

North American Numbering Council (NANC)

Recommendations on Funding of the Creation Costs and Fee Structure for Users of the Reassigned Numbers Database

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Section 1: Executive Summary

The establishment of a national Reassigned Numbers Database (RND) will, to quote FCC Chairman Pai, provide “a solution that will reduce the number of mistaken calls to reassigned numbers.”¹ In order to help achieve that objective, the North American Numbering Council (NANC), through its Numbering Administration Oversight Working Group (NAOWG), considered and analyzed various approaches pursuant to direction provided, and recommendations sought, by the Commission within FCC 18-177.² This set of recommendations is the result of that effort.

FCC 18-177 requires Service Providers to fund the creation of the RND, and requires their subsequent repayment through processes overseen by an RND Administrator that will be selected by the Commission through a bidding process. Further, that Order seeks from the NANC guidance on costing and pricing structures that would enable wide scale use of the RND by callers (Users), and seeks guidance on ways to encourage the establishment of the RND’s systems and processes in order for the RND to begin operating as quickly and economically as possible. The NANC encountered a dearth of relevant information necessary to develop the level of detail that it desired to include within its recommendations. For example, at present there is insufficient empirical information that may be used to establish specific RND funding and pricing levels. Certain fundamental differences between the existing Federal Do-Not-Call (DNC) Registry and the proposed RND, as well as a lack of available public cost information associated with the initial establishment and ongoing operation of the DNC Registry, inhibited the development of detailed comparisons that could be used in the development of RND-related recommendations.

Hence, while neither specific dollar amounts necessary to fund the establishment of the RND, nor to operate and ensure recovery and reimbursement are presently determinable, the processes and an exemplary tier schedule for query pricing were identified and provided in the recommendations that follow.

Section 2: Introduction and Background

At the direction of the FCC, (In FCC 18-177 CC Docket 17-159), the North American Numbering Council’s (NANC’s) Numbering Administration Oversight Working Group (NAOWG) was tasked with making recommendations on a series of questions relating to the design and operation of the Reassigned Numbers Database (RND).³ In this report, the NANC provides the following recommendations for:

- 1) the Funding and Repayment of the Creation Costs of the RND
- 2) The Initial Pricing Structure and Pricing Levels that could be applicable to use for the RND.

Section 3: Funding and Repayment of Creation Costs of the RND

In this section, the NANC provides recommendations for the funding and repayment of the creation costs of the RND. FCC 18-177 indicated that cost efficiencies may be achieved by the merging of the RND administration with the NANPA/PA⁴ and that it may be the most cost efficient way of administering the database.⁵ In doing so, the NANC provides the following recommendations relative to the Service Provider contributions to fund the RND creation costs, and then later repayment of those contributions

¹ See <https://docs.fcc.gov/public/attachments/DOC-355526A2.pdf>.

² See 18-177, available at <https://docs.fcc.gov/public/attachments/FCC-18-177A1.pdf>.

³ See 18-177 ¶ 59-62

⁴ See 18-177 ¶ 34, 47

⁵ See 18-177 ¶ 60

to those Service Providers. The recommendations are consistent with use of the existing process for the NANP Fund⁶, to both collect from and later repay to Service Providers the costs of RND creation.⁷ The current NANP Fund process entails the annual development of a contribution factor where Service Providers fund the costs associated with the NANPA/PA and Billing & Collection (B&C) Agent functions based upon the Service Provider's portion of the industry's overall revenues as reported collectively on the FCC's Form 499a. This contribution factor is calculated by the B&C Agent based upon the known NANPA/PA and B&C contracted rates, is initiated in the spring and approved by the NANC in the second quarterly NANC meeting,⁸ and then submitted to the FCC. The contribution factor is then identified in an FCC Public Notice, and then implemented in the September/October timeframe where the B&C Agent bills and collects the funds based upon each Service Provider's portion of the known NANP Fund costs. Continuing with this process and schedule allows for Service Providers to anticipate funding requirements during their standard budgeting intervals prior to the time that the funds will be needed and provides the B&C Agent with the required FCC Form 499a information.⁹

Section 3.1: Collecting RND Creation Cost Contributions from Service Providers

The NANC recommends that no changes to the process or timing of the normal NANP Fund contribution mechanism result from the decision to incorporate the initial funding of the RND creation into that contribution mechanism. Due to the lack of basis for determining the costs of the RND creation, no dollar amount could be recommended for Service Providers to "fund" prior to contract award (or at least until receipt of proposals from possible vendors) and that instead, to the extent there is any advance payment of creation costs, it be based upon the amount bid by the winning vendor or be subsidized by the NANP Fund contingency funds. Once the contracted costs for the RND creation have been determined, the B&C Agent would calculate two contribution factors, one that would be used to collect funds for the start-up costs of the initial creation of the RND system, and a second contribution factor for the funding of the creation (development) costs of combining the NANPA/PA systems and the ongoing combined NANPA/PA annual operations costs. The RND creation funding shall not include any ongoing administration costs of the RND. These two contribution factors may be combined on the same bill from the B&C Agent, but will include line itemization designating the separate RND and NANP Fund contribution factors, and remain distinct for accounting and RND creation cost repayment purposes. Ongoing operation costs after the establishment of the RND will be the responsibility of the RNDA.¹⁰ The calculation of the RND contribution factor shall maintain the same schedule as is currently provided for funding of the NANP Fund. This process will continue to accommodate the Service Providers' need to appropriately budget and provide funding for known NANP costs.

The funding amount will need to be known to the B&C Agent and Service Providers in advance of the contribution factor calculation. This funding amount will be required to be known by Service Providers prior to November of the year prior to the calculation of the contribution factor. This will allow the appropriate budgeting by Service Providers and the basis for the B&C Agent to calculate the contribution factor.

It has been estimated that the Request for Proposal (RFP) resulting from this NANC RND Technical Requirements Document (TRD) and report may be issued and then a contract awarded in late summer

⁶ See <http://nanpfund.com/>

⁷ See 18-177 ¶ 46

⁸ This meeting typically takes place in June.

⁹ The deadline for service provider filing of FCC Form 499a is April 1st.

¹⁰ See 18-177 ¶ 46

2020. Thus, there should be ample time and flexibility in the event the contract award is delayed. It is anticipated that the RND creation funds be collected in a single annual contribution factor. However, if the funds to be collected result in twice the current year's NANP Fund contribution factor, a multiple year contribution factor or vendor self-funding should be considered.

In addition to identifying the detail associated with the costs of administration of the current NANPA/PA systems, the costs of the combined NANPA/PA system development, and the costs of ongoing operation of the combined NANPA/PA system, the vendor shall identify separately the costs for the development of the RND, and the ongoing administration costs of the RND. The vendor selected as the NANPA/PA and RND Administrator (RNDA) will document how it will keep the administrative costs of the RNDA separate from the NANPA/PA as the revenue generated from Users/User Agents using the RND will be covering the administrative costs of the RNDA and RND. The separation of the administrative costs between the NANPA/PA and RNDA will be subject to an annual audit. In addition, the RNDA vendor shall provide a commitment and detail describing how both the combination of the NANPA/PA systems and the development of the RND will be completed in parallel and demonstrate how the two development efforts will not be delayed due to work effort conflict between the two efforts.

If there is a need for funding some portion of the RND creation costs prior to when a RND contribution factor has been calculated, but after the RND funding requirement has been determined, some portion of the current NANP Fund contingency fund surplus may be used for RND system development funding. However, caution must be taken to avoid funding creation costs that exceed any expected surplus in the contingency amount as that could result in insufficient funds to run the NANPA/PA function and/or the B&C Agent function. Any contingency funds used for the RND creation pursuant to the RND TRD shall not result in a funding deficit for the current NANP Fund funding requirements for the October 2019-September 2020 cycle.

To the extent that the timing of the procurement effort related to the RND does not allow for the inclusion of RND creation costs in the October 2020-September 2021 NANP Fund contribution cycle, as an alternative to the requirements of the FCC Order 18-177, expedited RND system development may be accomplished by avoiding the contribution factor calculation, billing, and collection process. The RNDA vendor may determine that its creation of the RND system may be accomplished prior to the completion of the contribution factor process and funding availability. The RNDA vendor may determine that self-funding of the RND creation may be the most expeditious and economical way to accomplish the establishment of the RND. This may also expedite the ability for the RNDA to realize profit by avoiding the requirement to remit funds for Service Provider cost recovery. This also provides the incentive for the RNDA to develop the most economic RND in the least amount of time as the reduced time for recovery of its costs and quicker receipt of profits is directly related to the speed and economical deployment of the RND.

Section 3.2: B&C Agent RND Creation Funding Considerations

The B&C Agent will be required to establish the appropriate arrangements to account for each Service Provider contribution to RND creation costs, and to remit funds to the RNDA for RND creation with the appropriate accounting. The B&C Agent shall establish a \$25 minimum contribution to RND development costs consistent with the methodology used to set the NANP Fund minimum contribution.¹¹ The RND creation contribution factor shall be applied separate from the calculation for funding of the NANP Fund contribution factor.

Section 3.3: Repayment of RND Creation Costs

Repayment of the RND creation costs to the Service Providers will ultimately be provided by the Users/User Agents of the database.¹² These funds will be sourced from the usage rates that the Users/User Agents will pay the RNDA for query access to the RND. The RNDA shall remit funds to the B&C Agent where the B&C Agent will repay Service Providers such that the Service Providers only recover those funds that were collected in the funding process described above.¹³ The RNDA shall remit no less than quarterly payments to the B&C Agent, for Service Provider repayment, based upon at a minimum, the forecasted average revenue per query calculated for the term of its contract. The B&C agent shall reconcile repayments with Service Providers annually. If the RND creation costs rely upon the funding of the Service Providers, the Service Providers shall obtain complete repayment of costs prior to the RNDA experiencing any profits from the development or operation of the RND. This cost recovery structure has the benefit of further incentivizing the RNDA to develop the RND system as quickly and economically possible, and to engage in marketing to incent use of the RND. This methodology will also provide bidding vendors with the ability to anticipate and normalize the User/User Agent rates over the term of the contract and provide this detail in their proposals. The repayment shall be made over no longer than the term of the initial administrator's contract.

Section 3.4: B&C Agent Considerations for Service Provider Repayment

The B&C Agent will be required to establish the appropriate arrangements to collect repayment funds from the RNDA. Service Providers that have made contributions through the B&C agent to the RNDA for the creation of the RND shall be credited for those contributions, and no more. This may be accomplished through a direct repayment using the B&C Agent's existing refund process, or a credit provided against future NANP Fund contribution amounts assessed to those Service Providers by the B&C Agent. To the extent that total funds collected from Service Providers to fund the chosen RND creation costs exceed those costs, that excess portion of the funds collected from the Service Providers is to be refunded, under the credit methodology, on a pro-rata basis as a credit against the payments due from those same Service Providers in the very next annual NANP Fund billing cycle.

The B&C Agent also shall establish a repayment mechanism to repay Service Providers in the event that a Service Provider's service offerings change (or it goes out of business, etc.) such that it is no longer being assessed in the NANP Fund annual billing cycles in which it would otherwise be credited. Any repayment amounts that the B&C Agent is unable to return or credit to the appropriate Service Provider shall be applied to the costs of the NANP Fund balance.

¹¹ See 47 CFR §52.17. See also the Frequently Asked Questions located at <http://nanpfund.com/faqs/>.

¹² See 18-177 ¶ 46

¹³ See 18-177 ¶ 49

The B&C Agent shall not impute interest expense on behalf Service Providers during the time their contributed funds are being used by the RNDA. This further necessitates a short repayment period.

Section 4: Initial Pricing Structure and Pricing Levels

In this section, the NANC provides recommendations for the initial pricing structure and pricing levels that could be applicable to use for the RND. Reaching consensus on any of the issues related to pricing for use of the RND was seriously hampered both by:

- a) a lack of data on the costs that may be incurred to create and operate that database and any realistic expectation of either the number of Users/User Agents or volume of queries of the system
- b) understanding that, in light of a), above, price levels cannot be credibly determined. Details on those concerns are found in Section 4.1 below. The recommendations that the NANC has been able to make are found Section 4.2 below.

The following guidelines were used in developing the recommendations that follow:

- “Users” as used in this document refers to any person, entity or agent thereof that queries the RND to determine, for the purpose of making lawful calls or sending lawful texts,¹⁴ whether a telephone number has the potential to have been reassigned.
- Lack of known cost and demand data, and other relevant information, impacts price points within the recommendations, and results in the need for illustrative pricing structures.
- A “Queries-per-year” metric was determined to be an appropriate basis from which other pricing options may be developed in order to ensure full cost recovery within the presumed initial 5-year RNDA contract period (Other pricing options may be offered by the RNDA and include, for example, monthly-per-query levels and/or flat-rate plans).
- The pricing structure and price levels should stimulate a level of User-rates and query demand sufficient to ensure full recovery of all costs plus full reimbursement to Service Providers within the presumed initial 5-year RNDA contract period.

Due primarily to recovery and reimbursement concerns, no consensus was reached on whether an initial short-term waiver of charges to stimulate demand would be warranted.

Section 4.1: Process Concerns

As noted above, due to the lack of basis for determining the costs of the RND creation, no dollar amount could be recommended for Service Providers to “fund” prior to contract award. Further, costs associated with ongoing maintenance and administration of a heretofore non-existent RND are unknown, and such costs cannot be credibly estimated without details surrounding the specific investment, system, and operational characteristics that could be determined by individual bidders. Fundamental differences exist between the existing Federal Do-Not-Call Registry and the proposed RND, creating an incongruence for the purposes of estimating comparable RND unit costs and rates, and no publicly-available DNC Registry cost information could be obtained prior to the deadline to provide this report. Demand elasticities associated with User/User Agent volumes (*e.g.*, number of queries), are expected to be high,¹⁵ meaning that a high per-query rate will suppress User volumes, and a low rate is

¹⁴ See also FCC 18-177 ¶26 and footnote 69

¹⁵ See Professional Association for Customer Engagement (PACE) Notice of *Ex-Parte* Communication, CG Docket Nos. 02-278, 18-152 & 17-59 dated December 10, 2018 available at [https://ecfsapi.fcc.gov/file/1210179430942/PACE%20Ex%20Parte%20Notice%20\(12-10-2018\).pdf](https://ecfsapi.fcc.gov/file/1210179430942/PACE%20Ex%20Parte%20Notice%20(12-10-2018).pdf).

likely to increase User volumes. Varying assumptions were considered, and the NANC presents a scenario herein on an illustrative basis (*i.e.*, not as a basis reflecting actual costs, rates, or User volumes).

Section 4.2: Price Structure and Price Level Recommendations

Each User is required to establish an account with the RNDA prior to the RND processing queries from the User (Queries will require the User to indicate a Customer Number, and that number is only provided upon completion of the account establishment). Thus, the User will be required to complete the necessary account information prior to receiving a Customer Number, which will require payment information. A User account should not be established without indication of payment information. The RNDA must be able to allow the User to pay via a credit card, if the User so desires. If so, the RNDA must validate the credit card before providing the Customer Number to the User. Although use of a credit card for payment is a minimal requirement, the RNDA is not precluded from arranging other forms of payment with Users, should the User find it agreeable (*e.g.*, ACH transfer, check, cash, etc.). Once the account is established, the RNDA should take steps to ensure the validity of the payment method before enabling User access.

It is recommended that the RNDA offer Users a tiered price structure based on usage levels. The number of levels, and the query volume (consisting of a lower and upper query volume limit) associated with each level should be left to the discretion of the RNDA, subject to the following constraints. Tiers may be defined for a query volume based on a defined time period, which the RNDA may define at a monthly and/or annual time period. It is recommended that there be a minimum of 3 levels based on increasing discounts as volumes increase. Each tier should be associated with a flat-rate amount, which is charged to the User at the beginning of the time period, and covers the volume of queries during that time period up to the upper query volume limit.

If the time period is an annual time period, the User may elect to receive monthly email notifications providing a summary of the number of queries processed for that account up to that time period (This is intended to inform the User of when they are about to hit the upper limit of the tier).

Once the tier query limit threshold is reached, no further queries are to be processed for that User, unless the User has elected to be charged for renewing the tier or upgrading to the next higher tier. This may be indicated by the User at the time the account is established, or may be indicated afterwards, but prior to reaching the query volume threshold.

An exemplary Tier Schedule is shown below to illustrate the above concepts. At this time, the estimates shown are provided to illustrate the pricing structure; they are illustrative only and do not reflect any sort of estimate based on market size. It is known, for example, that there are over 4,000 debt collectors operating in the U.S. presently, and it can be predicted that a percentage of these will establish accounts at some tier. Similarly, it is not known at this time what percentage of other market segments participants (*e.g.*, retail, banking, customer service, etc.) would establish accounts with the RNDA, let alone the volume of queries each would generate.

Illustration 1:

**NOTE: ILLUSTRATIVE RATE COMPUTATIONS ONLY;
DOES NOT INDICATE ACTUAL OR ESTIMATED VOLUMES, COSTS, OR REVENUES**

<u>Tiers</u>	<u>Actual Queries</u>	<u>Unit Cost</u>	<u>Per-User Costs</u>	<u>User Counts</u>	<u>Total Revenues</u>
T5 >50,000,000 Queries Per Year	75,000,000	\$0.000055	\$4,125.00	100	\$412,500.00
T4 5,000,001-50,000,000 Queries Per Year	50,000,000	\$0.00005	\$2,500.00	150	\$375,000.00
T3 500,001-5,000,000 Queries Per Year	5,000,000	\$0.0002	\$1,000.00	200	\$200,000.00
T2 501-500,000 Queries Per Year	500,000	\$0.00025	\$125.00	100	\$12,500.00
T1 1-500 Queries Per Year	500	\$0.1	\$50.00	50	\$2,500.00
					\$1,002,500.00

Finally, consideration should be given to extending the safe harbor to Users whose queries generate a response of “no data” to help stimulate usage of the RND.

Section 5: Glossary

Billing and Collection Agent	The entity responsible for the collection of funds to support numbering administration for telecommunications services from the United States telecommunications industry and NANP member countries (47 CFR §52.7 (f); see also 47 CFR §52.16).
FCC 499-A	The Form 499-A is used to determine a company’s required contribution to the Universal Service Fund (“USF”), as well as to the Local Number Portability Administration (“LNPA”), North American Numbering Plan Administration (“NANPA”) and TRS funds, and is the basis for a carrier’s annual FCC regulatory fee. For new providers, the Form 499-A also serves as a carrier’s FCC registration.
Illustrative Pricing Structure	Pricing model created for demonstration purposes only.
North American Numbering Council (NANC)	A Federal Advisory Committee established pursuant to the United States Federal Advisory Committee Act (FACA) as amended, 5 U.S.C. App 2. The purpose of the NANC is to advise the FCC and to make recommendations that foster efficient and impartial NANP administration. The NANC advises the FCC on numbering policy and technical issues in areas of responsibility the FCC has entrusted to the NANC, with a focus on examining numbering in the changing, modern world of communications.
North American Numbering Plan Administrator (NANPA)	The NANPA is responsible for the neutral administration of NANP numbering resources, subject to directives from regulatory authorities in the NANP member countries (see also 47 CFR §52.7 (e)). The NANPA is an impartial non-governmental entity that is not aligned with any particular

	telecommunications industry segment. Under contract to the FCC, NANPA's responsibilities include assignment of NANP resources, and, in the U.S. and its territories, coordination of area code relief planning and collection of utilization and forecast data. See also 47 CFR § 52.13.
North American Numbering Plan (NANP) Fund	The North American Numbering Plan (NANP) is a numbering scheme for the public switched telecommunications networks (PSTN) within the United States, Canada and participating Caribbean countries. The NANP Fund was established to cover the costs of the NANP which included the costs of the administrator for the numbering plan and central code administration and other administration costs of the Plan. NANP is funded by United States telecommunication service providers, and from other member countries. 47 CFR §52.17
Pooling Administrator (PA)	The term Pooling Administrator refers to the entity or entities responsible for administering a thousands-block number pool (47 CFR §52.7 (g)). The Pooling Administrator is responsible for the neutral administration of thousands-blocks from Central Office (CO) Codes in areas where thousands-block number pooling has been ordered or implemented. The PA is an impartial non-governmental entity that is not aligned with any particular telecommunications industry segment and is under contract to the FCC.
Reassigned Numbers Database	The database which will contain a list of all US geographic and Toll Free NANP numbers that have been permanently disconnected and the disconnect date that Users and User Agents will be able to query to validate whether a telephone number has the potential to have been reassigned.
Reassigned Numbers Database Administrator	The entity which will maintain the Reassigned Numbers Database.
User	For purposes of this document, any person, entity or agent thereof that queries the Reassigned Number Database to determine whether a telephone number has the potential to have been reassigned.