EXHIBIT TKM-15T

BEFORE THE WASHINGTON
UTILITIES AND TRANSPORTATION COMMISSION

IN THE MATTER OF THE CONTINUED	**)**	
COSTING AND PRICING OF UNBUNDLED	**)**	
NETWORK ELEMENTS, TRANSPORT,	**)**	**Docket No. UT-003013**
TERMINATION, AND RESALE	**)**	**Part B**

REBUTTAL

TESTIMONY OF

TERESA K. MILLION

ON BEHALF OF

QWEST CORPORATION

FEBRUARY 7, 2001

Q. PLEASE STATE YOUR NAME, POSITION, EMPLOYER, AND BUSINESS ADDRESS.

A. My name is Teresa K. Million. I am employed by Qwest Corporation (Qwest), as Director – Service Costs. My business address is 1801 California St., Denver, CO.

Q. HAVE YOU PREVIOUSLY FILED TESTIMONY IN THIS PROCEEDING?

A. Yes.

Q. WHAT IS THE PURPOSE OF THIS TESTIMONY?

A. The purpose of this testimony is to rebut the testimonies of: Ms. Jing Roth and Mr. Thomas L. Spinks representing the Washington Utilities and Transportation Commission staff; Mr. Paul G. Bobeczko on behalf of WorldCom; Ms. Natalie J. Baker representing AT&T Communications of the Pacific Northwest, Inc.; Mr. John C. Klick and Mr. Brian F. Pitkin representing the Joint Intervenors; Mr. Thomas H. Weiss representing the Joint Intervenors; and Dr. Richard Cabe representing Rhythms Links, Inc. and Covad Communications Company relating to Qwest's cost studies filed in Part B of this docket.

TESTIMONY OF MS. ROTH

Q. MS. ROTH SUGGESTS THAT QWEST SHOULD USE THE COMMISSION-APPROVED CUSTOMER TRANSFER CHARGE (CTC) IN PLACE OF THE COSTS/PRICES QWEST PROPOSES FOR UNE-C (EXISTING SERVICE) FOR PLAIN OLD TELEPHONE SERVICE (POTS). DO YOU AGREE?

A. Yes. Upon review of Ms. Roth's suggestion, Qwest agrees that the CTC is an appropriate surrogate for the cost of converting existing POTS customers to UNE-C,[1] with one exception. The CTC charge that was determined in the prior docket included an amount to recover the OSS (Operational Support Systems) costs associated with resale customer conversions. It would be inappropriate for Qwest to include those costs in calculating a comparable rate for UNE-C (existing POTS) since demand for UNE-C was not included in determining the amount of OSS costs for CTC. Therefore, Qwest recommends that the nonrecurring rate for UNE-C (existing POTS) be based on the CTC established previously, minus the OSS costs embedded in that rate. The adjusted rate for UNE-C (existing POTS) is shown in the Summary of Results in Exhibit TKM-16.

Q. DOES MS. ROTH MAKE A SIMILAR PROPOSAL FOR UNE-C (NEW POTS)?

A. No. Ms. Roth suggests specific adjustments for UNE-C (new POTS) including: separate charges for connection and disconnection; a change in probability, only, for each additional line (mechanized); and a time estimate adjustment, only, for first line and manual.

Q. DOES QWEST AGREE WITH MS. ROTH'S RECOMMENDED ADJUSTMENTS TO UNE-C (NEW POTS)?

A. Yes. In responding to a data request from the Joint Intervenors, wherein Qwest was asked to identify its use of prior Commission decisions in its current cost studies, Qwest became aware that it had not calculated separate connect and disconnect costs for the nonrecurring studies that it filed, as required in the Seventeenth Supplemental Order.[2] Qwest agrees with Ms. Roth that it should separate the UNE-C (new POTS) nonrecurring charges between connections and disconnections. In addition, Qwest is recalculating all of the remaining nonrecurring costs submitted in this docket to produce separate connect and disconnect costs for each nonrecurring charge. (Please see Exhibit TKM-16).

Qwest also agrees with Ms. Roth's other adjustments to the UNE-C (new POTS), and has reflected those in the re-filed studies.

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[1] As noted in my direct testimony, UNE-C is the acronym for the combination of unbundled network elements that comprises basic local exchange service.

Q. DOES MS. ROTH RECOMMEND OTHER ADJUSTMENTS TO QWEST'S NONRECURRING COSTS?

A. Yes. Ms. Roth makes a number of other adjustments to Qwest's nonrecurring cost studies which she believes should be implemented throughout the studies wherever applicable. Specifically, Ms. Roth enumerates six adjustments to either time estimates or probabilities for various ordering and processing activities represented in the studies. [Those proposed adjustments are set forth in Ms. Roth's Exhibit JYR-C4]

Q. DOES QWEST AGREE WITH MS. ROTH'S OTHER RECOMMENDED ADJUSTMENTS?

A. No. Again, in reviewing Qwest's cost studies for compliance with the Commission's previous directives, Qwest realized that it had not adjusted times in the current studies to reflect those required by the Commission in the November 1999 filing in compliance with the Eighth Supplemental Order.[3] Qwest has determined that it is appropriate to adjust the nonrecurring costs submitted in this filing so that they are consistent with all of the other nonrecurring costs previously submitted in the compliance filing. Those adjustments are all reflected in Exhibit

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[2] Seventeenth Supplemental Order: Interim Order Determining Prices; Notice of Prehearing Conference, Docket No. UT-960369, et al. (September 23, 1999), para. 471.

TKM-16. Qwest believes that those adjustments make the nonrecurring cost studies consistent with prior Commission requirements. Those prior Commission requirements reduced order processing times in ways that are not consistent with Qwest's actual experience, and therefore reflect efficiencies in order processing that have yet to be achieved. There is simply no justification to additionally reduce work times and probabilities in accordance with the adjustments recommended by Ms. Roth. Therefore, in order to treat nonrecurring costs consistently across all studies, Qwest proposes to align the times and probabilities in this study, except for UNE-C (new and existing POTS) which will be treated as described above, with those previously approved by the Commission for nonrecurring charges. [Please see Exhibit TKM-16]

TESTIMONY OF MR. SPINKS

Q. PLEASE ADDRESS MR. SPINKS CONCERNS REGARDING THE USE OF A TOTAL INVESTMENT FACTOR (TIF) IN QWEST'S COST MODELS.

A. Mr. Spinks originally stated in his Direct Testimony filed on October 23, 2000, that Qwest has not previously used a TIF to arrive at total investment on an

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[3] Eighth Supplemental Order: Interim Order Determining Prices in Phase II; and Notice of Prehearing Conference, Docket No. UT-960369, et al. (May 11, 1998), para. 474.

Engineered, Furnished, and Installed (EF&I) basis. I will explain that the TIF is not new, nor does it produce EF&I investment.

Q. PLEASE EXPLAIN THE TIF.

A. The TIF is a factor that combines all the proper investment loadings into one factor, calculated mathematically correctly, so that when multiplied against the material investments provides a total installed investment. While switching equipment provided by the vendor at an EF&I price includes the installation and engineering, the TIF factor is applied to a material price to calculate not only installation and engineering, but also other costs such as power, warehousing, transportation and finance charges. Thus, the TIF will be higher than the investment loadings added to EF&I investment. However, the TIF does not calculate EF&I investment. The TIF does calculate fully loaded material investments that may include investment on an EF&I basis, but also reflects the additional loadings mentioned above that are not generally included in an EF&I price from a vendor.

The major component of the TIF is the labor to install and engineer the equipment. Since the material investment is for equipment only, as explained, the TIF factor also includes investments for testing and the power equipment required to properly operate the equipment represented by the material investment. Sales tax and Interest During Construction (IDC) are added to the material investment

to cover expenses Qwest incurs when it purchases equipment. Qwest also incurs expenses for warehousing and transporting the equipment from its warehouses to the equipment location.

Qwest relies on the most current General Ledger Journal files, as reflected in the company books, as well as other company reports (such as the MR2A) to calculate the underlying factors that make up the TIF factor. Qwest uses these reports to calculate the average expenditures required to perform the steps necessary to first warehouse the equipment, then transport it to the proper location, install and power the equipment, and finally, reflect the necessary taxes and finance charges.

Q. WHY DO YOU SAY THAT THE TIF IS NOT NEW?

A. Qwest has always presented its material investments on a fully loaded basis, using a TIF to arrive at the amount. Qwest's previously filed cost studies and cost models have included the TIF in a variety of ways depending on what level of material investment the cost analyst started with; although, in the past this calculation may have been embedded, and not readily apparent in the study or model. Qwest responded to discovery requests in this docket and detailed the development and historical use of the TIF. There, Qwest explained that the TIF has been used in UNE cost studies filed with the Commission since at least 1997. Those data request responses are attached hereto as Exhibits TKM-17, TKM-18C,

TKM-19C, TKM-20C, and TKM-21C (Qwest's responses to WUTC Data Requests 03-004, 03-005, 03-005S1. 03-005S2 and 03-005S3).

Qwest's current process requires that material investments be brought into the models at a common point so that the TIF is applied consistently to arrive at fully loaded material investment.

Q. WHY DOES QWEST USE FACTORS TO CALCULATE THE TIF INSTEAD OF USING ACTUAL ENGINEERING COSTS OR ENGINEERING COST ESTIMATES?

A. Developing a factor to reflect actual average costs to be added to material investments is more accurate than engineering estimates, and is appropriate in forward-looking cost studies.

The equipment for which TIFs are developed come in many configurations and forms and include circuit equipment, radio systems and other terminal equipment. It is difficult to estimate the loadings required to produce a given total installed investment amount, since no two jobs are alike. The loadings required for one job may be very different from those required for the next one. This causes many peaks and valleys in engineering estimates, making estimating very difficult, and not as accurate as using actual expenditures collected for the equipment being installed to develop an average loading factor. Since the TIF represents a

relationship of material investment to related expenditures for the most current time period it provides a forward-looking cost estimate based on Qwest's actual experience installing equipment.

Q. HAS QWEST PROVIDED ADDITIONAL INFORMATION REGARDING THE TIF?

A. Yes. Qwest provided Mr. Spinks with supporting documentation for development of the TIF in the data request responses that I mentioned above. [Exhibits TKM-17 through TKM-21C]

Q. DOES MR. SPINKS STILL HAVE CONCERNS ABOUT THE TIF?

A. Yes, after reviewing the additional information, he has expressed a concern about the calculation of the transportation and warehouse loading factors in Supplemental Testimony filed on December 20, 2000. I have concluded from my review of Mr. Spinks' Supplemental Testimony that these two factors are his only remaining concern with the TIF, and that Qwest's responses to the data requests have eliminated his earlier concerns.

Q. IS MR. SPINKS CORRECT THAT IT IS INAPPROPRIATE TO APPLY A COST PER HOUR MEASURE TO AN INVESTMENT AMOUNT TO CALCULATE LOADED INVESTMENT?

A. Yes. Mr. Spinks is absolutely correct that it would be inappropriate for Qwest to develop the transportation and warehouse loading factors on a cost-per-hour basis to be applied to material investment dollars. However, although it is understandable that Mr. Spinks might have reached such a conclusion, Qwest has not used a cost-per-hour calculation to develop the transportation and warehouse loading factors used in the TIF. Unfortunately, the pages in the supporting documentation that Qwest provided to Mr. Spinks pursuant to his data request, calculating the transportation and warehouse factors, were mislabeled. They indicated hours for a calculation representing dollars. The corrected pages have been provided in Exhibit TKM-21C.

If he had had time to investigate further, Mr. Spinks would have seen that the "per hour" rate works out to twelve cents per hour in one calculation and twenty cents per hour in another if one assumes hours. Of course, this is far below any labor rate utilized by Qwest. Also, the number of "hours" shown for one state, Arizona, for one account, 6512.19, range from 2.8 million for the month of January to more than 4.9 million in November. Even if one assumed a 60 hour work week per employee, that many hours (if the numbers represented hours) would require time to be reported by more than 11,500 employees, up to more than 20,400 employees, in one state for one month to one account. Qwest simply does not have that many employees reporting that many hours to just one account in any one state.

As Mr. Spinks points out, the appropriate way to develop factors to apply to investment is to measure the warehouse and transportation cost per dollar of investment. The amounts labeled as hours on the worksheet to which Mr. Spinks refers represent such dollars of investment.

Q. IS MR. SPINKS CORRECT THAT COSTS FOR DS1 AND DS3 LOOPS SHOULD BE DEAVERAGED?

A. Yes. Qwest agrees that costs for DS1 and DS3 loops should be deaveraged. Qwest has prepared TELRIC studies that produce deaveraged costs for DS1 and DS3 capable loops, as well as DS1 capable feeder. These cost studies are attached as Exhibit TKM-22.

Q. IS MR. SPINKS CORRECT IN HIS ASSUMPTIONS REGARDING THE EXPECTED RATIOS OF FEEDER AND DISTRIBUTION INVESTMENT FOR CALCULATION OF DEAVERAGED SUB-LOOP COSTS?

A. No. Because Mr. Spinks assumes that loops are shorter in more densely populated areas, he believes that it necessarily follows that the ratio of feeder and distribution investment shifts toward a 50/50 split in those densely populated areas. Mr. Spinks provides no support for this assumption. Mr. Spinks' analysis is flawed for two reasons. First, one cannot assume that the loops that fall in more

densely populated areas of Washington (i.e., Zone 1) are short, or that the loops that fall in the less dense wire centers (i.e., Zone 5) are long. The zones in Washington were based on loop cost by wire center, not loop length, and while loop length influences loop cost, it is not the only determining factor.

Second, one cannot ignore that even in Zone 1 a variety of densities apply. For example, Zone 1 (downtown Seattle) contains high-rise buildings that are very dense, as well as shopping malls, the Pike Street Market and some older residential areas that are less dense. Because of the wire centers included in Zones 2, 3, 4, and 5 some of those same factors that influence density exist in each of those zones, as well. For example, cities such as Seattle, Bellevue, Tacoma and Spokane are included in each of the other four zones. Thus, one can find high-rise buildings, shopping malls, industrial parks or residential areas in all of the zones. Throughout the wire centers in Washington's five zones one is likely to encounter both shorter and longer loop lengths, and both densely populated and less densely populated areas.

Finally, because each of the five zones has a mix of loop lengths and densities it does not follow that one should expect Zone 1 to have a higher percentage of feeder investment relative to distribution investment. In fact, one should probably expect, as Qwest has found, little variation in the relationship between feeder and distribution across zones. Qwest's calculation of the ratio of feeder and

distribution investments resulted in feeder ratios between 27% and 28%, and distribution ratios between 72% and 73% in all five zones.

TESTIMONY OF MR. BOBECZKO

Q. MR. BOBECZKO SAYS THAT THE COMMISSION SHOULD REEXAMINE THE UNE LOOP RATE IN WASHINGTON, DO YOU AGREE?

A. No. The Washington Commission only just gave final approval to Qwest's tariffs for deaveraged UNE loop rates in its Thirty-Second Supplemental Order in the Generic Interconnection Docket, Phase III, UT-960369, et al., on January 19, 2001. Mr. Bobeczko's request to re-litigate the UNE loop rates is based on nothing more than WorldCom's dislike for the current cost-based rates. He asserts that WorldCom would not make any money if it had to purchase loops at the current rates.

First, I would point out that WorldCom is well aware that there are a number of considerations in determining whether an exchange service will be profitable in addition to a simple comparison of the residential exchange rate to the sum of the core UNE rates. Other considerations include revenues from vertical services such as switched access, toll, calling features, and data services. Second, even if his assertion is true, the Telecom Act and the FCC's rules do not promise that

CLECs will profit from selling local service alone to residential customers. The Telecom Act and the FCC's rules do promise to provide the ILECs with reasonable compensation for UNEs that is based on the cost of the UNEs. This Commission, after considerable and detailed review of the costs proposed by each party, has in its view established deaveraged UNE loop rates based on those costs.

Finally, Mr. Bobeczko is not even claiming that a reexamination would produce different costs. He is merely hoping that upon reconsideration the Commission will use WorldCom's sudden interest in serving Washington residential customers as a deciding factor when setting the UNE loop rates, and provide WorldCom with lower rates than those that have been established based on cost. Qwest believes that it would be inappropriate to re-litigate loop rates so soon after they have been established.

TESTIMONY OF MS. BAKER

Q. MS. BAKER SAYS THAT QWEST'S PROPOSAL FOR INSIDE WIRE IS INCOMPLETE AND INADEQUATE, DO YOU AGREE?

A. No. Ms. Baker assumes that because Qwest did not provide for subloop deaveraging on the basis of building cable as a separate product offering, Qwest's proposal was inadequate. Qwest's position was to allow access at any technically feasible point in the distribution, including at the point of connection to the

building cable, at a geographically deaveraged subloop rate. Thus, Qwest proposed a single rate for the individual components (i.e., feeder and distribution) within each of the geographically deaveraged zones. Therefore, in Zone 1, no matter where the connection to the distribution plant is made, the rate is $5.46, and in Zone 2 the rate is $10.10, and so on.

Now that Qwest is aware of the CLECs desire to access the building cable as a separate subloop element, Qwest is more than happy to produce a separate rate for building cable. The building cable product will be provided on a "per pair" basis at established Field Connection Point arrangements when the CLEC places outside plant to a building and wants access to Qwest owned building cable through a building terminal. The building cable study assumes that the CLEC or building owner will place, at its expense, a common terminal or cross-connect facility that Qwest will jumper to the Qwest terminal and building cable. The Building Cable cost study is included as Exhibit TKM-23.

The rate for building cable will be an averaged per month, "per pair" rate rather than a deaveraged subloop rate. In other words, Qwest proposes a single rate for building cable that will apply across all of Washington's five zones. This is because the nature of building cable is such that its cost does not vary geographically. The building cable rate does not include the cost of placing jumpers between the CLEC provided terminal and Qwest's terminal. That cost is

a part of the cost of a Field Connection Point. Qwest will continue to offer other types of subloop and inside wire on a deaveraged basis according to the geographically deaveraged zones. To the extent that Ms. Baker has concerns about the specific terms and conditions associated with building cable arrangements, those concerns are better addressed in a proceeding designed to negotiate such terms and conditions rather than this cost docket which is designed to address the costs of network facilities.

TESTIMONY OF MR. KLICK

Q. MR. KLICK SAYS THAT QWEST'S TELRIC STUDIES ARE NOT CONSISTENT WITH PRIOR WASHINGTON COMMISSION DECISIONS (KLICK RESPONSE TESTIMONY, PAGES 9 TO 10). DO YOU AGREE?

A. No. As a matter of fact, the words from the Commission quoted by Mr. Klick were exactly the point I was making in my Direct Testimony. The Commission said, "[i]n judging the soundness of the cost inputs, we believe that US West has proposed a useful standard: the inputs 'must be *realistic, accurate estimates* of all of the *actual* costs a provider would incur if it built out a new network using the least cost, forward-looking technology.' US West Brief at 5." The point I made was that cost studies that use *realistic* inputs that achieve good estimates of what would *actually* be incurred in the construction of a new network are what was

intended by the Telecom Act as interpreted by the Court. Cost studies that use *imaginary* and *unrealistic* inputs that do not reflect what *actually* would be incurred would not meet the requirements of the Act. The Commission has previously agreed with U S WEST's (now Qwest's) view of this matter and has approved costs that meet this standard, in its view. Qwest's cost studies continue to use this standard in the studies I am proposing in this proceeding.

Q. MR. KLICK POINTS OUT THAT THE EIGHTH CIRCUIT HAS STAYED THE PORTION OF ITS DECISION DEALING, WITH THE FCC'S PRICING RULES THAT YOU REFERENCE IN YOUR DISCUSSION. DOES THIS MEAN THAT THE COURT'S RULING CAN BE IGNORED IN THIS PROCEEDING?

A. No. To the contrary, as recently as January 8, 2001, the Eighth Circuit ruled, in Southwestern Bell Telephone Company v. Missouri Public Service Commission,[4] that the arbitrated agreement approved by the Missouri PSC be vacated and that any further proceeding "should employ a pricing methodology that is consistent with the 1996 Act as interpreted by this Court." In discussing its holding, the Court affirmed the continuing validity of its ruling in footnote #4 with the following:

[4] Southwestern Bell Telephone Company v. Missouri Public Service Commission, 2001 U.S. App. LEXIS 156, (8th Cir., 2001).

> …We also should note that, after the opinion in Iowa Utilities II was filed on July 18, 2000, the panel granted the FCC's motion to stay the mandate on that part of the decision that vacated 47 C.F.R. § 51.505(b)(1), pending the filing and disposition of petitions for writ of certiorari in the Supreme Court. In October 2000, a number of such petitions were filed, and as this opinion is written those petitions remain pending in the Supreme Court. Notwithstanding this turn of events, our decision in Iowa Utilities II is not vacated, remains the law, and requires vacatur of the §252 agreement reached in this case.

It should be clear from this ruling that until or unless the decision of the Eighth Circuit in Iowa Utilities II is overturned, cost models that calculate unit costs using realistic, achievable and actual inputs to produce a realistic outcome would meet the requirements of the Telecom Act.

Q. MR. KLICK BELIEVES THAT YOUR TESTIMONY SUGGESTS THAT THE COST STUDIES WERE UNDERTAKEN ON AN ELEMENT-BY-ELEMENT BASIS AND THEREFORE DO NOT REFLECT ADEQUATE ECONOMIES OF SCALE. IS THIS AN ACCURATE ASSESSMENT OF YOUR TESTIMONY?

A. No. My testimony referenced by Mr. Klick described in high level terms the general methods used by Qwest to prepare its TELRIC studies. The general methods used by Qwest have not changed from those used to produce prior studies submitted to this Commission and continue to be consistent with Commission findings. Mr. Klick's testimony only makes vague remarks that have little basis in fact and mischaracterize my testimony. For example, he cites my

description of the process Qwest follows in preparing its cost studies to identify network elements. From that high level discussion Mr. Klick makes incorrect generalizations, and draws the conclusion that Qwest's cost models "robs potential purchasers of Part B UNEs of economies of scope and scale available to Qwest, and results in discriminatory UNE prices." Klick Response Testimony at page 12.

Q. MR. KLICK APPARENTLY BELIEVES THAT QWEST SHOULD CALCULATE NEW COMMON COST FACTORS EACH TIME IT SUBMITS ITS TELRIC STUDIES. IS THIS A GOOD IDEA IN YOUR OPINION?

A. No. The Commission and other parties have expended considerable resources in the establishment of forward-looking common cost factors to be used with unbundled network elements. In its Seventeenth Supplemental Order at paragraph 206, the Commission adopted common cost markups that were to be applied "equally to the other network elements." As recently as three weeks ago, rates that reflect these common cost factors went into effect for the first time. In addition, in the Thirteenth Supplemental Order in this Docket, released January 31, 2001, the Commission confirmed the appropriateness of these same factors in its discussion of Collocation. The Commission has not requested resubmission of common cost factors in this proceeding. Qwest has used the Commission

approved factors in its proposed prices. It is unnecessary for Qwest to resubmit studies and re-litigate that issue in this proceeding.

Q. MR. KLICK STATES THAT QWEST IS REQUESTING CHARGES FOR VERTICAL FEATURES IN THIS PROCEEDING WHICH IS INCONSISTENT WITH PRIOR COMMISSION RULINGS. IS MR. KLICK ACCURATE?

A. He is completely wrong. The cite used by Mr. Klick is the sentence in Mr. Hook's testimony that says:

> The UNE Combination of 1FR/1FB lines consists of the following UNEs:
>
> Analog – 2 wire voice grade loop, Analog Line Side Port, Shared Transport and, if desired, Vertical Features. The price for the 1FR/1FB UNE Combination is located in Exhibit PWH-2 of this testimony.

The price listed by Mr. Hooks does not contain any price for Vertical Features. Mr. Hooks testimony only described what could be ordered by the CLEC. Vertical Features are available at no charge, consistent with the Commission decision.

Q. MR. KLICK NOTES THAT QWEST DID NOT PROVIDE TELRIC STUDIES FOR SUB-ELEMENTS OF THE SUB-LOOP SUCH AS BUILDING CABLE. IS HE CORRECT?

A. Yes. Qwest did not realize until recently that the CLECs wanted these sub-elements presented in this proceeding. Qwest is submitting cost studies for building cable at this time, as discussed above in response to Ms. Baker's testimony, to address the CLECs' desire for this product.

Q. MR. KLICK STATES THAT THE CORRECT WAY TO CALCULATE THE SUB-LOOP IS TO RELY UPON THE "COMPLIANCE RUNS" USED TO GENERATE THE DEAVERAGED LOOP COSTS. DOES QWEST HAVE THE COMPLIANCE RUNS REFERENCED BY MR. KLICK?

A. No, and evidently neither does anyone but the Commission. The issue of these runs was recently a topic of investigation. For example, the Commission provided a letter of inquiry to the Staff on October 20, 2000, asking for information related to Staff's spreadsheet runs of the HAI 3.1 model. From the questions asked by the Commission, it is apparent that the runs used by the Commission are different than the ones used by staff. Qwest's only information are the runs supplied by Staff in the de-averaging proceeding, and therefore Qwest may also have runs different than those used by the Commission.

The Commission used RLCAP with the HAI model and the BCPM to establish loop rates in Washington. As I explained in my Direct Testimony, Qwest has

used RLCAP to geographically deaverage the subloop in a manner consistent with the Commission's loop deaveraging decision.

TESTIMONY OF MR. WEISS

Q. MR. WEISS TAKES ISSUE WITH QWEST'S TIF FOR HARDWIRE MOUNTINGS, IS THIS A FAIR ATTACK ON QWEST'S TIF?

A. No. Mr. Weiss selects a single TIF factor out of many that Qwest uses, and attempts to use this TIF factor to illustrate his contention that Qwest inflates its material costs. The TIF of 2.11 that Mr. Weiss has chosen for his discussion is for circuit equipment mountings represented by Field Reporting Code (FRC) 257C. He suggests that a correct loading of material cost, based on his experience, would be 1.20 for plug-ins and 1.40 for hardwired equipment. He discusses "appropriate TIF ranges as being from 1.10 to 1.55." However, Mr. Weiss fails to mention that besides the TIF of 2.11 that he discusses for FRC 257C, Qwest has five other TIFs that represent FRC 257, alone. For SONET equipment there is 257CS, there is also a classification for SONET (257CS) with no power. Additionally, Qwest calculates each of these TIFs separately for both warehousing and transportation, and for transportation only. The transportation only calculation reflects equipment that is ordered directly to a job site with no warehousing involved. Qwest calculates these various TIFs in order to more accurately reflect the appropriate material costs for a variety of equipment configurations. The TIFs for

these variations range from 1.43 to 1.99. Qwest also calculates the same variations of FRC 257C for plug-ins which range from 1.29 to 1.50. Thus, Qwest does calculate TIFs that are within the range suggested by Mr. Weiss when it is appropriate to do so. However, unlike Mr. Weiss, Qwest's experience in developing its individual TIF factors is based on its actual costs for each type of equipment represented by various Field Reporting Codes (e.g., 157C, 257C, 257CS, 257CS with no Power, 357C, 858C, etc.).

Although Mr. Weiss maintains that his TIF recommendations reflect sales taxes, telco engineering, and OEM installation charges, he fails to address the additional elements included in Qwest's TIF such as material testing, power to operate the equipment, warehousing or transportation. Mr. Weiss inappropriately suggests that Qwest use a TIF factor that does not include all of the necessary elements. Qwest believes that its TIF factors accurately represent all of the relevant costs and should be approved by the Commission.

Q. MR. WEISS STATES THAT "WITHOUT SUBSTANTIATION" QWEST INFLATES MATERIAL COSTS THROUGH THE USE OF THE TIF. IS HE CORRECT?

A. No. As described above in response to Mr. Spinks' testimony, the TIF factors used by Qwest are based on the relationship of actual material investment costs to related expenditures for the most current time period and reflect Qwest's actual

experience installing equipment. Qwest's TIF calculations are based on the most current General Ledger Journal files, as reflected in the company books, as well as other company reports. Qwest uses these reports to calculate the average expenditures required to perform the steps necessary to first warehouse equipment, then transport it to the proper location, install and power the equipment, and finally, reflect the necessary taxes and finance charges. The individual components of the TIF (e.g., power, warehouse, transportation, IDC, etc.) are "subfactors" that are developed in conjunction with the Annual Cost Factors Book.

Development of the annual cost factors, including the TIF, was presented and discussed during the prior cost docket. The pages reproduced in Exhibit TKM-24 were originally filed as part of Exhibit 115 in the Generic Cost Docket, UT-960369, et al. The Commission conducted a thorough review of Qwest's methodology in that proceeding. Qwest's current methodology for developing these factors is consistent with its prior approach. Qwest's use of the TIF in its current cost studies reflects a new presentation, but not a new use of the TIF.

The factors suggested by Mr. Weiss, on the other hand, are completely unsubstantiated. They are based, as he says, on his experience in the industry. However, when asked to provide documentation of the factors he proposed, Mr. Weiss responded that the "details behind his experience are the proprietary

property of carriers who are not party to this proceeding and cannot by produced…." In addition, when Qwest asked the Joint Intervenors about their experiences regarding the cost to install equipment in their networks, they objected that the information Qwest sought was not relevant and declined to provide a response. Therefore, the only unsubstantiated factors are those proposed by Mr. Weiss.

Q. WHAT OTHER ASPECTS OF QWEST'S COST STUDIES DOES MR. WEISS ADDRESS?

A. Mr. Weiss discusses the equipment utilization rate or fill factor used by Qwest in its studies. However, once again, he focuses on only one out of several fill factors used by Qwest, and of course he picks the lowest utilization rate to discuss in relationship to his recommendation. Mr. Weiss takes only one of Qwest's eight possible architectures for DS1s (SONET Fiber Mux) and uses as an example the utilization rate for common equipment, which happens to be 37%. Qwest's actual experience with utilization of DS1s in Washington is 28 out of 84, or 33%, so an assumption of 37% is a forward-looking fill factor that comports with reality. Mr. Weiss fails to mention that Qwest's utilization for DS1 Plug-ins for the SONET Fiber Mux architecture is 97%. He also fails to use as examples any of Qwest's other architectures. These other architectures include utilization rates of 39%, 65%, 71%, 74% and 100%. Confidential Exhibit TKM-25C provides a matrix

that references the specific cell locations in the cost study of the utilization factors for each of the architectures.

Q. MR. WEISS RECCOMMENDS THAT QWEST USE AN 85% FILL FACTOR WHEN CALCULATING INVESTMENTS FOR DS1 AND DS3 CAPABLE LOOPS. IS THIS A REALISTIC ASSUMPTION?

A. No. Mr. Weiss presents a detailed discussion in support of an 85% fill factor in his Supplemental Response testimony filed on October 31, 2000. However, his discussion is fatally flawed in one very important respect, the hypothetical suggested by Mr. Weiss to achieve 85% utilization does not exist in an environment that uses actual facilities and equipment to provision DS1 and DS3 capable loops.

On January 8, 2001, when the United States Court of Appeals for the Eighth Circuit vacated the pricing decisions of the Missouri Public Service Commission it stated that "it was not permissible for the PSC 'to set prices based on the forward-looking costs of an idealized network,'…."[5] In its discussion the Court confirmed its opinion in Iowa Utilities Board v. FCC, 219 F.3d 744, 751 (8th Cir. 2000) (Iowa Utils. II) stating that:

[5] Southwestern Bell Telephone Company v. Missouri Public Service Commission, 2001 U.S. App. LEXIS 156, (8th Cir., 2001).

> At bottom…, Congress has made it clear that it is the cost of providing actual facilities and equipment that will be used by the competitor (and not some state of the art presently available technology ideally configured but neither deployed by the ILEC nor to be used by the competitor) which must be ascertained and determined.

Thus, in setting appropriate utilization rates when determining costs it is important to consider, as Qwest has, what is actually deployed in the system and what will be used by the competitor on a forward-looking basis. Mr. Weiss has completely ignored this important concept in concluding that 85% is an appropriate fill factor.

Q. PLEASE EXPLAIN WHY YOU BELIEVE MR. WEISS' ANALYSIS OF EQUIPMENT UTILIZATION IS INCORRECT.

A. To begin with Mr. Weiss states that Qwest's use of two copper-based architectures is not forward-looking and that therefore no weight should be given to the HDSL Soneplex and HDSL Loop Extender architectures. This opinion completely ignores the fact that currently in Washington more than 50% of Qwest end-user DS1 customers are provisioned over these two types of architecture. These are, and will continue to be, viable solutions for providing DS1 capability to locations where demand for DS1s is low. In fact, Qwest does not deploy the fiber OC3-type solution that Mr. Weiss uses in his analysis until demand by local end-user customers for DS1s at a given location exceeds 11 DS1s. Any less demand than that, and the cost to deploy OC3s is much higher than the cost for

lower capacity copper-based solutions. This is because an OC3 provides capacity for 84 DS1s at a given location, and demand cannot be aggregated from one location to another without adding additional OC3s. Therefore, when spread over sufficient demand the OC3 fiber solution is, as Mr. Weiss says, the low cost solution. However, when demand for DS1s at a location is low the cost per DS1s using OC3s is much higher than the cost for DS1s using copper.

In Washington, of the 4373 locations where DS1s are currently deployed to serve end-user customers, only 226 or 5% of those locations have demand that exceeds 11 DS1s per location. Nevertheless, Qwest in taking a forward-looking view of DS1 deployment in the future only weighted its copper-based architectures 27%, while weighting the fiber-based OC3 architecture 46%. Qwest then assumed 65% utilization of the copper-based architectures due in part to current average end-user demand levels of 2.4 DS1s per location. The copper-based architectures provide capacity for 4 or 8 DS1s per location. Qwest also assumed 37% utilization (i.e., 31 DS1s utilized out of a capacity of 84) for its OC3-based SONET Fiber Mux architecture, although current utilization of OC3s is only 28 DS1s, or 33%.

Q. WOULDN'T YOU CONSIDER THE DS1 DEMAND ACROSS MULTIPLE LOCATIONS WHEN DETERMINING THE APPROPRIATE UTILIZATION?

A. No. In an OC3 environment, demand across multiple locations cannot simply be aggregated when considering the appropriate utilization. This is because provisioning an OC3 in the central office provides capacity for 84 DS1s so long as an OC3 is also provisioned at the end-user location. So while it is possible to deploy an OC3 ring architecture to serve the demand at more than one location, this results in high utilization rates in the central office and low utilization at the end-user location. In other words, to serve multiple locations an OC3 could be deployed in the central office and at end-user locations A, B and C. This could result in utilization of all 84 DS1s in the central office, but only a portion (for example, 28 out of 84 DS1s) at each of the three locations because the OC3 in the central office could only serve a total of 84 DS1s. This limitation results in the use of a total of four OC3s to serve demand for 84 DS1s, not two OC3s to serve demand for 168 DS1s as suggested by Mr. Weiss. The fact is that unless there is demand for 168 DS1s in a single location, it is not possible to serve that demand with only two OC3s. Given the current level of end-user demand (i.e., an average of 2.4 DS1s per location across more than 4300 locations) it is unlikely that Mr. Weiss' example will exist in Qwest's network for a very, very long time. Mr. Weiss' analysis simply does not work in the real world. Therefore, his analysis of an 85% utilization factor could only exist in an imaginary network.

Q. IS THERE ANOTHER FLAW IN MR. WEISS' ANALYSIS OF UTILIZATIONS RATES?

A. Yes. Assuming that Mr. Weiss has used the correct demand levels in his analysis, his utilization levels are inflated by his assumption that Qwest would increment with additional OC3s to serve his assumed levels of demand. The reality is that each time an OC3 is added, it requires that four additional fibers be utilized. What is more likely to occur in the real world is that if demand at a given location were to approach the levels suggested by Mr. Weiss, Qwest would not place another OC3 but would instead expand capacity by replacing an existing OC3 with an OC12. This solution quadruples the capacity through the use of electronics without having to use any additional fiber. However, if capacity is increased from 168 to 420 DS1s instead of 252, according to Mr. Weiss' chart on Exhibit THW-5, utilization at the start of the next period would drop to 38% and the end of period utilization would be 57%, not 94%. In fact, utilization would not reach 95% until the time period represented by column E. This, of course, would result in a period average utilization of much less than 85% as suggested by Mr. Weiss.

Q. WHAT ABOUT MR. WEISS' CLAIM THAT DS1 DEMAND WILL SKYROCKET DUE TO RESIDENTIAL DEMAND FOR ADSL AND HDSL TECHNOLOGIES? WON'T THAT RESULT IN INCREASED DEMAND?

A. No. Mr. Weiss' claim is misleading. First, demand for ADSL does not result in providing DS1 capable loops to the end-user location (i.e., the residential customer's home). An increase in that type of demand is more likely to result in fiber being provide to a remote terminal, but that is not the definition of a DS1 capable loop. A DS1 capable loop provides a connection from the Qwest Central Office to the end-user location. Second, it is highly unlikely that the mass market of residential end-user customers would require, or be willing to pay for, the capacity afforded by DS1s in the near future. However, in the event that there was demand for DS1s in the residential market, it would still be for only one or maybe two DS1s per home. This kind of residential demand supports Qwest's position that there will continue to be a need for copper-based DS1 solutions with low capacity, not the fiber-based OC3 solution analyzed by Mr. Weiss.

Q. MR. WEISS ALSO DISCUSSES A NUMBER OF PROBLEMS HE SEES WITH QWEST'S NONRECURRING COST STUDIES. PLEASE RESPOND TO HIS CONCERNS.

A. First, Mr. Weiss points out that Qwest has included costs for disconnection in its nonrecurring rates. Mr. Weiss' solution is to simply eliminate the disconnection costs, which he says is consistent with the Commission's prior orders. This is not true, nor is his solution appropriate. As stated above in response to the testimony of Ms. Roth, Qwest realized after it filed its nonrecurring studies that it should

have developed separate rates for connections and disconnections in keeping with the Commission's Seventeenth Supplemental Order. The revised nonrecurring studies are attached as Exhibit TKM-16.

Second, Mr. Weiss makes a number of adjustments to the individual activities "to recognize that such activities will not be performed manually…." These adjustments fail to account for the fact that Qwest's studies already assume mechanization for certain activities, such as design, that will be impacted on a forward-looking basis by the development of fully functional OSS. In addition, as discussed earlier, Qwest believes that by adjusting its studies to be consistent with the nonrecurring studies previously approved by the Commission, it will address the issue of forward-looking efficiencies.

Third, Mr. Weiss takes issue with certain activities that he believes are duplicated unnecessarily in Qwest's studies. For example, Mr. Weiss submits that testing activities are duplicated in the studies (Weiss Response Testimony at page 21). He states that testing performed by the Service Delivery Implementor has been performed earlier in the service provisioning process. It is not that the activities are duplicated but that there are multiple people involved in certain activities. In performing testing there are three people involved, an installer, a central office technician and an implementor/coordinator. These people work together to conduct a single test. The installer and central office technician perform testing

activities on each end of the loop, while the coordinator documents the activity and reports back to the CLEC. These activities occur simultaneously although in the cost study the portrayal may appear as though they are successive activities. Mr. Weiss is mistaken about these activities being duplicated late in the process, taken together the work performed by these three people represents the second of five work tasks.

Mr. Weiss also assumes incorrectly that the activities of the Service Delivery Implementation group occur toward the end of service delivery and include verification that earlier work had been performed. This interpretation is in error. The Service Delivery Implementor has overall coordination responsibility for service provisioning and performs work activities throughout the entire timeline of service order provisioning. The Implementor is in contact with all work groups as necessary along the critical date path of the order. The activity "Verify Local Network Operations (LNO) Circuit" is an abbreviated reference for a number of work activities performed by the Implementor throughout the service establishment process. Thus the implementation activities do not occur at the end of service delivery and do not verify earlier work.

Finally, Mr. Weiss makes adjustment to Qwest's time estimates because he believes that the overall function can be performed in less time than Qwest's experts have estimated for the individual steps. For example, he adjusts a series

of activities that Qwest's subject matter experts estimate to take nine minutes down to three minutes. Mr. Weiss provides no support for this adjustment, other than that evidently he thinks it should take less time than Qwest's experience suggests. Qwest believes that absent a valid reason for such an adjustment its proposed adjustments in response to Ms. Roth's testimony are sufficient.

TESTIMONY OF DR. CABE

Q. IS DR. CABE CORRECT THAT THE UNIQUE CIRCUMSTANCES OF DARK FIBER REQUIRE ITS COSTS TO BE CALCULATED DIFFERENTLY THAN OTHER UNES?

A. No. Dark fiber, by definition, is fiber in the network that is not "lit" by electronics. That means that dark fiber is assumed to exist in the network as Dr. Cabe suggests. However, Dr. Cabe states that "unlike other UNEs, the companies will never construct or place new dark fiber to meet the demand for this element" (Cabe Response Testimony at page 3). Nowhere in the Telecom Act or the FCC's rules is there a requirement that ILECs must construct facilities that do not already exist in order to meet the needs of the CLECs for any unbundled network element. Dark fiber, like any other network element, will continue to exist in the network by virtue of Qwest's continued construction of facilities, generally. Each time new facilities are added dark fiber will be an inherent part of those new facilities.

Dr. Cabe quotes the FCC in the Third Report and Order to describe what dark fiber is for costing purposes (Cabe Response Testimony at page 1). The problem is that the section of the FCC's order that Dr. Cabe quotes is describing the requirement ILECs have to provide dark fiber, however, there is no reference whatsoever in that section to the appropriate treatment of dark fiber for cost purposes. In discussing the requirement to provide dark fiber, the FCC does not suggest a requirement to distinguish the TELRIC calculation to specifically address dark fiber. The TELRIC rules are designed to calculate the cost of replacing the entire network, including dark fiber, based on existing wire centers and facilities sufficient to serve total current demand. Qwest's TELRIC study for dark fiber does exactly what it is supposed to do.

Q. ISN'T THE TELRIC COST EFFECTED BY THE RESTRICTIVE TERMS AND CONDITIONS THAT ALLOW THE ILEC TO RECOVER DARK FIBER FROM THE CLEC FOR ITS OWN USE?

A. No. First it is important to note that terms and conditions regarding the "take back" of dark fiber are still being negotiated with the CLECs in the Section 271 workshops. Qwest's position, as stated in the SGAT filed on March 22, 2000 and quoted by Dr. Cabe in footnote 2 of his Response Testimony (page 3), has softened so that it is now unlikely that a condition would arise that would result in Qwest taking dark fiber back from a CLEC. It is my understanding that, although

negotiations are on-going, it would require a circumstance of emergency stemming from Qwest's position as carrier of last resort before dark fiber would be reclaimed from the CLECs.

Notwithstanding this changing position, the TELRIC of a fiber in the network is not changed by the fact that the ILEC might recover it for its own use. Value of service pricing addresses items such as "take back" provisions, but TELRIC is designed to calculate the cost of an element if Qwest were to rebuild the network using forward-looking technology. If a CLEC wishes to use dark fiber it must pay the ILEC reasonable compensation for that element. Mr. Cabe is inappropriately mixing the calculation of a TELRIC with the CLEC's use of an existing inventory of dark fiber. The fact is that fiber, whether it is "lit" or "unlit" has a cost, and that cost includes capital costs as well as operating expenses. Qwest's TELRIC methodology appropriately calculates those costs using inputs that reflect achievable fiber utilization in a replacement network. Mr. Cabe is advocating the use of an avoidable cost methodology that has no place in the costing of UNEs.

Q. IN HIS SUPPLEMENTAL RESPONSE TESTIMONY DR. CABE TAKES QWEST TO TASK FOR NOT FILING A COST STUDY FOR LINE SHARING ON DLC SYSTEMS. CAN YOU COMMENT ON THIS?

A. The reason that Qwest did not file a cost study for line sharing over Digital Loop Carrier (DLC) systems is that the Qwest has not been able to sufficiently define

that element to produce a cost study. The issues surrounding how to accomplish line sharing from the remote terminal are still being debated at the FCC as well as in Qwest's own continuing discussion with the CLECs. As recently as January 19, 2001 in its Third Report and Order on Reconsideration in CC Docket No. 98-147, the FCC announced the initiation of a *Third Further Notice of Proposed Rulemaking* in the Advanced Services docket to discuss "the feasibility of different methods of providing line sharing where an incumbent LEC has deployed fiber in the loop."[6] The FCC recognizes that there are a variety of line-sharing arrangements available and that those arrangements may be influenced by whether a CLEC has already collocated or is capable of collocating at a remote terminal. In its Third FNPRM the FCC states "…we clarify that an incumbent LEC's obligation to provide access to the unbundled high frequency portion of the loop extends to situations where it has deployed fiber in the loop (e.g., where the loop is served through a fiber-fed DLC at a remote terminal). This Further Notice focuses on the various methods by which competitors can access this element in this circumstance [footnote omitted]."[7] It should be evident from the preceding that Qwest did not overlook or neglect this issue as Dr. Cabe suggests, Qwest merely recognized that it is premature to produce cost studies until the element has been more clearly defined.

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[6] In the Matter of Deployment of Wireline Services Offering Advanced Telecommunications Capability and Implementation of the Local Competition Provisions of the Telecommunications Act of 1996, CC

CONCLUSION

Q. BASED ON YOUR REBUTTAL TESTIMONY, WHAT IS YOUR RECOMMENDATION FOR THE COMMISSION?

A. The Commission should accept Qwest's newly filed Nonrecurring Cost Studies prepared in response to the suggestions of Ms. Roth and the CLECs. The Commission should also accept Qwest's Building Cable study filed in response to the CLECs, as well as its deaveraged DS1 and DS3 capable loops filed at the suggestion of Mr. Spinks. In addition, Qwest has provided ample additional evidence of the validity of its TIFs and has demonstrated that the utilization factors used in its cost studies do not need to be changed. Finally, Qwest does not believe that it is appropriate to re-open the cost of the loop at this time, nor is the time ripe for addressing line sharing over fiber-fed DLC systems.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does.

Docket No. 98-147 and 96-98, January 19, 2001, para. 12.

[7] *Id*. at para. 55.