

BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION
COMMISSION

In the Matter of the Review of) DOCKET NO. UT-023003
Unbundled Loop and Switching Rates; the)
Deaveraged Zone Rate Structure; and)
Unbundled Network Elements, Transport,)
and Termination)
)

**REPLY TESTIMONY OF TERRY R. DYE
ON BEHALF OF VERIZON NORTHWEST INC.**

April 20, 2004

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1 **Q. PLEASE STATE YOUR NAME AND CURRENT POSITION.**

2 A. My name is Terry R. Dye, and I am employed by the Verizon Services Group as
3 Senior Staff Consultant — Financial Planning and Analysis.

4 **Q. ARE YOU THE SAME TERRY R. DYE IDENTIFIED IN VERIZON NW'S LOOP
5 DEEVERAGING TESTIMONY FILED ON JUNE 26, 2003?**

6 A. I am.

7 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

8 A. The purpose of my testimony is to present and explain Verizon Northwest Inc.'s
9 ("Verizon NW's") study showing that the UNE rates proposed by AT&T
10 Communications of the Pacific Northwest, Inc. ("AT&T") and WorldCom, Inc.
11 (d/b/a "MCI") (collectively "AT&T/MCI") in this proceeding would not permit
12 Verizon NW to recover its historical investment in, and the associated operating
13 expenses for, the facilities Verizon NW uses to provide UNEs to CLECs, and
14 thus do not provide just compensation for those facilities. Our study focuses on
15 the most widely used elements — the loop, switching, and transport, which
16 together comprise the UNE-platform, or "UNE-P." In determining Verizon NW's
17 costs, our study relies on the publicly available investment and operating
18 expense data recorded in Verizon NW's 2003 Automated Reporting Management
19 Information System ("ARMIS") reports filed with the FCC. Because we used
20 several conservative assumptions in our study, our calculations in fact understate
21 Verizon NW's actual costs. Attachment A to my declaration provides the data
22 and calculations supporting our study. Below, I describe how our study was
23 performed.

1 **Q. PLEASE SUMMARIZE THE RESULTS OF YOUR STUDY IN MORE DETAIL.**

2 A. Our study shows that the UNE rates proposed by AT&T/MCI in this proceeding
3 will produce large shortfalls between Verizon NW's costs and its revenues. Our
4 study shows that Verizon NW's monthly recurring cost to provide CLECs with the
5 facilities used to provide UNE-P is \$42.16, and its recurring cost to provide a
6 stand-alone loop is \$27.44. Att. A at 1, 3. These costs are substantially above
7 the \$11.97 UNE-P and \$7.64 loop recurring rates proposed by AT&T/MCI in this
8 proceeding. Thus, adopting these rates would result in a shortfall of \$30.19 per
9 UNE-P per month and \$19.80 per loop per month.

10 **I. HISTORICAL COST STUDY**

11 **A. Overview**

12 **Q. DESCRIBE AT A GENERAL LEVEL HOW VERIZON NW'S COSTS OF**
13 **PROVIDING UNE FACILITIES WERE CALCULATED.**

14 A. Using the investment account data reported in ARMIS, we calculated the total
15 investment associated with each Verizon NW exchange loop, the total common
16 transport investment associated with each Verizon NW exchange loop, and the
17 total switching investment on a per-line basis. We then calculated a capital cost
18 factor and applied this factor to the loop, transport, and switching investments to
19 determine the recurring capital cost for each exchange loop and for switching
20 and common transport per line. These results were divided by twelve to produce
21 the recurring monthly capital costs for loops, switching, and transport. We next
22 used the expense account data reported in ARMIS to determine the total annual
23 operating expenses per loop, and for switching and transport per line and then
24 divided by twelve to determine monthly expense figures. To calculate the total

1 cost of providing a UNE loop, we added the monthly per-loop operating expenses
2 to the previously calculated monthly per-loop capital costs. Similarly, we
3 calculated the total per-line cost of switching and transport by adding the monthly
4 operating expenses of each to the previously calculated monthly capital costs.
5 To calculate Verizon NW's cost of providing a UNE-P, we added the monthly
6 costs of providing loop, switching, and common transport.

7 **B. Calculation of Average Investment for Each Facility**

8 **Q. HOW WAS THE AVERAGE PER-UNIT INVESTMENT FOR LOOPS DERIVED?**

9 A. The investment per loop included both investments that are specifically related to
10 the particular facility and a share of the support assets. An example of this
11 support asset is land. The investment in land supports the direct loop, transport,
12 and switching investments.

13 To calculate the investment associated with loops, we first identified the
14 investment accounts corresponding solely to loops, and then divided each of
15 these accounts by the average number of lines in service to get a per-line loop
16 investment. This investment figure was next multiplied by the capital factor and
17 then divided by 12 to get a monthly per-line loop capital cost.

18 We then had to determine what portion of the support assets should be
19 attributed to loops. To do this, we calculated the amount of total support
20 investment per line by dividing the sum of the amounts recorded in support asset
21 accounts by the average number of lines in service. Then, in order to calculate
22 the portion of this per-line investment attributable to loops, we developed the
23 following ratio: we divided the total loop investment (*i.e.*, the sum of all ARMIS
24 accounts relating to loop investment) by the total investment for loops, transport,

1 and switching. We then applied this ratio to the per-line support asset amount to
2 determine the portion of those investments attributable to loops on a per-line
3 basis. This investment figure was also multiplied by the capital factor and divided
4 by 12 to get a monthly per-line support capital cost.

5 Finally, we added the amounts for loop-specific capital costs and support
6 capital costs attributable to loops to determine the total monthly capital cost
7 associated with each loop.

8 **Q. WAS A SIMILAR PROCESS FOLLOWED TO CALCULATE THE INVESTMENT**
9 **FOR SWITCHING?**

10 A. Yes. For each account associated with switching investment, we divided the
11 investment by the average number of switched access lines and then added the
12 results for these accounts together in order to determine the per-line investment
13 associated with switching. Although some switching costs vary with usage, and
14 therefore should be recovered on a per minute of use basis in order to send
15 correct economic signals, the relevant question for our study is the *average* cost
16 Verizon NW has already incurred to provide a UNE-P. Accordingly, dividing the
17 switching investment by the number of lines appropriately produces the average
18 switching cost Verizon NW has incurred per line.

19 **Q. HOW WERE THE COSTS OF THE TRANSPORT COMPONENT OF UNE-P**
20 **ADDRESSED?**

21 A. We first identified from ARMIS the interstate transport portion of cable and wire
22 facilities (“C&WF”) investment and compared this to the total interstate C&WF
23 investment. We then calculated the percentage that the transport investment

1 represented of total C&WF investment. This percentage was then applied to the
2 C&WF investment “subject to separations” (that is, total regulated interstate plus
3 intrastate investment) to derive a total transport investment amount. We then
4 divided the resulting figure by the average number of lines in service to arrive at
5 a per-line transport cost.

6 **C. Calculation of Operating Expenses for Each Facility**

7 **Q. HOW WERE THE OPERATING EXPENSES ASSOCIATED WITH LOOPS**
8 **CALCULATED?**

9 A. Operating expenses include both expenses that are specifically related to the
10 particular facility and a share of common expenses. These common expenses
11 are called “non-plant specific” expenses because they do not relate to any
12 particular type of plant. Examples of these expenses are support and common
13 overhead.¹

14 To calculate the operating expenses associated with loops, we first
15 identified the accounts corresponding to loop expenses, applied the
16 corresponding loop percentage for each account based on the corresponding
17 investment percentages, and then divided the resulting loop operating expenses
18 for each of these accounts by the average number of lines in service to get an
19 annual per-line loop expense. The annual per-line loop expense was divided by
20 12 to get a monthly per-line loop expense.

¹ These expenses are recorded in ARMIS 43-03, rows 6110, 6120, 6510, 6530, 6610, 6620, 6720, and 7240.

1 We then had to determine how much of the non-plant specific expenses
2 should be attributed to loops. To do this, we calculated the amount of non-plant
3 specific expenses per line by dividing the sum of the amounts recorded in non-
4 plant specific expense accounts by the average number of lines in service. We
5 then subtracted out the per-line non-plant specific expenses attributable to
6 switching. The resulting per-line non-plant specific expenses are attributable to
7 loop and transport. Then, in order to calculate the portion of this per-line
8 expense attributable to loops, we developed the following ratio: we divided the
9 total loop investment (*i.e.*, the sum of all ARMIS accounts relating to loop
10 investment) by the total regulated C&WF investment for the entire company. We
11 then applied this ratio to the per-line non-plant specific monthly expenses
12 attributable to loop and transport to determine the portion of those expenses
13 attributable to loops on a per-line basis.

14 Finally, we added the amounts for loop-specific expenses and non-plant
15 specific expenses attributable to loops to determine the total monthly operating
16 expenses associated with each loop.

17 **Q. HOW WERE THE OPERATING EXPENSES ASSOCIATED WITH COMMON**
18 **TRANSPORT CALCULATED?**

19 A. The monthly operating expenses for common transport were developed in the
20 same manner as described above for loops. That is, we added together the
21 common transport specific expenses and a portion of non-plant specific
22 expenses attributable to transport.

23 **Q. HOW WERE THE EXPENSES FOR SWITCHING CALCULATED?**

1 A. We calculated the expenses for switching in much the same way as we did for
2 loops. As with loops, we first identified all accounts corresponding solely to
3 switching expenses and then divided the amount in these accounts by the
4 average number of switched access lines to get a per-line annual switching
5 expense. We then divided by twelve to get the monthly expense. To determine
6 the monthly portion of the non-plant specific expenses associated with switching,
7 we took the per line non-plant specific monthly expenses calculated above and
8 multiplied by the ratio of total switching investments to the total regulated
9 investment of the company. Finally, we added the switching-specific expenses
10 and non-plant specific expenses attributable to switching to determine the total
11 monthly operating expenses associated with switching on a per-line basis.

12 **Q. WAS THE COST OF UNCOLLECTIBLES ACCOUNTED FOR IN YOUR**
13 **STUDY?**

14 A. Yes. We included the total annual company-wide uncollectible figure reported in
15 ARMIS as part of the calculations of non-plant specific monthly expenses that
16 were then attributed either to loops, transport, or switching, as explained above.

17 **D. Capital-Related Expense Factors**

18 **Q. WHAT IS THE CAPITAL-RELATED COST FACTOR?**

19 A. The capital-related cost factor is comprised of depreciation, the cost of debt and
20 equity, and income taxes.

21 **Q. PLEASE EXPLAIN HOW THE DEPRECIATION PORTION OF THE CAPITAL-**
22 **RELATED COST FACTOR WAS CALCULATED.**

23 A. To determine the depreciation annual cost factor in this study, we took the total
24 annual depreciation expense reported in ARMIS for 2003 and divided this

1 number by the total plant in service (including plant held for future
2 telecommunications use) investment for all regulated company assets. This
3 represents the percentage of total investment that is depreciated annually. Using
4 this approach to calculate the depreciation factor is a conservative assessment of
5 Verizon NW's actual depreciation cost, because the ARMIS depreciation
6 expense is based on the regulatory lives prescribed by the FCC, which tend to be
7 longer than the true economic lives reflected by Generally Accepted Accounting
8 Principles ("GAAP").

9 **Q. HOW WAS THE RETURN, INTEREST, AND TAX FACTOR CALCULATED?**

10 A. This calculation required several steps. We used the FCC's prescribed 11.25%
11 as the cost of capital (including the FCC-prescribed components for cost of debt
12 and cost of equity). Because the FCC has stated that the 11.25% figure
13 represents an appropriate *starting* place for the cost of capital, this figure is also
14 quite conservative. In fact, the more appropriate figure would be at least the cost
15 of capital that Verizon NW uses for financial evaluation purposes, which is the
16 absolute *minimum* figure that should be used in assessing the TELRIC cost of
17 capital. The cost of capital associated with providing UNEs should be even
18 higher, because it should include an additional risk premium designed to account
19 for some of the risks inherent in the UNE and TELRIC regime. Obviously,
20 including that risk premium in this study would result in a higher cost than what
21 we report here.

22 After calculating the cost of debt and equity, we then determined the cost
23 of capital including taxes assuming Verizon NW's actual federal corporate tax

1 rate of 35% (prior to credits and adjustments) and the Washington state income
2 tax rate of 0%.

3 **Q. WHAT STEPS WERE TAKEN TO ENSURE THAT THIS CALCULATION**
4 **TAKES INTO ACCOUNT ONLY THE CAPITAL AND INCOME TAX COSTS**
5 **ASSOCIATED WITH VERIZON NW'S UNRECOVERED INVESTMENT?**

6 A. In calculating the total capital cost factor, we applied a net-to-book ratio to the
7 total plant in service investment base, so that only capital costs associated with
8 the company's undepreciated investment base are considered. To determine the
9 net-to-book ratio, we subtracted the total accumulated depreciation and net
10 deferred income taxes (reported in ARMIS) from total plant in service, and then
11 divided that number by the total plant in service number.

12 **E. Calculation of Verizon NW's Recurring Monthly Cost to**
13 **Provide a UNE Loop and a UNE-P.**

14 **Q. HOW WAS VERIZON NW'S MONTHLY COST TO PROVIDE A UNE LOOP**
15 **CALCULATED?**

16 A. First, we applied the capital cost factor to the total per-loop investment calculated
17 above and then divided that number by twelve to determine the recurring monthly
18 loop capital cost. We then added this number to the monthly per-loop operating
19 expense figure calculated as described above to determine the total monthly cost
20 for a loop.

21 We then had to make two adjustments to this figure (1) to remove avoided
22 retailing costs and (2) to remove non-recurring costs from the calculation. First,
23 we determined how much of this cost was attributable to wholesale (as opposed
24 to retail) activities. To do this, we multiplied the avoided cost discount

1 percentage² by Verizon NW's total regulated revenues (after subtracting out the
2 categories of revenue that are not associated with any retail activities) and then
3 divided this number by the average number of lines and then by twelve to arrive
4 at a monthly retail avoided cost per UNE loop. We subtracted this amount from
5 the total monthly cost for a loop to arrive at a monthly wholesale cost per loop.
6 Next, we had to calculate how much of this cost was strictly recurring as opposed
7 to non-recurring costs. To do this, we took the total service order and
8 provisioning non-recurring revenues as a proxy for non-recurring costs, divided
9 that by the average number of loops in service and then by 12, and subtracted
10 that per-line amount from the total per-loop cost. According to the study, based
11 on 2003 data, Verizon NW's monthly recurring costs to provide a UNE loop is
12 \$27.44. Att. A at 1, 3.

13 **Q. HOW WAS VERIZON NW'S RECURRING MONTHLY COST TO PROVIDE A**
14 **UNE-P CALCULATED?**

² The resale discount percentage used in our study — 12.62%, which corresponds with the pending UNE filing in Docket No. UT-023003 — is consistent with resale discount rates set by state commissions using the appropriate “avoided” cost standard. See Decision No. 97-01-022 Approving Arbitrated Agreement, *Petition of AT&T Comm. of California, Inc. for Arbitration Pursuant to Section 252 of the Federal Telecommunications Act of 1996 to Establish an Interconnection Agreement with GTE California, Inc.*, 1997 WL 55963 at *11 (Cal. Pub. Util. Comm. Jan. 13, 1997) (approving a 12% resale discount rate); *Petitions by AT&T Communications of the Southern States, Inc., MCI Telecommunications Corp. and MCI Metro Access Transmission Services, Inc., for Arbitration of Certain Terms and Conditions of a Proposed Agreement with GTE Florida Inc. Concerning Interconnection and Resale Under the Telecomm. Act of 1996*, Order No. PSC-97-0064-FOF-TP at 78 (Fl. P.S.C. Jan. 17, 1997) (adopting a 13.04% resale discount). And even the FCC Wireline Competition Bureau, in the Virginia arbitration, set a resale discount of 13.11%.

1 A. We added the recurring cost of the loop (above) to the recurring costs for
2 switching and for common transport. To develop these costs, we followed
3 procedures similar to those for developing loop costs. We first applied the capital
4 cost factor to the total per-line investment relating to switching (described above)
5 and then divided that number by twelve to determine the monthly per-line capital
6 cost associated with switching. We then added this number to the monthly per-
7 line operating expense figure associated with switching to calculate the per-line
8 monthly cost to provide switching.

9 We determined the per-line costs associated with transport by multiplying
10 the common transport investment by the capital factor previously discussed, and
11 dividing by twelve to derive the monthly costs. We then added the monthly
12 common transport expenses determined above, to determine the per-line total
13 cost. Finally, to determine Verizon NW's monthly cost to provide a UNE-P, we
14 summed the \$27.44 in loop costs, \$14.14 in switching costs, and \$0.58 in
15 transport costs to get a recurring monthly UNE-P cost of \$42.16.

16 Since we identified the avoided retail costs and the non-recurring costs on
17 a per-line basis, excluding them from loop costs as described above
18 automatically excluded them from the UNE-P costs since all UNE-platforms
19 contain an unbundled loop.

20 **II. SHORTFALL ANALYSIS**

21 **Q. HOW WAS THE AMOUNT OF THE SHORTFALL VERIZON NW WILL INCUR**
22 **BY PROVIDING UNES AT THE RATES PROPOSED BY AT&T/MCI IN THIS**
23 **PROCEEDING DETERMINED?**

1 A. We compared Verizon NW's monthly costs for a UNE loop and a UNE-P with the
2 comparable rates proposed by AT&T/MCI in this proceeding. The recurring UNE
3 loop rate proposed by AT&T/MCI is \$7.64, and the UNE-P rate is \$11.97. As
4 noted above, our study demonstrates that UNE loop and UNE-P rates of \$27.44
5 and \$42.16, respectively, would be required for Verizon NW to recover its
6 investment and associated operating expenses. Thus, the rates proposed by
7 AT&T/MCI would produce a monthly per-loop shortfall of \$19.80 and a monthly
8 per-UNE-P shortfall of \$30.19.

9 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

10 A. Yes.