provides scheduled CNA task automation that interfaces with CNAS.

#### Development Server

The Development Server is a clone of the Application Server and is used to provide GUI services for development and testing of changes for the production application server. This virtual machine generally resides only in the main Central Region and is deallocated unless required.

### **3. CNAS Data Storage**

The data storage methods are described below.

#### Database Storage

The CNAS Database is the primary data storage and management system for numbering data. Service is provided by Microsoft Azure cloud-based database.

#### File-Based Cloud Storage

The file-based storage for CNAS is used for file-based communications between the Application server and the Email and Automation server to facilitate managing distribution lists and message queuing.

#### Project File Storage

The CNA utilizes the Git version control system to manage software development and maintain version control. MS Azure DevOps Version Control Repositories is used as a cloud-based Git repository service.

### **2) Project File Shares**

The CNA utilizes Microsoft SharePoint server file shares to serve the CNA staff:

#### CNA Project Share

This file share contains all the available historical and current operational working files used by the CNA team to provide all the services required to execute the CNA contract. This includes (but is not limited to) working aids, documentation, current and historic applications, mapping projects and correspondence.

#### Network Admin Share

This file share contains various files accessed only by CNA network administrators that are related to system configurations of an IT or networking nature.



## **SCHEDULE 4.0 – TELECOMMUNICATIONS INDUSTRY DOCUMENTS/GUIDELINES**

The services to be provided by the selected Bidder to CNAC and the services users will be required to be performed in accordance with established performance standards, which performance will be subject to a periodic review process between CNAC and the CNA. Proposals shall set out the performance standards proposed to be maintained followed and the periodic review to be followed.

- 1) CRTC Interconnection Steering Committee Administrative Guideline.
- 2) CSCN Adjunct to the CRTC Industry Steering Committee Administrative Guideline.
- 3) Canadian Numbering Plan & Dialing Plan.
- 4) Canadian Central Office Code (NXX) Assignment Guideline.
- 5) Canadian Emergency Service Routing Digit (ESRD) Block Assignment Guideline.
- 6) Canadian International Mobile Station Identity (IMSI) Assignment Guideline.
- 7) Canadian MIN Block Identifier (MBI) Assignment Guideline.
- 8) Canadian Non-Geographic Code Assignment Guideline.
- 9) Canadian NPA Relief Planning Guideline.
- 10) Canadian NPA 600 NXX Code Assignment Guideline.
- 11) Canadian Number Resource Utilization Forecast (C-NRUF) Guideline.
- 12) Canadian System Identifier (SID) Assignment Guideline.
- 13) Canadian Adjunct to the INC Carrier Identification Code (CIC) Assignment Guideline.
- 14) Canadian Adjunct to the INC 900 NXX Code Assignment Guideline.
- 15) Canadian Adjunct to INC NPA Allocation Plan and Assignment Guideline.
- 16) INC 800-855 Number Assignment Guideline.
- 17) INC Vertical Service Code Assignment Guideline.
- 18) Canadian N11 Notification & Implementation Guideline.
- 19) ANSI T1.11a - 1994 American National Standards Institute (ANSI) “Telecommunications - Signaling System Number 7 - Message Transfer Part (MTP) (Numbering of Signaling Point Codes)”.
- 20) ANSI T1.111 - 1996 American National Standards Institute (ANSI) “Telecommunications - Signaling System Number 7 - Functional Description of the Signaling System Message Transfer Part (MTP)”.

Most of the guidelines are maintained on the CRTC CISC CSCN Web Site at:  
<http://www.crtc.gc.ca/cisc/eng/cisf3fg.htm>).

## SCHEDULE 5.0 – CNAC LIST

### **CNAC Shareholders**

- Amtelecom Group Inc.
- ISP Telecom Inc.
- Vidéotron Ltée
- Bell Canada
- Exatel Inc.
- Execulink Telecom Inc.
- Hay Communications Co-operative Limited
- Fido Solutions Inc.
- Nexicom Telecommunications Inc.
- The Westport Telephone Company
- Wightman Telephone Limited
- Quadro Communications Co-operative Inc.
- Rogers Cable Communications Inc.
- Rogers Wireless Partnership.
- Saskatchewan Telecommunications
- TELUS Communications Company

### **CNAC Directors/Shareholder Representatives**

- Clayton Zekelman
- Rob Figiuzzi
- Pierre-Luc Hebert
- Jesse Gasteiger
- Michael Andrews
- Peter Szabo
- Mélanie Cardin
- Angela Lawrence
- Debbie Brioux
- Gerry Thompson
- John DeHeer
- Dave Day
- Martha Facey
- Stephen H.A. Lynn

## **CNAC Officers**

- Bill Barsley – President
- Gary Jessop – Corporate Secretary

## **Other**

- Glenn Pilley (Pilmar Services Inc.) – CNAC Business Manager
- Welch LLP – Billing and Collection Agent
- Jessop & Proulx LLP – Law Firm