

DESCRIPTION AND JUSTIFICATION

1.0 Introduction and Description of Filing

In this tariff filing, scheduled to become effective February 15, 2011, the Bell Operating Companies (BOCs) propose changes to Tariff F.C.C. No. 1, 800 Service Management System (SMS/800) Functions (SMS/800 Tariff) to modify rates and charges based on an updated cost study and current cost and demand data, and modify certain general regulation and service offering text. The proposed modifications are detailed below.

1.1 Modify Regulations and Service Offerings

- Title Page 2 and Title Page 4, an update to the names, titles and addresses of the tariff's issuing officers. Title Page 2 also has changes to the corporate entities represented by the listed issuing officer. Verizon West Virginia Inc. is deleted and the following entities are added: Verizon South Inc., Verizon California Inc., Verizon Florida LLC, Verizon North Retain Co. and GTE Southwest Incorporated.
- On pages 10 and 11, we are updating the issue number and date for certain Technical Publications. All publications are available as of the filing date for this tariff.
- General Regulations
 - ◆ Section 2.1.8(A), change "Certified U.S. Mail" to "certified mail" allowing the use of a certified mail service, providing proof of sending and delivery, other than that provided by the United States Postal Service (USPS) for those Resp Orgs that are outside the United States and thus cannot be served via USPS.
- Service Offerings
 - ◆ Section 3.6, remove "or on diskette" reflecting that Resp Org changes can no longer be submitted via diskette. Customers have not submitted changes via diskette in many years and thus no customer impact is anticipated.
- Schedule of Rates and Charges
 - ◆ Section 4.1.2 (B), minor modifications that clarify the description of dedicated connections to the SMS/800 system to include all customer connections via site-to-site virtual private networks.

1.2 Modify Rates and Charges

This tariff filing is also being made by the BOCs to modify rates and charges in the SMS/800 Tariff. The proposed changes, reflecting the BOCs' most current estimates of demand and cost for services provided under the tariff, would *decrease* revenue over the prospective one-year

period of February 15, 2011 through February 14, 2012 by \$3,316,476. A comparison of current and proposed rates, as well as the revenue impact of the rate changes, is displayed in Table 1 (after section 4.9).

2.0 Revenue Requirement Development

The prospective revenue requirement for SMS/800 from February 15, 2011 through February 14, 2012 consists of expenditures for ongoing operations of the existing system. Virtually all of the costs are expense items. Specific budget items for SMS/800 ongoing operations are:

1. *SMS/800 Operation and Administration* which consists of: (a) Help Desk operational support to SMS/800 users including telephone assistance related to interfacing with SMS/800 and preparation/maintenance of toll-free number records, and processing of requests for changes in Responsible Organization for toll-free numbers; (b) day-to-day management, planning and administrative oversight provided by the SMT Business Manager (DSMI), external operational support services such as billing and collections, accounting, cost analysis and website support, and other costs such as bad debt (services provided to bankrupt Responsible Organizations), and general administrative and human resources expenses related to SMS/800; and (c) the indirect cost of significant internal resources that the Bell companies expend to support management, operation and administration of the SMS/800. These resources include employees in the companies' tariff, regulatory, legal, technical, financial, taxation, procurement, accounting, network operations, systems provisioning, and operations support organizations.

During the past tariff year the BOCs have continued to incur bad debt costs for those Responsible Organizations that either filed for bankruptcy protection or voluntarily discontinued service to their customers and could not pay for services rendered. The BOCs expect that additional Responsible Organizations will either terminate service or file for bankruptcy protection and thus a 'bad debt' allowance is included in the revenue requirement for the proposed tariff year (February 15, 2011 through February 14, 2012).

The estimated revenue requirement for SMS/800 operation and administration for the one-year period of February 15, 2011 through February 14, 2012 is \$9,136,636 distributed as follows: (a) Help Desk: \$1,849,734; b) Management and Administration, including the bad debt noted above: \$6,987,334; and (c) BOC indirect costs: \$299,569.

2. *SMS/800 Data Center Operation* reflects the cost of the ongoing support, maintenance of the existing production and test/disaster recovery SMS/800 data centers and operation of a Service Center (Help Desk) facility to handle security and access problems. The estimated revenue requirement for the data center operation is \$24,319,309.

3. *SMS/800 Software Support* includes the provision of software maintenance, computer site and application support, and software development for new features for the existing SMS/800 system. The estimated revenue requirement for software support is \$5,533,813.

A comparison of projected past year and actual past year costs, and projected future year costs are shown in Table 2.

2.1 Revenue Requirement Distributions

A detailed hardware, software and activity based cost study was performed to identify average unit costs for the SMS/800 rate elements. The updated costing methodology is consistent with the methodology used for previous SMS/800 tariff filings. The average unit costs developed are shown in Table 5. The resulting revenue requirement for each rate element is shown in Table 4. Cost-causation analyses were performed and applied to budget elements as follows:

- A Task Oriented Costing (TOC) study was used to distribute SMS/800 Help Desk costs to rate elements. Help Desk managers identified the primary tasks performed, how often the tasks were performed, and the average time spent performing them. Each task was then analyzed and associated with the particular rate element it supports. To the extent that Help Desk costs are not specific to a rate element, the costs are included in the CRA rate element. The resulting unit costs are shown in Table 5, column (a).
- Data center costs consist primarily of: (a) network equipment and facilities needed to provide communications access for customers' links; (b) storage hardware (tape and disk drives) for toll-free number record data; and (c) a processing community used to respond to and execute customer requests for SMS/800 services. *Network costs* are attributable almost entirely to rate elements required to access SMS/800. A unit cost analysis of each type of connection to SMS/800 was used to determine its cost. The processing community, consisting of central processing units and server-based distributed processors, and storage costs are related almost exclusively to the support and processing of customer records and were therefore, with only a few minor exceptions, assigned to the CRA rate element. The Data Center also supports production of some reports and batch updates. Activity based analyses were used to capture these costs and associate them with the appropriate rate elements. The resulting average unit costs for the Data Center are shown in Table 5, column (b).
- The cost of software support includes software maintenance, site support and software development for new features. The software maintenance and site support dollars were attributed on the basis of analyses of effort by software personnel for the basic functions of software development, software maintenance and support services. The costs of the various functions were attributed to rate elements based on these analyses. The software development staff also supports production of some reports. Activity based analyses were used to capture these costs and associate them with the appropriate rate elements. The average unit costs developed for software costs are shown in Table 5, column (c).
- The Operations and Administration cost are analyzed to determine if they explicitly support any of the SMS/800 rate elements. With the exception of a small amount associated with the preparation of additional bills requested by SMS/800 customers, the

operations and administration costs are shared and common costs. The resulting average unit costs are shown in Table 5, column (d).

3.0 Basis of Ratemaking

The rate structure for SMS/800 consists of service elements that are used by Responsible Organizations. The proposed rate for each element is based on its projected revenue requirement and demand. The only exception is the proposed daily and hourly rates for Responsible Organization requested MGI Testing. This rate is based on changes to vendor contracts. The contractual rate of \$185 per hour, or \$1,480 per day, is expected to remain valid for the proposed tariff period. This information is shown in Table 6.

4.0 Demand Forecast

The demand forecast for the prospective year is displayed in Table 3. Information and/or data considered in developing the forecast are discussed in the following sections.

4.1 Customer Record Administration (CRA)

This rate element represents the quantity of toll-free numbers for which customer records exist in the SMS/800 and is charged on a recurring (monthly) basis for each number record administered. Following the methodology used to produce prior CRA forecasts, we examined alternative ARIMA models, searching to find the best fit of the historical data. An ARIMA model predicts the future value of the dependent variable (toll free numbers) solely by analysis of past values of that variable.¹

The first issue addressed involved data frequency. The toll free number data are collected and reported weekly, but previous tariff filings (as well as the CRA rate element charge) use monthly data. A two-year forecast of monthly data requires a 24-period forecast. Because data typically contain random elements, projections tend to become less reliable with the number of periods forecast. This problem can be mitigated by using lower data frequency, allowing random influences to offset, smoothing observed values. When high frequency forecasts are not needed, modeling the dynamics at a lower frequency is usually more accurate. For example, estimating a moving average error term with quarterly data provides an average over three months to improve the forecast, while using monthly data produces just one month's worth of moving average correction. When the individual months are not required in their own right—as is the case here—the longer observation period provides an error correction more closely related to the longer forecast needed. Of course, lower frequency data yield fewer observations over the same time frame and, all else equal, additional observations tend to improve estimation accuracy. Given that the use of annual data is ruled out due to insufficient degrees of freedom, we chose to

¹ This is an example of the Box-Jenkins approach to time-series modeling that only uses past values of a variable to predict future values.

perform our estimations with demand measured quarterly. This approach is designed to balance forecast variance against loss of observations.

The monthly forecasts for December 2010 through February 2012 reported in Table 3A represent linear interpolations of the quarterly forecasts. (For instance, if toll free lines were projected to rise from 22,000,000 to 22,300,000 from one quarter to the next, the consecutive estimated monthly totals would be 22,100,000, 22,200,000, and 22,300,000.) For the forecast, we used the unweighted average of the three months in each quarter to construct the quarterly series of toll free numbers. The average monthly number of lines for a quarter was considered to be that number which would accrue to the middle month of each quarter. The middle month for the quarter ending March 2008 is February 2008, the middle month for the quarter ending June 2008 is May 2008, etc. Use of this averaging methodology tended to smooth out random fluctuations, as desired.

Similar to the choice of quarterly data, a three-year estimation window represents a tradeoff between regime stability and the number of estimation observations. Shorter time periods for estimation were considered, but there was reason to believe that these estimates were more susceptible to short term fluctuations and were less precise. Longer periods were not used because it is believed that factors that might drive demand change over time, and that factors that affected the market as recently as four years ago might not have any influence over current market conditions. It should be noted that this was the methodology used in previous forecasts.

Note that whenever actual data available ends mid-quarter, data for the remaining months of that quarter are unknown. This means that either some known data must be disregarded or that the remaining months in the quarter must be extrapolated. Since the former option requires disregarding actual data, the latter option is preferable. The methodology for forecasting demand for the remaining months of the quarter is similar to the methodology used for forecasting quarterly estimates (i.e., ARIMA). The difference is that only monthly data will be used in this forecast, as opposed to smoothed quarterly data. The lack of smoothing is acceptable because the demand will only be forecasted one or two months ahead, which is a fairly short run forecast. Twelve months of monthly data is used in this forecast to capture all the effects that might be observed in a year.

Forecasting December 2010 Monthly Demand

Because the available data ends in November 2010, to produce a quarterly forecast as described above, it is first necessary to produce a monthly forecast for the fourth quarter of 2010. The best ARIMA model was an AR(1), AR(9) differenced model with one MA term:

$$R\text{-Square} = 0.5528 \quad R\text{-Square Adjusted} = 0.5436$$

PARAMETER	ESTIMATES	STD ERROR	T-STAT
AR(1)	0.8383	0.0561	14.9428
AR(9)	0.0846	0.0446	1.8962
MA(1)	-0.3632	0.0971	-3.7419

APRIL	69,801	25,829	2.7024
CONSTANT	129,366	70,096	1.8455

$$d(CRA_t) = 129,366 + 0.8383*d(CRA_{t-1}) + 0.0846*d(CRA_{t-9}) + 69,801*APRIL + u_t - 0.3632 u_{t-1}$$

The forecast for December 2010 is 29,442,010.

Forecasting Quarterly Demand Through February 2012

The ARIMA model that appeared to produce the best fit using the most recent 12 quarters of data has an AR(1) MA(1) form and is defined by the following parameters and summary statistics:

R-Square = 0. 973 R-Square Adjusted = 0. 9669

PARAMETER	ESTIMATES	STD ERROR	T-STAT
AR(1)	0.9636	0.1127	8.5482
MA(1)	0.9593	0.0493	19.4664
CONSTANT	39,049,156	40,041,661	0.9752

In equation form, the model indicates that:

$$\text{Forecasted } CRA_t = 39,049,156 + 0.9636 CRA_{t-1} + u_t + 0.9593 u_{t-1}$$

The results of the quarterly forecast are shown in Table 3A.

4.2 Change of Responsible Organization for Toll-Free Number

This element provides for changing the Responsible Organization for a toll-free number and is charged on a non-recurring (per request) basis. Monthly demand during this calendar year has averaged approximately 1,750. Projected demand is estimated to remain at this level, 21,000 annually, for the prospective one-year period of February 15, 2011 through February 14, 2012.

4.3 SMS/800 Access

This service element provides for the connection of dedicated and non-dedicated communications links to the SMS/800 and is charged on a recurring (monthly) basis. The monthly demand for the non-dedicated access over the last year is approximately 843 and the demand is anticipated to average that amount for the upcoming tariff period. Monthly demand for dedicated MGI access has remained steady at 31 during 2010 and is anticipated to remain stable for the upcoming tariff period. Monthly demand for non-MGI dedicated access has increased slightly during 2010 to 200 connections and is projected to remain at that level for the prospective period of February 15, 2011 through February 14, 2012.

4.4 Service Establishment

This service element provides for various aspects of establishing service, i.e., first logon ID, subsequent (additional) logon IDs and Smart Cards as well as the restoration of services for Resp Orgs that have had service suspended. Charges for these services are applied on a non-recurring (one time) basis. Demand for first logon IDs averaged just over 2 requests per month over the last 12 months and is forecast to continue at a this same rate resulting in an annual forecast of 25 for the upcoming tariff period. Demand for subsequent logon IDs averaged approximately 114 requests per month during this calendar year, and is forecast to remain at that level resulting in annualized demand projection of 1,368 for the prospective tariff period. Smart Cards are projected to be similar to the recent average resulting in an annual projection of 84 Smart Cards for the prospective tariff period of February 15, 2011 through February 14, 2012. The demand for Resp Org restoration of service (post suspension) is based on recent history of this activity and is set at 45 for the prospective tariff period.

4.5 Customer Reports

This service element provides for the preparation and delivery of customer specific off-line reports as well as the preparation and delivery of standard recurring on-line reports. The on-line report demand for the prospective tariff period February 15, 2011 through February 14, 2012 is 108, just below the total expected for the current tariff period of 113 reports. The online report is charged “per report”. Off-line reports are charged “per hour” to prepare and deliver for each customer request. After no activity in 2009, Resp Orgs in 2010 have started to request off-line reports and those requests are expected to total 36 hours this year. Off-line report demand is anticipated to remain at this level during the prospective tariff period of February 15, 2011 through February 14, 2012.

4.6 MGI Additional Testing per Hour

This service element provides for initial and/or additional MGI testing as requested from the SMS/800 software support team and is charged on an hourly basis as required. Monthly demand for this calendar year has averaged 3 hours of additional MGI testing, a significant decline from 2009. The demand for the prospective tariff period February 15, 2011 through February 14, 2012 is anticipated to be remain at this level, 36 hours.

4.7 Copy of Additional Bill

This service element provides for SMS/800 customers to obtain an additional copy of their bill. Demand for additional bills has dropped from previous years due to consolidation of Resp Org accounts. Recent activity has been steady, averaging approximately 5.5 bills per month, and demand is anticipated to remain at that level for the prospective tariff period February 15, 2011 through February 14, 2012.

4.8 Batch Updates

This service element allows customers to request changes and updates to many toll-free records and is charged per file. Monthly demand during the last 12 months has averaged approximately 54 batch updates. The demand is expected to be slightly higher for the prospective tariff period February 15, 2011 through February 14, 2012 resulting in an annualized demand of 649 batch updates.

4.9 Batch Update Testing per Hour

This service element provides for initial testing of batch update files and formats required to properly conduct batch updates on the SMS/800 system as requested from the SMS/800 support team and is charged on an hourly basis as required. Annual demand for the prospective tariff period February 15, 2011 through February 14, 2012 is anticipated to be 23 hours.