**Report for July 2022 R-NRUF**
**to the**
**Canadian Steering Committee on Numbering (CSCN)**

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## 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 2022 G-, R- and S-NRUF results, the CNA determined that NPAs 226/519/584, 236/250/604/672/778, 416/437/647, and 506 remain in the 6-year relief planning window.

## 2. High Level Summary

The results from the July 2022 R-NRUF are quite different from the January 2022 R-NRUF results due to various Telecommunications Service Providers (TSPs) submitting updated data. The CNA has verified the input from these TSPs and the variance from previous inputs can be rationalized.

These results were reviewed by the Canadian Steering Committee on Numbering (CSCN) and the Relief Planning Committees during a conference call held on 1 September 2022.

Specific changes are listed below.

| NPA | PED from January 2022 NRUF | PED from July 2022 NRUF | Change in PED |
|---|---|---|---|
| 226/519/548 | Mar-2025 | Apr-2024 | Advanced 11 months |
| 236/250/604/672/778 | Mar-2027 | Jul-2026 | Advanced 8 months |

| NPA | PED from January 2022 NRUF | PED from July 2022 NRUF | Change in PED |
|---|---|---|---|
| 416/437/647 | Mar-2026 | Nov-2026 | Delayed 8 months |
| 506 | Oct-2024 | Feb-2024 | Advanced 8 months |

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

| | July 2022 R-NRUF Aggregate results | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Actuals | | Forecast | | | | | |
| NPA / Years | 1-Jan. 2022 | 1-Jul. 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 |
| | | | | | | | | |
| 226/519/548 | 1914 | 1885 | 2179 | 2356 | 2522 | 2630 | 2729 | 2846 |
| 236/250/604/672/778 | 3165 | 3241 | 3402 | 3585 | 3764 | 3917 | 3097 | 4265 |
| 416/437/647 | 1956 | 1979 | 2141 | 2240 | 2321 | 2439 | 2523 | 2612 |
| 506 | 627 | 646 | 744 | 873 | 859 | 889 | 933 | 965 |
| | | | | | | | | |
| NPA / Years | 1-Jan. 2022 | 1-Jul. 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 |

**NPA 226/519/548**

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

| NPA 226/519/548 Summary of Projected Exhaust Dates | | | |
|---|---|---|---|
| NPA | Type of C-NRUF | Date of Publication | Projected Exhaust Date |
| 226/519/548 | January 2021 G-NRUF | 23 February 2021 | July 2024 |
| 226/519/548 | July 2021 R-NRUF | 19 August 2021 | August 2024 |
| 226/519/548 | January 2022 R-NRUF | 01 March 2022 | March 2025 |
| 226/519/548 | July 2022 R-NRUF | 19 August 2022 | April 2024 |

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

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

| NPA 236/250/604/672/778 Summary of Projected Exhaust Dates | | | |
|---|---|---|---|
| **NPA** | **Type of C-NRUF** | **Date of Publication** | **Projected Exhaust Date** |
| 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 |
| 236/250/604/672/778 | January 2021 R-NRUF | 01 March 2022 | March 2027 |
| 236/250/604/672/778 | July 2021 R-NRUF | 19 August 2022 | July 2026 |

**NPA 416/437/647**

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

| NPA 416/437/647 Summary of Projected Exhaust Dates | | | |
|---|---|---|---|
| **NPA** | **Type of C-NRUF** | **Date of Publication** | **Projected Exhaust Date** |
| 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 |
| 416/437/647 | January 2022 R-NRUF | 1 March 2022 | March 2026 |
| 416/437/647 | July 2022 R-NRUF | 19 August 2022 | November 2026 |

**NPA 506**

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

| NPA 506 Summary of Projected Exhaust Dates | | | |
|---|---|---|---|
| **NPA** | **Type of C-NRUF** | **Date of Publication** | **Projected Exhaust Date** |
| 506 | January 2015 G-NRUF | 27 March 2015 | April 2025 |
| 506 | January 2016 G-NRUF | 21 March2016 | 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 |

| NPA 506 Summary of Projected Exhaust Dates | | | |
|---|---|---|---|
| **NPA** | **Type of C-NRUF** | **Date of Publication** | **Projected Exhaust Date** |
| 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 |
| 506 | January 2022 R-NRUF | 1 March 2022 | October 2024 |
| 506 | July 2022 R-NRUF | 19 August 2022 | February 2024 |

## 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 2022 R-NRUF are the assumptions that were provided on 14 December 2021 to the CNA by the Canadian Steering Committee on Numbering (CSCN) for conducting the January 2022 NRUF.

Item 4 of the Attachment to the 14 December 2021 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 |
|---|---|
| 226/519/548 | Historical Average |
| 236/250/604/672/778 | Historical Average |
| 416/437/647 | Historical Average |
| 506 | Historical Average |

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

The CNA sent an e-mail reminder on 20 July 2022 and started contacting individual companies during the first week of August to remind them of the 29 July 2022 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 July 2022 R-NRUF results are reasonable and the PEDs for the four 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.