

Universal Service Fund
Average Schedule Company Data Definitions

1996 USF EXPENSE ADJUSTMENT STUDY FOR 1997 CALENDAR-YEAR PAYMENTS

The following steps were used in developing the 1997 Average Schedule USF Expense Adjustment formula.

I. Underlying Data

The study uses data collected from the population of Subset III study areas settling on Costs and from a sample of Average Schedule study areas.¹ Average Schedule financial data were collected from a statistical sample of Average Schedule study areas during calendar years 1994, 1995 and 1996. Data collected during 1994 include 1993 accounting and 1994 demand information; data collected during 1995 include 1994 accounting and 1995 demand information; data collected during 1996 include 1995 accounting and 1996 demand information. All Average Schedule sample data were projected to 1995 using account-level growth rates taken from the annual sample of Average Schedule study areas.

II. Formula Development

1. The Average Schedule Loop Cost Calculation

Using Part 36.611 rules and data from cost study areas, NECA computed USF cost categorization factors for Subset III study areas. The cost factors were developed from accounts related to Exchange Line Cable and Wire Facilities (Category 1.3) and Exchange Line Central Office Circuit Equipment (Category 4.13). As described below, USF loops, defined in Part 36.611, were also used in the formula development.

Using the above information, NECA computed USF categorization factors. For example, by computing the ratio of Cost Company COE 4.13 investment to total Cost Company COE investment, NECA developed an average categorization factor for Category 4.13 investment.

NECA then applied Cost Company categorization factors to the uncategorized accounts from the sample of Average Schedule study areas to produce unseparated Average Schedule category-level costs. The unseparated loop cost for each Average Schedule study area was then determined by summing the following expense categories related to COE 4.13 and C&WF 1.3 plant:

- Return on Investment
- Operating Taxes
- Expenses
- Maintenance
- Depreciation
- Network & General Support
- Network Operations
- Corporate Operations
- Benefits
- Rents

¹ These data are collected in connection with NECA's annual Average Schedule modifications filed with the Commission each December.

Universal Service Fund
Average Schedule Company Data Definitions

For each sample Average Schedule study area, cost per loop was calculated by dividing loop cost, computed directly above, by the study area's USF loops.

2. Estimation of the Expense Adjustment for the Average Schedule Population

NECA calculated the estimated expense adjustment for each sample Average Schedule study area following the identical steps used to compute the expense adjustment for study areas settling on cost. The calculation is described in Part 36.631 of the Commission's rules.

The cost per loop computed for each sample Average Schedule study area was compared with the National Average Cost per Loop to identify those study areas that qualify for the USF expense adjustment. Each sample Average Schedule study area so identified was assigned a weight. The sampling weight is defined as the inverse of the probability that a particular study area is included in the Average Schedule sample for a specific year.

When summed, the product of each study area's expense adjustment and its corresponding weight produced an estimate of \$9.369 million in expense adjustments to be paid to the population of Average Schedule study areas during 1997.

3. Derivation of the Average Schedule USF Formula

After the total expense adjustment amount is computed, as specified in Part 36.631, the distribution of this expense adjustment among Average Schedule study areas was determined by a formula similar to those used for Average Schedule settlements, pursuant to Part 69.606.

The Average Schedule USF formula is based on the fact that, in general, study areas serving low-density areas incur higher loop costs on average than higher-density areas. The study, therefore, uses "Loops per Exchange" as a measure of loop density. The Average Schedule USF expense allocation formula estimates "Cost per Loop" as a function of "Loops per Exchange".

The derivation of Cost per Loop for each sample study area was explained in Step 1 above, while Loops per Exchange were developed from pooling reports. The following equation (where LN indicates the Natural Logarithm) offers the best fit for the input data. The equation simultaneously satisfies two constraints: that the total expense adjustment equals the \$9.369 million developed in Step 2 and that the formula fit the coordinate defining a Cost per Loop at 115% of the National Average and the maximum number of Loops per Exchange that will receive an expense adjustment.

$$\text{Cost Per Loop} = 1,207.90 - 146.76 \times \text{LN}(\text{Loops per Exchange})$$

Loops per Exchange were then introduced into the above expression, and Cost per Loop was computed for each Average Schedule study area with fewer than 630 loops per exchange.

The average cost per loop for Average Schedule companies with more than 630 loops per exchange is \$262.01. Since this average cost falls below 115% of the National Average Cost per Loop, none of these companies qualifies for a USF expense adjustment.

Universal Service Fund
Average Schedule Company Data Definitions

III. Results and Conclusions

As outlined in Part 36.631 of the Commission's rules, study areas with less than 200,000 loops and with Costs per Loop exceeding 115% of the National Average Cost per Loop (115% x \$248.43 = \$285.69) will receive, from the Universal Service Fund, an expense adjustment per loop equal to 65% of costs in excess of \$285.69. When Costs per Loop exceed \$372.65 (150% of the National Average) the Fund will pay relevant study areas additional adjustments per loop based on 75% of these excess costs.

Expense adjustments per loop multiplied by the number of USF loops yields a study area's total USF expense adjustment. Total expense adjustments for average schedule study areas are estimated at \$9.369M with payments to commence on January 1, 1997. This represents an increase of about 12.3% above the 1996 current levels. Average Schedule study areas with fewer than 536 loops per exchange will qualify for the adjustment. During 1997, 189 Average Schedule study areas are designated to receive a USF expense adjustment.

The following table compares data from the 1996 filing after applying the Cap with expected 1997 expense adjustment payments.

AVERAGE SCHEDULE STUDY AREAS
USF EXPENSE ADJUSTMENT

	<u>Payment Year</u>	
	<u>1996</u>	<u>1997</u>
Expense Adjustment (\$000)	8,344	9,369
Number of Qualifying Study Areas	195	189
Maximum Number of Qualifying Loops per Exchange	526	536
USF Loops (000)	2,450	2,496

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Data File Identifier	Data
Column Variable Name	Line Format
Description of Data Item	

A	SAR_ID	Exchange Carrier Study Area Code	N/A	6.
B	PRD	USF Data Collection Period	N/A	3.
C	S_	Subset	N/A	\$1.
D	CL	Calculation Method	N/A	\$1.
E	SAR_NAME	Study Area Name	N/A	\$40.
F	CC_NAME	Common Control Name	N/A	\$40.
G	USFLOOPS	Category 1.3 Loops	N/A	11.
H	SAR_CPL	Study Area Cost Per Loop	N/A	11.2
I	NACPL	National Average Cost Per Loop	N/A	11.2
J	ANNPAY	Annual Expense Adjustment	N/A	15.2
K	MOPAY	Monthly Expense Adjustment	N/A	15.2
L	USFURR	USF Unseparated Revenue Requirement	N/A	15.2
M	EXCH	Number of Exchanges Within the Study Area	N/A	4.

Notes to Table

Data File Identifier - Column: Lotus 123 file Column Name

Data File Identifier - Variable Name: Data Column descriptor on Lotus 123 file

Description of Data Item: Data Collection item definitions

Data Line: Data Collection line numbers

Format: Lotus 123 file field format

Examples

- 6. 6 character numeric, no decimals
- 11.2 11 character numeric, 2 decimals
- \$1. 1 character alphanumeric