

**Report for July 2021 R-NRUF  
to the  
Canadian Steering Committee on Numbering (CSCN)**

Published: 17 September 2021

Issued by:  
Canadian Numbering Administrator  
COMsolve Inc.

David Comrie  
150 Isabella Street, Suite 605  
Ottawa, ON K1S 5H3

## 1. Purpose of R-NRUF

In accordance with the *Canadian Numbering Resource Utilization Forecast (C-NRUF) Guideline* (the Guideline), approved by the Canadian Radio-television and Telecommunications Commission (CRTC) in Telecom Decision CRTC 2015-166 dated 29 April 2015:

When an NPA is entering the timeframe for NPA Relief Planning (e.g., within or about 72 months before the Projected Exhaust Date), an initial R-NRUF is conducted to obtain actual and forecast annual data at the Exchange Area level of detail. The purpose of the initial R-NRUF is to validate the Projected Exhaust Date for an exhausting NPA, and to provide the CNA with detailed information to be used to identify a potential Relief Date and to prepare the Initial Planning Document as outlined in the Canadian NPA Relief Planning Guideline. Typically, the initial R-NRUF will utilize Format 2 in Appendix A. In general, the CNA will conduct the initial R-NRUF when needed; however, the CNA should attempt to choose dates for the initial and subsequent R-NRUFs that will coincide with the annual G-NRUF and mid-year R/S-NRUF dates (e.g., as of January 1 and July 1 each year).

Subsequent R-NRUFs will be conducted semi-annually to monitor CO Code forecast changes prior to implementing relief. These R-NRUFs shall be conducted until three months of when relief is implemented, or until they are replaced by S-NRUFs or J-NRUFs.

Based on the January 2021 G- and R-NRUF results, the CNA determined that, in addition to NPA 204/431, 226/519/584, NPA 236/250/604/672/778, NPA 289/365/905, NPA 403/587/780/825, NPA 416/437/647, NPA 438/514, NPA 450/579, NPA 506, and NPA 819/873, NPA 709 had also reentered the 6-year relief planning window and the CNA declared that NPA 249/705 and NPA 343/613 were in a Jeopardy Condition.

## 2. High Level Summary

The results from the July 2021 R-NRUF are quite different from the January 2021 R-NRUF results due to various Telecommunications Service Providers (TSPs) submitting updated data. The CNA has verified the input from various TSPs and the variance from previous inputs can be rationalized.

Based on the July 2021 R-NRUF results and in accordance with Section 9.1 of the *Canadian NPA Relief Planning Guideline*, the following three NPAs are now in a Jeopardy Condition:

- 204/431
- 403/587/780/825
- 819/873

Accordingly, they will be included in future J-NRUF requests until such time as the NPA is no longer in a Jeopardy Condition or 66 days prior to the Relief Date.

July 2021 R-NRUF Report

These results were reviewed by the Canadian Steering Committee on Numbering (CSCN) and the Relief Planning Committees during a conference call held on 30 August 2021.

Specific changes are listed below.

NPA	PED from January 2021 NRUF	PED from July 2021 NRUF	Change in PED
204/431	Apr-2024	Oct-2023	Advanced 6 months
226/519/548	Jul-2024	Aug-2024	Delayed 1 months
236/250/604/672/778	Feb-2027	Mar-2027	Delayed 1 months
403/587/780/825	Nov-2022	Jul-2022	Advanced 4 months
416/437/647	Jul-2026	Sep-2025	Advanced 10 months
438/514	Feb-2024	Nov-2023	Advanced 3 months
450/579	Sep-2023	Jun-2023	Advanced 3 months
506	Jan-2024	Nov-2023	Advanced 2 months
709	Sep-2026	Dec-2026	Delayed 3 months
819/873	Jul-2023	May-2023	Advanced 2 months

The most recent R-NRUF data is summarized in the following chart.

NPA / Years	July 2021 R-NRUF Aggregate results							
	Actuals		Forecast					
	1-Jan. 2021	1-Jul. 2021	2022	2023	2024	2025	2026	2027
204/431	1259	1277	1420	1514	1649	1734	1801	1875
226/519/548	1744	1859	2051	2211	2333	2453	2556	2641
236/250/604/672/778	3093	3105	3248	3409	3561	3707	3855	3973
403/587/780/825	2904	2941	3124	3297	3462	3584	3700	3804
416/437/647	1902	1933	2016	2121	2218	2325	2451	2563
438/514	1301	1330	1418	1517	1636	1729	1810	1894
450/579	1281	1328	1436	1555	1686	1790	1897	1984
506	619	624	684	745	827	876	918	968
709	589	592	633	675	709	736	771	826
819/873	1294	1357	1432	1553	1704	1811	1895	1985
<b>NPA / Years</b>	<b>1-Jan. 2021</b>	<b>1-Jul. 2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>

**NPA 204/431**

NRUF data, including the most recent results, is summarized in the following chart.

<b>NPA 204/431 Summary of Projected Exhaust Dates</b>			
<b>NPA</b>	<b>Type of C-NRUF</b>	<b>Date of Publication</b>	<b>Projected Exhaust Date</b>
204/431	January 2019 G-NRUF	26 March 2019	July 2026
204/431	January 2020 G-NRUF	24 March 2020	January 2025
204/431	July 2020 R-NRUF	18 August 2020	June 2024
204/431	January 2021 R-NRUF	23 February 2021	April 2024
204/431	July 2021 R-NRUF	19 August 2021	October 2023

**NPA 226/519/548**

NRUF data, including the most recent results, is summarized in the following chart.

<b>NPA 226/519/548 Summary of Projected Exhaust Dates</b>			
<b>NPA</b>	<b>Type of C-NRUF</b>	<b>Date of Publication</b>	<b>Projected Exhaust Date</b>
226/519/548	January 2021 G-NRUF	23 February 2021	July 2024
226/519/548	July 2021 R-NRUF	19 August 2021	August 2024

**NPA 236/250/604/672/778**

NRUF data, including the most recent results, is summarized in the following chart.

<b>NPA 236/250/604/672/778 Summary of Projected Exhaust Dates</b>			
<b>NPA</b>	<b>Type of C-NRUF</b>	<b>Date of Publication</b>	<b>Projected Exhaust Date</b>
236/250/604/ 672/778	January 2021 G-NRUF	23 February 2021	February 2027
236/250/604/ 672/778	July 2021 R-NRUF	19 August 2021	March 2027

**NPA 403/587/780/825**

NRUF data, including the most recent results, is summarized in the following chart.

<b>NPA 403/587/780/825 Summary of Projected Exhaust Dates</b>			
<b>NPA</b>	<b>Type of C-NRUF</b>	<b>Date of Publication</b>	<b>Projected Exhaust Date</b>
403/587/780/825	January 2017 G-NRUF	29 March 2017	March 2022
403/587/780/825	July 2017 R-NRUF	25 September 2017	January 2023
403/587/780/825	January 2018 R-NRUF	20 March 2018	September 2022
403/587/780/825	July 2018 R-NRUF	5 September 2018	March 2022
403/587/780/825	January 2019 R-NRUF	26 March 2019	June 2022
403/587/780/825	July 2019 R-NRUF	20 September 2019	February 2022
403/587/780/825	January 2020 G-NRUF	24 March 2020	December 2022
403/587/780/825	July 2020 R-NRUF	18 August 2020	November 2023
403/587/780/825	January 2021 R-NRUF	23 February 2021	January 2023
403/587/780/825	July 2021 R-NRUF	19 August 2021	July 2022

**NPA 416/437/647**

NRUF data, including the most recent results, is summarized in the following chart.

<b>NPA 416/437/647 Summary of Projected Exhaust Dates</b>			
<b>NPA</b>	<b>Type of C-NRUF</b>	<b>Date of Publication</b>	<b>Projected Exhaust Date</b>
416/437/647	January 2019 G-NRUF	26 March 2019	January 2024
416/437/647	July 2019 R-NRUF	20 September 2019	June 2025
416/437/647	January 2020 G-NRUF	24 March 2020	January 2025
416/437/647	July 2020 R-NRUF	18 August 2020	November 2025
416/437/647	January 2021 R-NRUF	23 February 2021	July 2026
416/437/647	July 2021 R-NRUF	19 August 2021	September 2025

**NPA 438/514**

NRUF data, including the most recent results, is summarized in the following chart.

<b>NPA 438/514 Summary of Projected Exhaust Dates</b>			
<b>NPA</b>	<b>Type of C-NRUF</b>	<b>Date of Publication</b>	<b>Projected Exhaust Date</b>
438/514	January 2019 G-NRUF	26 March 2019	October 2023
438/514	July 2019 R-NRUF	20 September 2019	June 2024
438/514	January 2020 G-NRUF	24 March 2020	March 2026
438/514	July 2020 R-NRUF	18 August 2020	December 2024
438/514	January 2021 R-NRUF	23 February 2021	July 2024
438/514	July 2021 R-NRUF	19 August 2021	November 2023

**NPA 450/579**

NRUF data, including the most recent results, is summarized in the following chart.

<b>NPA 450/579 Summary of Projected Exhaust Dates</b>			
<b>NPA</b>	<b>Type of C-NRUF</b>	<b>Date of Publication</b>	<b>Projected Exhaust Date</b>
450/579	January 2017 G-NRUF	29 March 2017	June 2022
450/579	July 2017 R-NRUF	25 September 2017	August 2023
450/579	January 2018 R-NRUF	20 March 2018	June 2021
450/579	July 2018 R-NRUF	5 September 2018	March 2021
450/579	January 2019 R-NRUF	26 March 2019	June 2024
450/579	July 2019 R-NRUF	20 September 2019	June 2024
450/579	January 2020 G-NRUF	24 March 2020	October 2024
450/579	July 2020 R-NRUF	18 August 2020	July 2024
450/579	January 2021 R-NRUF	23 February 2021	September 2023
450/579	July 2021 R-NRUF	19 August 2021	June 2023

**NPA 506**

NRUF data, including the most recent results, is summarized in the following chart.

<b>NPA 506 Summary of Projected Exhaust Dates</b>			
<b>NPA</b>	<b>Type of C-NRUF</b>	<b>Date of Publication</b>	<b>Projected Exhaust Date</b>
506	January 2015 G-NRUF	27 March 2015	April 2025
506	January 2016 G-NRUF	21 March 2016	February 2021
506	July 2016 R-NRUF	12 October 2016	May 2020
506	January 2017 R-NRUF	29 March 2017	December 2021
506	July 2017 R-NRUF	8 September 2017	November 2024
506	January 2018 R-NRUF	20 March 2018	December 2021
506	July 2018 R-NRUF	5 September 2018	January 2022
506	January 2019 R-NRUF	26 March 2019	August 2022
506	July 2019 R-NRUF	20 September 2019	April 2023
506	January 2020 G-NRUF	24 March 2020	March 2024
506	July 2020 R-NRUF	18 August 2020	March 2024
506	January 2021 R-NRUF	23 February 2021	January 2024
506	July 2021 R-NRUF	19 August 2021	November 2023

**NPA 709**

NRUF data, including the most recent results, is summarized in the following chart.

<b>NPA 709 Summary of Projected Exhaust Dates</b>			
<b>NPA</b>	<b>Type of C-NRUF</b>	<b>Date of Publication</b>	<b>Projected Exhaust Date</b>
709	January 2015 G-NRUF	27 March 2015	August 2024
709	January 2016 G-NRUF	21 March 2016	May 2019
709	April 2016 J-NRUF	15 May 2016	March 2019

<b>NPA 709 Summary of Projected Exhaust Dates</b>			
<b>NPA</b>	<b>Type of C-NRUF</b>	<b>Date of Publication</b>	<b>Projected Exhaust Date</b>
709	July 2016 J-NRUF	2 September 2016	March 2019
709	October 2016 J-NRUF	5 December 2016	March 2019
709	January 2017 J-NRUF	29 March 2017	August 2019
709	April 2017 J-NRUF	2 June 2017	August 2019
709	July 2017 J-NRUF	5 September 2017	May 2023
709	January 2018 R-NRUF	20 March 2018	April 2023
709	July 2018 R-NRUF	5 September 2018	March 2023
709	January 2019 R-NRUF	26 March 2019	August 2023
709	July 2019 R-NRUF	20 September 2019	October 2023
709	January 2020 G-NRUF	24 March 2020	March 2023
709	July 2020 R-NRUF	18 August 2020	June 2028
709	January 2021 R-NRUF	23 February 2021	September 2026
709	July 2021 R-NRUF	19 August 2021	December 2026

**NPA 819/873**

NRUF data, including the most recent results, is summarized in the following chart.

<b>NPA 819/873 Summary of Projected Exhaust Dates</b>			
<b>NPA</b>	<b>Type of C-NRUF</b>	<b>Date of Publication</b>	<b>Projected Exhaust Date</b>
819/873	January 2019 G-NRUF	26 March 2019	October 2025
819/873	July 2019 R-NRUF	20 September 2019	March 2025
819/873	January 2020 G-NRUF	24 March 2020	July 2025
819/873	July 2020 R-NRUF	18 August 2020	December 2023
819/873	January 2021 R-NRUF	23 February 2021	July 2023
819/873	July 2021 R-NRUF	19 August 2021	May 2023

**3. Schedule of Future R-NRUF Activities in the Current Year**

No further R-NRUFs are scheduled to take place in this calendar year.

**4. R-NRUF Assumptions**

The assumptions used for the July 2021 R-NRUF are the assumptions that were provided on 14 October 2020 to the CNA by the Canadian Steering Committee on Numbering (CSCN) for conducting the January 2021 NRUF.

Item 4 of the 14 October 2020 letter states, in part:

Where the CNA believes, based on its analysis of past growth and NRUF forecast data for an NPA, that the six-year forecast average annual growth may not be the best methodology for that NPA for projecting growth beyond the six-year forecast period, the CNA shall seek guidance

from CRTC staff and will advise the CSCN of the alternative method used.

In this instance, the CNA compared the average forecast growth for the next five years, the median forecast growth for the next five years and the median and average historical growth for the past five years. The lowest number resulting from these calculations was the one used to identify the Projected Exhaust Date (PED) for each NPA.

NPA	Future PED Method
204/431	Historical Average
226/519/548	Historical Median
236/250/604/672/778	Historical Median
403/587/780/825	Historical Median
416/437/647	Historical Median
438/514	Historical Median
450/579	Historical Average
506	Historical Median
709	Historical Average
819/873	Historical Median

## 5. Summary of Challenges Encountered during the R-NRUF Process

The CNA sent an e-mail reminder on 23 July 2021 and started contacting individual companies during the first week of August to remind them of the 31 July 2021 due date. Nevertheless, some R-NRUF submissions were a few days late.

## 6. Conclusion

In accordance with Section 4, Item 6 h) of the *Canadian Numbering Resource Utilization Forecast (C-NRUF) Guideline*, the CNA has conducted assessments, sought clarification and/or explanation from various TSPs to reconcile 2021 growth with current and historical forecasts to determine whether the 2020 NRUF results are reasonable and the Projected Exhaust Dates for all NPAs are realistic.

The CNA believes that emerging technology growth has been responsible for a good part of the recent demand. It is assumed that the introduction of the *Canadian Non-Geographic Code Assignment Guideline*, will alleviate some of the issues associated with Machine-to-Machine demand but it is difficult to quantify. Some TSPs are applying for non-geographic codes.

Based on the data and explanations provided by TSPs in response to the CNA's questions, the NRUF results appear reasonable and the PEDs for Canadian NPAs are generally realistic.