

April 2023 North American Numbering Plan (NANP) Exhaust Analysis

Introduction

NANPA projects the exhaust of the NANP based upon the current NPA Exhaust Analysis and the utilization and forecast data submitted by service providers via the Numbering Resource/Utilization Forecast Report (“NRUF”) process. The following assumptions were also used in this exhaust analysis.

April 2023 NANP Exhaust Projection Assumptions

The following is a list of assumptions used in the development of the April 2023 NANP exhaust projection prepared by NANPA.

1. The NANP exhaust study uses as its basis the Central Office (“CO”) code demand, which includes service provider and thousands-block pooling forecasts, historical CO code assignments and other Numbering Plan Area (“NPA”)-specific information, calculated for each respective NPA. The monthly CO code demand as calculated in the NPA exhaust analysis using statistical analyses similar to the analysis NANPA uses to forecast the exhaust of NPAs, i.e., SP forecasts and historical CO code assignment data.
2. For NPAs in rationing, NANPA compared the actual CO code demand over the past year(s) with the rationed amount. In addition, NANPA compared the forecasted CO code demand provided by service providers and/or the thousands-block pooling forecasts to the rationed amount. Based upon this analysis, NANPA identified an average annual CO code demand rate for the NPA.
3. A new NPA will be required when the number of assigned and unavailable CO codes reaches 800.
4. It is assumed that each new NPA will require the same number of unassignable codes as the current NPA. Generally the unassignable CO codes in the existing NPAs are duplicated in the new NPA. There may be times, however, when additional CO codes in the new NPA are marked unassignable.
5. No assumptions were made with regard to the relief method implemented (*i.e.*, NPA split vs. overlay). However, it was assumed that the selected relief method did not require the duplication or protection of CO codes other than those identified in number 4 above.
6. The CO code demand for an exhausting NPA will be continued after NPA relief. By doing so, the demand for both the existing and new NPAs will be considered for the geographic area covered by the original NPA.
7. To account for the variability of demand, a sensitivity analysis was performed to the CO code demand (*i.e.*, demand will be increased and decreased by increments of 10%) to understand the impact on NANP exhaust.

Results based on Assumptions

As recognized in previous NANP exhaust analyses, the model is sensitive to the yearly CO code demand rate. Using the April 2023 NPA Exhaust Analysis and the CO code demand included in NRUF submissions, an average yearly gross CO code demand rate of 6,560 CO codes was calculated. This yearly demand rate was compared with U.S. CO code demand rates in 2018 through 2023.

Year	Annual Gross CO Code Demand	Annual Net CO Code Demand
2018	2,800	2,500
2019	2,926	2,650
2020	4,030	3,346
2021	4,966	4,835
2022	6,561	3,849
2023	6,560	4,395

To project the exhaust of the NANP, an average annual gross demand of 6,560 CO codes was used. This demand factors in the forecast data submitted as part of the February 2023 NRUF process and the demand in non-US NANP member area codes.¹

Model Based on Projected Demand

Using an average gross CO code demand rate of 6,560 codes assigned per year, the projected NANP exhaust date is 2051 assuming the quantity of NPAs remains at 677.

This figure of 677 NPAs is derived as follows: 800 NPAs less the 11 NPAs that are unavailable² for assignment: N11 NPA codes (8), 555 and 950 NPA codes (2), and 988 NPA code (1); and less the 112 NPAs that are reserved³ for: NANP expansion (80), 880 – 887 and 889 toll-free NPA codes (9) and non-geographic NPA codes⁴ (23).

Sensitivity Analysis

For comparison purposes, NANPA performed a sensitivity analysis using an average annual demand to 7,872 CO codes, a 20% increase in the base model demand. This analysis resulted in a projected exhaust of 2045.

¹ NANPA included an annual forecast of 1,257 CO codes for non-US NANP member countries.

² Per Section 4.2, NPA Allocation Plan And Assignment Guidelines, ATIS-0300055.

³ Per Section 4.3 and 11.0, NPA Allocation Plan And Assignment Guidelines, ATIS-0300055.

⁴ Includes 23 NPA codes, 18 reserved for non-geographic services (532, 538, 542, 543, 545, 547, 549, 552, 553, 554, 556, 569, 578, 589, 550, 535, 546, and 558) and 5 reserved for Canada (633, 644, 655, 677 and 688).

