

BEFORE THE ARIZONA CORPORATION COMMISSION

DOCKETED


WILLIAM A. MUNDELL  
CHAIRMAN

JIM IRVIN  
COMMISSIONER

MARC SPITZER  
COMMISSIONER

JUN 12 2002

DOCKETED BY



IN THE MATTER OF THE INVESTIGATION  
INTO QWEST CORPORATION'S COMPLIANCE  
WITH CERTAIN WHOLESALE PRICING  
REQUIREMENTS FOR UNBUNDLED  
NETWORK ELEMENTS AND RESALE  
DISCOUNTS.

DOCKET NO. T-00000A-00-0194

DECISION NO. 64922

PHASE II  
OPINION AND ORDER

DATES OF HEARING:

July 16, 17, 18, 19, 20, 27, and 31, 2001

PLACE OF HEARING:

Phoenix, Arizona

ADMINISTRATIVE LAW JUDGES:

Lyn Farmer and Dwight Nodes

IN ATTENDANCE:

William A. Mundell, Chairman  
Marc Spitzer, Commissioner

APPEARANCES:

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Mr. Michael W. Patten, ROSHKA, HEYMAN & DeWULF, PLC, on behalf of Cox Arizona Telecom, Inc., Z-Tel Communications and McLeodUSA Telecommunications Services, Inc.;

Mr. Eric Heath on behalf of Sprint Communications Co., LP.;

Mr. Thomas H. Campbell, LEWIS & ROCA, LLP, on behalf of Time Warner Telecom of Arizona, LLC; and

Mr. Christopher C. Kempsey, Chief Counsel and Ms. Maureen A. Scott, Staff Attorney, Legal Division, on behalf of the Utilities Division of the Arizona Corporation Commission.

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**1 BY THE COMMISSION:**

2 This docket comes before the Arizona Corporation Commission ("Commission") for a  
3 decision pursuant to the Telecommunications Act of 1996, to establish unbundled network element  
4 and interconnection prices for Qwest Corporation in the State of Arizona.

**I. INTRODUCTION**

5  
6 The Telecommunications Act of 1996 ("1996 Act") established requirements and obligations  
7 for incumbent local exchange carriers ("ILECs") and competitive local exchange carriers ("CLECs")  
8 with respect to interconnection, provision of telecommunications services on an unbundled basis, and  
9 offering of telecommunications services for resale at wholesale rates. Pursuant to Section 251(c) of  
10 the 1996 Act (47 U.S.C. § 251(c)), an ILEC must accommodate CLEC requests to interconnect with  
11 the ILEC's existing local network and to use the network to compete for the provision of local  
12 telephone service. The ILEC must also provide a requesting CLEC with access to the elements that  
13 make up the ILEC's network on an individual or unbundled basis, and must make its retail services  
14 available on a wholesale basis for resale by a requesting CLEC. Further, the ILEC must allow for  
15 physical collocation of equipment necessary for interconnection or access to unbundled elements at  
16 the ILEC's premises or, when physical collocation is not practicable, the ILEC must provide for  
17 virtual collocation.

18 Under the pricing standards set forth in Section 251(d) of the 1996 Act, the rates charged for  
19 interconnection and unbundled elements must be "based on the cost (determined without reference to  
20 a rate of return or other rate-based proceeding) of providing the interconnection or network element  
21 ... [they must be] nondiscriminatory ... and may include a reasonable profit."

22 The 1996 Act also required the Federal Communications Commission ("FCC") to formulate  
23 rules to give effect to the 1996 Act. Under rules established by the FCC, pricing for interconnection  
24 and unbundled network elements ("UNEs") must use a forward-looking cost methodology that is  
25 based on the ILEC's total element long-run incremental costs ("TELRIC"). Pursuant to 47 C.F.R.  
26 §51.505(b), the costs must be determined using the ILEC's existing wire center locations, and using  
27 the most efficient technology available, regardless of the technology actually used by the ILEC. State  
28 commissions are also required to use TELRIC methodology for purposes of determining

1 interconnection and UNE prices.

2 On January 30, 1998, the Commission issued an Opinion and Order<sup>1</sup> ("*First Cost Docket*  
3 *Order*" or "Decision No. 60635") setting permanent prices for interconnection and UNEs, as well as  
4 wholesale discounts, for U S West Communications, Inc., nka Qwest Corporation ("Qwest"). At the  
5 time Decision No. 60635 was issued, the FCC's local competition rules<sup>2</sup>, including pricing  
6 provisions, had been vacated by the Eighth Circuit Court of Appeals on jurisdictional grounds. *Iowa*  
7 *Utilities Board v. FCC*, 120 F.3d 753 (8<sup>th</sup> Cir. 1997). As a result of the United States Supreme  
8 Court's decision in *AT&T v. Iowa Utilities Board*, 119 S.Ct. 721 (1999), those rules were reinstated.  
9 The Eighth Circuit Court of Appeals subsequently vacated 47 C.F.R. §51.505. *Iowa Utilities Board*  
10 *v. FCC*, 219 F.3d 744 (8<sup>th</sup> Cir. 2000). However, the United States Supreme Court recently reversed  
11 in part and affirmed in part the Eighth Circuit's decision, but left in place the FCC's TELRIC pricing  
12 methodology. *Verizon Communications, Inc., et al. v. Federal Communications Commission, et al.*,  
13 535 U.S. \_\_\_\_ (2002); 122 S.Ct. 1646 (2002).

14 Decision No. 60635, as well as several of this Commission's original arbitration decisions,  
15 were appealed to the Federal District Court for the District of Arizona. In *U S West v. Jennings*, 46  
16 F.Supp.2d 1004 (D. Ariz. 1999), the court upheld certain of the Commission's determinations and  
17 remanded others back to the Commission for further consideration. Several of the Federal District  
18 Court's rulings were appealed to the Ninth Circuit Court of Appeals, where they are currently  
19 pending.

20 The docket in this case was opened in 2000 to address issues related to Qwest's pricing of  
21 wholesale products and services. Phase I of this proceeding went forward on an expedited basis in  
22 order to comply with the FCC's geographical deaveraging requirements set forth in 47 C.F.R.  
23 §51.507(f). On July 25, 2000, the Commission issued an Opinion and Order in this case ("*Phase I*  
24 *Order*" or "Decision No. 62753") adopting *interim* geographically deaveraged UNE rates.

25 \_\_\_\_\_  
26 <sup>1</sup> *In the Matter of the Petition of American Communications Services, Inc. and American Communications*  
27 *Services of Pima County, Inc. for Arbitration with US West Communications, Inc. of Interconnection Rates, Terms, and*  
28 *Conditions Pursuant to 47 U.S.C. §252(b) of the Telecommunications Act of 1996, Docket No. U-3021-96-448 et al.*  
(January 30, 1998).

<sup>2</sup> *In re Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, CC Docket*  
No. 96-98, *First Report and Order* (rel. August 8, 1996) ("*First Report and Order*").

1 Phase II of this proceeding was designed to address issues raised by subsequent FCC orders  
2 and judicial decisions, and to establish *permanent* geographically deaveraged rates. On December  
3 14, 2000, a Procedural Order was issued which stated that Qwest's existing UNE rates would also be  
4 reviewed in Phase II. The Phase II hearing commenced on July 16, 2001 and concluded on July 31,  
5 2001. Initial post-hearing briefs were filed on August 31, 2001. Reply briefs were submitted on  
6 September 21, 2001.

## 7 II. OVERVIEW OF COST MODELS

8 In this proceeding, Qwest presented its Integrated Cost Model ("ICM") to support its  
9 proposed rates for recurring costs associated with the provision of UNEs. Qwest's ICM is comprised  
10 of the Loop Module ("LoopMod") program, the Transport Module, the Capital Cost Module, and the  
11 Expense Factors Module. As described in more detail below, the LoopMod develops investment for  
12 a subscriber loop and drop wire based on engineering loop designs, vendor prices, and placement  
13 costs. The Transport Module is used to estimate the investment in transmission and channel  
14 termination equipment needed to provide transport between switching offices. The transmission  
15 investment includes costs associated with fiber facilities and intermediate multiplexing equipment.  
16 The channel transmission investment includes electronic equipment at the switch location that  
17 converts electronic signals into optical signals (Qwest Ex. 16, at 18-19). The Capital Cost Module  
18 includes inputs for the cost of money and depreciation lives. In this proceeding, Qwest is proposing a  
19 rate of 9.61 percent for the cost of money, which was approved by the Commission as part of the  
20 settlement agreement in Qwest's last rate case (Docket No. T-01051B-99-0105, et al.) (Qwest Ex. 18,  
21 at 18-19). Qwest's model also employs the Commission's prescribed forward-looking depreciation  
22 lives (Qwest Ex. 16, at 35-36). Qwest's Expense Factor Module includes inputs that reflect Qwest's  
23 expenses and investments adjusted for inflation factors (*Id.* at 23-25). For nonrecurring costs, Qwest  
24 proposes using its own nonrecurring cost model.

25 The CLECs rely upon the HAI 5.2a Model to support their proposed recurring costs and, for  
26 nonrecurring costs, they rely upon the AT&T/WorldCom Nonrecurring Cost Model. Staff supports  
27 use of the HAI 5.2a Model as a starting point. Staff recommends using the inputs adopted in  
28 Decision No. 60635 and, where no inputs exist from that Decision, Staff recommends utilizing the

1 FCC inputs for the costs.

2 **A. Recurring Costs**

3 Recurring costs are the ongoing costs associated with providing a service or UNE. The costs  
4 generally include both capital costs and operating expenses. Recurring costs are typically presented  
5 as a cost per month or per unit of usage. Under the 1996 Act, TELRIC is the primary cost  
6 methodology used for determining pricing of UNEs and interconnection.

7 **1. Qwest's LoopMod Model**

8 LoopMod is an investment development program designed by Qwest that produces the  
9 investment for a subscriber loop and drop wire that can be used by Qwest as a basis for costs used in  
10 pricing decisions (Qwest Ex. 1, at 2). LoopMod calculates the investment required for loop and drop  
11 wire based on standard engineering loop designs, vendor prices and placement cost estimates.  
12 According to Qwest witness Buckley, the investments considered in LoopMod include materials,  
13 construction, and engineering required to build loop plant from the central office to a subscriber. Mr.  
14 Buckley testified that LoopMod uses quantity of lines in service, prices charged by contractors for  
15 outside plant construction, and distribution area data that are unique to Arizona. He indicated that,  
16 after LoopMod calculates the investment required, the results can be converted to monthly costs that  
17 are used by Qwest to make pricing decisions for the unbundled loop (*Id.*).

18 Qwest claims that the two most important factors in developing an Arizona-specific loop plant  
19 investment are distance and population density. Mr. Buckley stated that feeder investments are  
20 directly affected by the distance between the central office and the end-user's premises because  
21 longer distances require installation of more feeder plant. In addition, the density of the distribution  
22 area affects costs because higher density areas use larger, more efficient feeder cables and shorter  
23 distribution cables (*Id.* at 3). According to Qwest, its cost studies are designed to yield the forward-  
24 looking replacement costs of reproducing its telecommunications network considering the most  
25 efficient, least-cost technologies that are currently available (Qwest Ex. 16, at 3).

26 In determining forward-looking costs, Qwest contends that its cost studies take into account  
27 what facilities are currently deployed in the network, as well as what is reasonably expected to be  
28 deployed on a forward-looking basis (*Id.* at 5). Qwest claims that LoopMod considers the most

1 efficient mix of copper, fiber and integrated facilities and, consistent with TELRIC, uses technologies  
2 that are commercially available and currently being deployed in the industry (*Id.* at 7). However,  
3 Qwest asserts that its model does not rely on unproven or state-of-the-art technologies because of  
4 uncertainty as to future availability of such facilities and inefficiencies inherent in deploying the  
5 technologies where utilization of facilities is low (*Id.* at 5-6).

6 Qwest witness Teresa Million testified that Qwest also uses market prices to determine the  
7 costs of equipment and materials included in the Company's studies. She asserts that placement costs  
8 for facilities are based on the expenditures that the network organization currently incurs to perform  
9 various functions, based on actual contracts with vendors that do work for Qwest in Arizona (*Id.* at  
10 7). Ms. Million testified that Qwest's studies include forward-looking operating expenses by  
11 adjusting the Company's recent expense information to develop annual cost factors that estimate  
12 forward-looking costs. Qwest uses historical information as a starting point, and adjusts expense  
13 factors to account for future efficiencies and expected inflationary/deflationary price impacts (*Id.* at  
14 8).

15 Qwest also claims that it attempts to validate the assumptions and inputs it uses. As an  
16 example, Qwest asserts that component prices are taken directly from actual network contracts with  
17 Arizona vendors and that assumptions are verified through discussions with internal experts about  
18 actual construction experiences. According to Qwest, its cost analysts also spend extensive time  
19 reviewing cost data for related UNEs, and for the same UNEs in other states, to ensure that the  
20 model's results are reasonable (*Id.* at 28).

21 The CLECs contend that Qwest's LoopMod is simply a next generation version of the  
22 Regional Loop Cost Analysis Program ("RLCAP") that was rejected by this Commission in Decision  
23 No. 60635. In that Decision, the Commission stated that the US West models were "based upon  
24 embedded costs and technology, and do not consider particular demographics and geology of the  
25 State of Arizona" (*First Cost Docket Order*, at 7). The CLECs claim that many of the concerns that  
26 caused the Commission to reject the RLCAP model in the prior proceeding still exist with respect to  
27 the LoopMod model. The CLECs argue that, similar to the rejected RLCAP model, LoopMod relies  
28 on Qwest's embedded network when that information increases the loop cost estimate and rejects the



1 embedded costs when it leads to a decrease in Qwest's proposed loop cost.

2 As an example of the alleged deficiencies in Qwest's model, the CLECs assert that LoopMod  
3 fails to use accurate customer locations in designing outside loop plant. The CLECs contend that,  
4 although LoopMod uses some information regarding customer locations, the information relied upon  
5 dates from 1996. Another criticism leveled at Qwest's model is that the use of standardized  
6 distribution groups, as applied to Qwest's existing distribution areas, ignores the possibility that more  
7 efficient designs might yield lower costs (AT&T/WorldCom/XO Ex. 8, at 43). The CLECs claim  
8 that Qwest's use of standardized designs in its model shows that the model does not reflect what is  
9 required to serve existing customers in Arizona. Therefore, the CLECs recommend that Qwest's  
10 LoopMod should be rejected.

11 Qwest responded to the CLECs' criticisms by asserting that LoopMod uses data relating to  
12 the density characteristics of actual Arizona distribution areas ("DAs") to develop state-specific  
13 distribution investment. Qwest claims that LoopMod's distribution network starts with standard  
14 distribution designs that account for the effect of natural and man-made obstacles, such as roads and  
15 buildings. Qwest states that LoopMod then applies a multiplier based on the individual DA densities  
16 to adjust the cable lengths in the standard design, resulting in cable lengths that are Arizona-specific  
17 (Qwest Ex. 2, at 24). Qwest argues that the use of actual Arizona DAs, current Arizona vendor prices  
18 and placement costs, and forward-looking architectures is consistent with TELRIC principles and is a  
19 least-cost approach to modeling the Company's network.

20 Qwest also contends that, in the *First Cost Docket Order*, the Commission did not adopt  
21 either the RLCAP or Hatfield model (which was sponsored by the CLECs), but used parts of each for  
22 determining the loop rate. Moreover, according to Qwest, there are many material differences  
23 between RLCAP and LoopMod that render criticisms of the prior model irrelevant. Qwest points out  
24 that differences between the models include: new design of the feeder network that is based on  
25 Arizona-specific wire centers; different weighting within the distribution network that reflects unique  
26 Arizona densities; disaggregation of placement costs by density groups and by urban/rural to reflect  
27 placement methods an engineer would choose; and reduction in the amount of directional boring  
28 assumed in LoopMod (Qwest Ex. 1, at 5, 8, and 13; Tr. 131-133).

1 Qwest asserts that these differences show that LoopMod specifically accounts for Arizona-  
2 specific demographics in the distribution network based on the unique density within each Arizona  
3 distribution area. Qwest adds that LoopMod does not rely on so-called "embedded" inputs but,  
4 rather, is based on forward-looking assumptions that reflect how networks are designed and operated  
5 in the real world. Accordingly, Qwest requests that the Commission adopt LoopMod as the most  
6 appropriate recurring cost model presented in this proceeding. Based on application of its model,  
7 Qwest recommends an unbundled statewide average loop rate of \$25.95 (Qwest Ex. 18, at 59), which  
8 is significantly higher than the rate of \$21.98 that is now in effect in Arizona.<sup>3</sup>

## 9 2. HAI Model

10 AT&T/WorldCom/XO (AT&T/WorldCom/XO may be generically referred to as "the  
11 CLECs") agree with Qwest that UNE prices should be established based on costs, but disagree with  
12 how those costs should be determined. The CLECs claim that, despite Qwest's repeated admonition  
13 that the Commission must rely on Qwest's real world costs in setting UNE rates, Qwest has failed to  
14 recognize that in the real world competition is almost non-existent in Arizona, even at the current  
15 UNE rates. The CLECs point out that Qwest has sold fewer than 23,000 unbundled loops in the  
16 entire state, resulting in a competitor penetration rate of only three percent of Qwest's voice market  
17 (AT&T/WorldCom/XO Ex. 1, at 8). CLEC witness Gillan testified that competitive carriers are  
18 scaling back plans to enter the competitive carrier market or abandoning the market altogether (*Id.*).  
19 Although the CLECs agree that UNEs must be cost-based, they contend that Qwest's proposed costs  
20 do not comply with controlling TELRIC principles.

21 The HAI 5.2a Model ("HAI Model"), which was previously known as the Hatfield Model,  
22 was sponsored by AT&T/WorldCom/XO. The CLECs argue that the Commission should base its  
23 decision regarding recurring costs on the results produced by the HAI Model. According to the  
24 CLECs, the HAI Model has the benefit of this Commission's prior review, as well as review by other  
25 state commissions and the FCC. The CLECs claim that the HAI Model is preferable to Qwest's ICM  
26 because the HAI uses actual customer locations in Qwest's Arizona service area to the extent

27  
28 <sup>3</sup> The current Zone 1 loop rate of \$18.96 encompasses approximately 90 percent of Qwest's access lines.

1 possible. Where actual customer locations are not available, the HAI Model uses surrogate customer  
2 locations placed uniformly along the roads in the census blocks where customers are located. The  
3 CLECs claim, therefore, that the HAI Model develops the distribution plant necessary to serve actual  
4 customers, as opposed to assuming an average investment based upon standardized designs  
5 (AT&T/WorldCom Ex. 3, at 11-12).

6 Qwest's models are designed to calculate the investment required to provide a specific  
7 element or service. The Company then applies capital costs, and maintenance and expense factors to  
8 develop the recurring or nonrecurring charge that it proposes for the particular element (Qwest Ex.  
9 16, at 9-10). The CLECs contend that, while Qwest's maintenance and expense factors are based on  
10 the Company's embedded books, the HAI Model is based on forward-looking expenses that are  
11 consistent with a TELRIC analysis.

12 Based on application of the HAI Model, the CLECs advocate adoption of a statewide average  
13 loop rate of \$10.11. The CLECs note that Staff's proposed statewide average loop rate is \$12.35,  
14 which is close to the loop rate recommended by the CLECs (Staff Ex. 32, Sched. WD-17). The  
15 CLECs argue that Qwest's proposal is so far out of line with the CLECs' and Staff's recommendation  
16 because Qwest relies on a model that is designed to produce costs that will prevent entry by  
17 competitors through the use of unbundled elements.

18 The CLECs also assert that the HAI 5.2a Model provides rates for unbundled loops that  
19 comply with the FCC's TELRIC rules. The CLECs point out that the HAI Model has been reviewed  
20 in both state and federal proceedings and many portions of the model have been accepted by the FCC  
21 for estimating the forward-looking costs of providing universal service (AT&T/WorldCom/XO Ex. 3,  
22 at 16-19).

23 With respect to the placement of distribution plant, the CLECs claim that the HAI Model  
24 places customers where they are actually located. Where actual customer locations are not known,  
25 the model uses the U.S. Census Bureau's location of residential households by census block (*Id.* at  
26 20). Mr. Denney stated that, because this census block information places customers uniformly along  
27 roadways, it likely overestimates the actual dispersion of customers and therefore likely overstates  
28 the amount of the distribution plant needed to serve the customers, thereby addressing Qwest's

1 concern (*Id.* at 21).

2 As indicated above, Staff recommends adoption of the HAI 5.2a Model in this proceeding.  
3 Staff witness Dunkel testified that because TELRIC studies are intended to be forward-looking in  
4 nature, they should be based on expected costs on a forward-looking basis for an efficient provider,  
5 using current commercially available technology. Mr. Dunkel claims that the Commission must be  
6 cognizant of the fact that it is in the ILEC's interest to make charges for UNEs, collocation, and  
7 interconnection as high as possible. According to Mr. Dunkel, ILECs benefit from higher prices for  
8 these services because such charges are imposed on the ILEC's competitors thereby raising the  
9 competitive LECs' cost of doing business (Staff Ex. 30, at 4-5).

10 Although Mr. Dunkel advocates adoption of the HAI Model, he stated that the model  
11 sponsored in this case by the CLECs did not use, in some cases, the inputs specified by the  
12 Commission in the *First Cost Docket Order*. Mr. Dunkel recommends that the Commission adopt  
13 the HAI 5.2a Model, but that the Commission utilize the inputs previously approved in the *First Cost*  
14 *Docket Order*. Where the Commission did not address a specific input in that Order, Mr. Dunkel  
15 proposes using inputs adopted by the FCC (*Id.* at 72).

16 **3. Conclusion on Recurring Cost Models**

17 In the *First Cost Docket Order*, we declined to accept either Qwest's model or the CLECs'  
18 Hatfield Model in its entirety. After considering the evidence submitted in this proceeding, we find  
19 that the HAI 5.2a Model relied upon by the CLECs and Staff, provides the most appropriate measure  
20 of determining TELRIC-compliant, forward-looking costs and prices for UNEs, when used as a  
21 starting point and subject to the determination of specific inputs as discussed below. We agree with  
22 Staff and the CLECs that Qwest's model is based primarily upon its embedded network and costs and  
23 that Qwest's model fails to adequately incorporate efficiencies that should be recognized in a  
24 TELRIC environment.

25 Reliance on an incumbent LEC's embedded costs clearly does not recognize the efficiencies  
26 that would likely be experienced in a truly competitive environment. As discussed below in greater  
27 detail, in evaluating the specific inputs contained in the models we must take into account whether  
28 the components of the model reflect the least-cost, most efficient assumptions that are required under

1 a TELRIC analysis. Although each of the issues discussed below is evaluated independently, we  
 2 believe that, subject to the adjustments described herein, the HAI Model properly recognizes the  
 3 TELRIC methodology that is required for assessing Qwest's costs and UNE prices.

4 a. **Specific Recurring Cost Issues**

5 i. **Placement Costs**

6 As used in both the HAI Model and Qwest's LoopMod, placement costs are those costs  
 7 associated with placing cable, including costs for trenching or boring, and the frequency that those  
 8 placement methods will be used in placing buried cable. Placement costs for buried cable make up a  
 9 significant portion of the investment for the unbundled loop in both the HAI Model and Qwest's  
 10 LoopMod.

11 Qwest argues that, in a competitive market, placement costs must be based on the actual costs  
 12 that would be incurred by a carrier in placing facilities. For example, Qwest claims that  
 13 consideration must be given to costs associated with navigating around many types of obstacles,  
 14 including streets, highways, sidewalks, buildings, and yards. Absent consideration of these types of  
 15 factors, Qwest asserts that the inputs will not produce accurate results that are reflective of conditions  
 16 in a competitive environment. Qwest also contends that LoopMod maintains consistency in its  
 17 assumptions by including shorter lengths of cable that would occur in a replacement network, while  
 18 recognizing that such a replacement network would require a significant amount of boring and  
 19 trenching (Qwest Ex. 1, at 16). Qwest disputes the CLECs' and Staff's contention that cable will not  
 20 often have to be placed around and through landscaping.

21 According to the CLECs and Staff, Qwest exaggerates placement costs because Qwest  
 22 assumes that a high percentage of installation jobs would require cutting and restoration of concrete,  
 23 asphalt, or sod. The CLECs contend that, in its *Inputs Order*,<sup>4</sup> the FCC determined that basing costs  
 24 on small scale projects is not appropriate and the most reflective method of estimating construction of  
 25 a local telephone network is for projects with expenditures over \$50,000 (*Id.*, ¶109). The CLECs  
 26 state that Qwest's placement costs used in its model are based on "numerous small jobs or routine

27 \_\_\_\_\_  
 28 <sup>4</sup> *Tenth Report and Order, In the Matter of Federal-State Joint Board on Universal Service*, CC Docket No. 96-45, FCC 99-304 (rel. Nov. 2, 1999).

1 day-to-day work activities” (AT&T/WorldCom/XO Ex. 10, §1, p. 10). The CLECs and Staff argue  
2 that, in the real world, Qwest most often places facilities in the ground before obstructions are built.  
3 Staff also asserts that, even in urban environments, cutting and restoration of asphalt and concrete are  
4 often not necessary because cable is placed in existing underground conduits (Tr. 914-919).  
5 Accordingly, Staff and the CLECs allege that Qwest’s pricing overstates the actual costs that would  
6 be incurred in constructing plant using a TELRIC analysis.

7 We agree that Qwest’s LoopMod inputs overstate the costs attributable to placement of buried  
8 cable in a forward-looking environment. Applying a forward-looking TELRIC analysis, we agree  
9 with the CLECs and Staff that an appropriate cost model should assume efficient placement  
10 techniques being used by the ILEC and should assume that some, but not the majority of placement  
11 activities would require that streets, sidewalks, and landscaping would need to be cut and restored or  
12 bored. Compared to the LoopMod assumptions, the HAI Model relies upon the more reasonable  
13 assumption that, in a forward-looking environment, cable will be placed efficiently without the  
14 requirement of extensive boring and cutting. Therefore, we will adopt the HAI Model’s assumptions  
15 on this issue.

16 **ii. Structure Sharing**

17 Structure sharing is included in the models as a percentage of the time it is assumed that  
18 outside plant facilities will be shared by the ILEC, cable operators, electric utilities or others,  
19 including CLECs and interexchange carriers. Staff and the CLECs contend that Qwest’s model  
20 inputs underestimate the amount of sharing that will occur in a forward-looking environment. The  
21 CLECs argue that Qwest’s sharing assumptions do not reflect that Qwest will have the same sharing  
22 opportunities that existed when its plant was built. Instead, according to the CLECs, Qwest’s study  
23 assumes that its telecommunications facilities will be rebuilt in areas where electric and cable  
24 company facilities are already in place.

25 Qwest argues that, to share in placing buried cable, there must be a need for multiple  
26 providers to access a given area at approximately the same time. Qwest witness Buckley stated that,  
27 in new subdivisions, trenching activities can often be coordinated and the trenching costs shared  
28 among multiple utility providers (Qwest Ex. 1, at 24). However, Mr. Buckley contends that a rebuild

1 of the network will not involve sharing among multiple providers because the other providers already  
2 have facilities in place. LoopMod assumes that Qwest will pay 50 percent of the costs of placing  
3 aerial cable, 80 percent of the costs of placing buried cable, and 95 percent of the costs of placing  
4 underground cable (*Id.* at 25-26). Qwest contends that the data from the Company's buried  
5 placement records for the years 1995 to 1999 demonstrates that the Company has been able to trench  
6 for approximately 18 percent of the buried sheath placed. Mr. Buckley asserts that this data  
7 conservatively verifies Qwest's LoopMod assumption that there will be opportunities to share  
8 trenching costs with other utilities no more than 20 percent of the time (*Id.* at 27).

9 Staff contends that Qwest's proposed sharing cost for buried cable is similar to the level that  
10 was proposed by Qwest in the prior cost docket and rejected by the Commission (Decision No.  
11 60635, at 20). Staff argues that Qwest's proposed structure sharing percentages are based upon  
12 historical or embedded cost data and bear no relationship to the least-cost forward-looking TELRIC  
13 standard required under the 1996 Act and FCC rules.

14 The CLECs add that the FCC's *Inputs Order* requires that sharing assumptions in a TELRIC  
15 model should reflect that the telephone industry will have at least the same opportunity to share the  
16 cost of building plant as existed when the plant was built.<sup>5</sup> The CLECs argue that Qwest's model  
17 inputs for sharing ignore this standard and, instead, assume that telecommunications plant will be  
18 rebuilt in areas where other utility providers are already in place (Qwest Ex. 29, at 50). The CLECs  
19 also point out that many communities require or encourage cooperation among providers in placing  
20 trenches, and that many developers provide the trench to utilities at no cost (Tr. 913-914).

21 In the last cost docket, US West claimed that it had paid for placement of facilities, for both  
22 distribution and feeder, in the following percentages: 50 percent for aerial; 100 percent for  
23 underground; and 83 percent for buried cable (Decision No. 60635, at 20). The Commission rejected  
24 US West's facilities sharing proposal and established the sharing percentages as 50 percent each for  
25 aerial, underground, and buried cable (*Id.*). Staff recommends that the same sharing percentages be  
26 maintained in this case while the CLECs propose adoption of the HAI Model's assumptions.

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<sup>5</sup> *Inputs Order*, ¶244.

1           The structure sharing assumptions included in the HAI model are similar to those approved in  
2 the *First Cost Docket Order*, which we found in that Decision to be more reflective of a forward-  
3 looking network than the sharing assumptions proposed by US West. When facilities are initially  
4 being placed in a high growth market there will be a significant amount of developer-provided trench  
5 and thus, in a forward-looking model, costs should be reduced by substantial sharing. Moreover, as  
6 the CLECs and Staff point out, Qwest's proposed structure sharing assumptions are similar to the  
7 percentages that were rejected by this Commission in the *First Cost Docket Order* and Qwest has not  
8 convinced us that those assumptions have any more merit in this proceeding. We will, therefore,  
9 accept the sharing assumptions adopted in Decision No. 60635 of 50 percent each for aerial,  
10 underground, and buried cable, as proposed by Staff.

11                                   iii.     Plant Mix

12           Plant mix refers to the relative percentage of facilities that are buried, placed in underground  
13 conduit, and placed on telephone poles. Qwest witness Buckley stated that conduit systems are  
14 typically used in areas where there are multiple cables and where there is a need for easy access to the  
15 cables, such as areas with high population density. In less densely populated areas, trenching and  
16 plowing is often used for cable placement. Mr. Buckley indicated that aerial cable placement has  
17 declined in recent years because it is subject to higher maintenance costs, and because many  
18 municipalities and homeowners groups now require buried cable for aesthetic reasons (Qwest Ex. 1,  
19 at 28). Placement costs will be affected by the mix of these various structures because the cost of  
20 placing aerial, buried, and underground cable varies substantially.

21           LoopMod assumes underground placement for cable within certain distances from the central  
22 office, depending on the size of the wire center. The model's breakpoint between underground and  
23 buried cable is 1,000 feet for very small wire centers, 7,000 feet for small wire centers, 14,000 feet  
24 for medium wire centers, and 20,000 feet for large wire centers. The default aerial input in the model  
25 is 14 percent, which Qwest states is based on a Qwest company-wide summary of cable sheath miles  
26 in service. Mr. Buckley testified that a 2000 report shows that aerial comprises 13.8 percent,  
27 compared to 14.5 percent in 1996. Qwest asserts that this data shows a decreasing trend in use of  
28 aerial cable and that it is highly unlikely that a forward-looking network would result in an increase



1 in aerial cable (*Id.* at 29).

2       The CLECs contend that the actual percentage of aerial cable in Arizona is approximately 19  
3 to 20 percent (Tr. 140). The HAI model assumed an even higher percentage of aerial cable, which  
4 Mr. Denney testified comes close to replicating Qwest's aerial sheath mileage as reported to ARMIS  
5 (AT&T/WorldCom/XO Ex. 5). The CLECs argue that Qwest's reliance on its embedded structure  
6 for aerial structure assumptions is contrary to TELRIC. The CLECs urge the Commission to adopt  
7 the HAI assumptions, which they claim are based on a least-cost analysis that considers the cost of  
8 placing and maintaining the plant.

9       We agree with Qwest that the trend in decreased use of aerial cable should be reflected in a  
10 forward-looking cost model. It is inconsistent for the CLECs to argue, on the one hand, that cost  
11 inputs should not reflect Qwest's embedded network while, on the other hand, advocating the use of  
12 historical data for purposes of determining plant mix. The evidence shows that the use of aerial cable  
13 has been declining in recent years and that its use is likely to decline into the future. However,  
14 Qwest's proposed use of a system-wide percentage fails to recognize that aerial cable is used in a  
15 higher frequency in Arizona. Since Qwest's witness testified that the Company's aerial cable  
16 percentage in Arizona is currently at 19 to 20 percent, we will adopt an aerial cable ratio of 19  
17 percent to give recognition to the declining trend in the use of such cable. Adoption of this  
18 percentage reflects a forward-looking network on an Arizona-specific basis while, at the same time,  
19 reducing the CLECs' HAI default values which are higher.

20                               iv.     Fill Factors

21       The FCC's TELRIC methodology, as set forth in its *First Report and Order*, requires that per-  
22 unit costs should be determined from total costs by using reasonably accurate "fill" or "utilization"  
23 factors. These fill factors represent estimates of the proportion of a facility that will be filled with  
24 network usage. The FCC stated that the per-unit costs are derived "by dividing the total cost  
25 associated with an element by a reasonable projection of the actual total usage of the element" (*Id.*,  
26 ¶682). FCC Rule 505 provides that the TELRIC cost of an element "should be measured based on  
27 the use of the most efficient technology currently available and the lowest cost network  
28 configuration, given the existing location of the incumbent LEC's wire centers." 47 C.F.R. §51.505.

1 The FCC stated in its *Inputs Order*, at Paragraph 186, that:

2           The percentage of the total useable capacity of cable that is expected to  
3           be used to meet current demand is referred to as the cable fill factor. If  
4           cable fill factors are set too high, the cable will have insufficient  
5           capacity to accommodate small increases in demand or service outages.  
6           In contrast, if cable fill factors are set too low, the network could have  
7           considerable excess capacity.

8           Qwest's LoopMod assumes that living units will have two or three cable pairs, depending on  
9           the density group in which the living unit is located. Qwest's two or three pair assumption per living  
10          unit is based on its claim that it is less costly to place multiple pairs at once instead of later  
11          reinforcing facilities as demand increases. Qwest witness Buckley testified that although in Arizona  
12          there are currently approximately 1.17 working lines per residence, the Company's proposed fill  
13          factors are economically efficient and consistent with the goal of providing service on demand and  
14          minimizing held orders (Qwest Ex. 1, at 32).

15          The CLECs contend that Qwest's fill assumption of two to three pairs per household is  
16          inconsistent with the FCC's cable fill standards. The CLECs argue that the FCC has rejected a "pairs  
17          per location" approach in determining fill factors on a forward-looking basis. AT&T/WorldCom/XO  
18          witness Denney stated that Qwest's fill assumption would require the purchaser of an unbundled loop  
19          to pay the cost for all growth that may occur in the future within the network (AT&T/WorldCom/XO  
20          Ex. 3, at 38-39). The CLECs assert that the FCC requires distribution fill in a TELRIC model to be  
21          sized to meet current demand, including an amount of excess capacity to accommodate short-term  
22          growth.<sup>6</sup> The CLECs point out that, although Qwest's models assume three pairs for most locations,  
23          actual line usage demand is far less (AT&T/XO Ex. 5). The CLECs contend that this disparity  
24          between US West's and the CLECs' fill assumptions in the prior cost docket led the Commission to  
25          adopt the HAI model's fill factors.<sup>7</sup> The CLECs also claim that, because the HAI 5.2a fill factors  
26          used in this docket are even more conservative than those previously adopted by the Commission, the

27  
28 <sup>6</sup> FCC *Inputs Order*, ¶¶199-201.

<sup>7</sup> *First Cost Docket Order*, at 16.

1 CLECs' proposed fills should be adopted in this docket.

2 We agree with the CLECs that the HAI model's use of a 75 percent cable sizing factor for  
3 distribution plant, resulting in an average actual fill factor of 48.8 percent (or slightly more than 2  
4 lines per household), is appropriate (AT&T/WorldCom/XO Ex. 3, at 38). As the CLECs point out,  
5 Qwest's model develops the investment required to serve some unidentified "ultimate demand and  
6 spreads the cost of serving that ultimate future demand over only current demand (Tr. 100;  
7 AT&T/XO Ex. 5). We believe that, consistent with the FCC's *Inputs Order*, adoption of the HAI fill  
8 factors recognizes fills that are sized to meet current demand, including an amount of capacity to  
9 meet additional demand. Qwest's modeling of three pairs per location for most density group  
10 locations far exceeds current actual demand of less than 1.2 lines per location. As we stated in the  
11 *First Cost Docket Order*, "the use of achievable average fill factors of the Hatfield Model would be  
12 more representative of a forward-looking, least cost, efficient network."<sup>8</sup> Further, the fills advocated  
13 by the CLECs in this docket are actually lower than those adopted in the prior docket. The CLECs'  
14 proposed fill factors will be adopted.

15 v. Drop Lengths

16 The drop wire is the outside plant facility that extends from a distribution terminal to the  
17 actual customer premises. Qwest breaks the lengths of the drop facilities out by aerial versus buried  
18 and by distribution density group. In Qwest's model, only density groups 3, 4, and 5 use drops, while  
19 groups 1 and 2 utilize an entrance facility as opposed to a drop wire (Qwest Ex. 1, at RJB-3, page 3).  
20 Qwest's drop length proposal is based on data from seven Qwest states which produces an average  
21 drop length of approximately 150 feet. When applied to the state specific mix of density groups, the  
22 data produce a statewide average drop length of approximately 110 to 120 feet, which Qwest has  
23 proposed to be used for this proceeding (*Id.*).

24 Qwest argues that the average drop length of approximately 66 feet produced by the CLECs'  
25 HAI Model is unreasonably short. According to Qwest, its average drop length was produced from  
26 an empirical study of thousands of samples across its service area, whereas the CLECs' HAI model is

27  
28 <sup>8</sup> *Id.* at 17.

1 based on national default values. Qwest claims that, because Arizona and many other states in  
2 Qwest's region have a large percentage of highly rural areas, the average drop lengths should be  
3 expected to be longer than the national average.

4 The CLECs contend that Qwest's analysis is flawed because its survey of drop lengths  
5 excludes all multi-tenant dwellings. The CLECs also assert that the technicians performing the  
6 survey did not measure actual drop lengths, but were simply asked to perform a visual estimate of the  
7 drop length or to walk off the distance. According to the CLECs, a number of the drop lengths  
8 contained in the Qwest study are long enough to extend around most of the circumference of the lot  
9 for a given property included in the survey (AT&T/XO Ex. 14). The CLECs claim that these faults  
10 undermine the validity of Qwest's drop length inputs.

11 Staff also argues that the HAI drop lengths should be used. Staff claims that Qwest's regional  
12 study improperly excludes states with large urban areas, like Arizona and Colorado. Staff points out  
13 that, in Decision No. 60635, the Commission adopted the Hatfield model's calculation of drop costs,  
14 thus implicitly adopting the Hatfield drop length. Staff asserts that Qwest has not provided any  
15 compelling, Arizona-specific data to justify overruling the Commission's decision in the *First Cost*  
16 *Docket Order*.

17 After reviewing the evidence presented on this issue, we believe that the drop lengths  
18 advocated by Qwest, Staff, and the CLECs have deficiencies. On the one hand, we agree with Qwest  
19 that the CLECs' national default values fail to recognize that much of Qwest's service area, including  
20 portions of Arizona, are highly rural and require longer drops to implement service. On the other  
21 hand, we are concerned that Qwest's study failed to include multi-tenant units that would  
22 significantly reduce the results of the drop length average. In addition, Qwest's analysis fails to  
23 recognize that many of the "rural" areas in Arizona are uninhabited and thus not served by any  
24 telephone service provider. We also note that Qwest's service area in Arizona includes the  
25 metropolitan Phoenix and Tucson areas, where a significant number of the drop lengths would likely  
26 be shorter than average. Given our concerns with the two extremes of drop lengths presented for our  
27 consideration, we believe that an Arizona statewide average drop length of 90 feet is a reasonable  
28 middle ground that gives recognition to the flaws of both proposals. This drop length of 90 feet shall,

1 therefore, be adopted in this docket.

2 **vi. IDLC Unbundling Costs**

3 Qwest claims that it incurs costs when it separates individual unbundled loops from integrated  
4 digital loop carrier ("IDLC") systems. Because DLC systems use high bit rate circuits (DS-1 or OC-  
5 3) to transport multiple low bit rate circuits from the remote electronics to the central office, when a  
6 CLEC orders an unbundled loop that is carried on IDLC, Qwest must "groom" or unbundle the loop  
7 to permit it to be terminated on an intermediate distribution frame and then cross-connected to a  
8 CLEC's equipment. Grooming is not required for copper loops or for loops derived from universal  
9 DLC systems (Qwest Ex. 2, at 18-19). Qwest contends that, because grooming is only necessary for  
10 IDLC loops, it assumes in Arizona that 44 percent of the loops are on IDLC (*Id.*).

11 The CLECs argue that Qwest's assumption that 44 percent of all loops will be carried over  
12 IDLC is unsupported. The CLECs claim that Qwest currently has substantially less than 44 percent  
13 IDLC unbundled loops. The CLECs assert that the result of this disparity is that Qwest's proposal  
14 seeks recovery of costs that it does not incur in the real world. The CLECs further contend that, in a  
15 forward-looking network, it should be assumed that CLECs could purchase loops in a fully-integrated  
16 DLC environment that would not require de-multiplexing at the central office (AT&T/WorldCom Ex.  
17 8, at 32). Staff also argues that because Qwest has removed the tap and bridge coils on many loops,  
18 CLECs should not be required to pay grooming charges on any loops included in Qwest's bulk  
19 deloading project in Arizona. Staff further asserts that a recurring fee is improper because loop  
20 grooming is a one-time activity. The CLECs and Staff claim, therefore, that the proposed grooming  
21 charge is unnecessary and anticompetitive and should be rejected.

22 Although Qwest discounts the CLECs' contention that in a forward-looking environment  
23 there would be no need for grooming IDLC loops, the Company's proposed assumption of 44 percent  
24 IDLC loops significantly overstates its actual experience (*See*, AT&T/WorldCom Exs. 28 and 29).  
25 We agree with the CLECs that in a "forward-looking" network no loops will need to be groomed and,  
26 thus, no charges should be imposed on IDLC loops. However, the CLECs fail to recognize that the  
27 purchase of IDLC loops likely will increase on a going-forward basis, and that those loops that are  
28 not universal LDC will need to be groomed to provide service to purchasing CLECs. There is wide

1 disparity in the positions taken by Qwest and the CLECs, and we do not believe that either position is  
 2 appropriate. We conclude that an input of 10 percent IDLC loops will properly recognize the  
 3 likelihood of increased purchases and use of IDLC loops on a forward-looking basis.

4 **vii. Overhead Costs**

5 Qwest argues that the CLECs' HAI model employs an unreasonably low overhead rate of  
 6 10.4 percent, which is based on AT&T's own overhead from 1994. Qwest claims that the use of  
 7 AT&T's overhead is inappropriate because interexchange carriers collect a large amount of revenue  
 8 from their customers that is passed on directly to local exchange carriers in the form of access  
 9 charges. According to Qwest, because these revenues are not generated by AT&T's network, they  
 10 are not properly attributable to AT&T in the calculation of overhead (Qwest Ex. 9, at 58-59). Dr.  
 11 Fitzsimmons points out that the HAI model's 10.4 percent overhead factor has been rejected by at  
 12 least one other state commission<sup>9</sup> which adopted an overhead factor of 13.6 percent. He also stated  
 13 that because AT&T's long distance business is very different from Qwest's local telecommunications  
 14 business, direct cross-company comparisons are meaningless. Dr. Fitzsimmons claims that Qwest's  
 15 overhead values for 1999 and 2000 were 13.3 and 12.9 percent, respectively (*Id.* at 61). Dr.  
 16 Fitzsimmons recommends that an overhead factor of 13.0 percent should be adopted, resulting in an  
 17 increase of \$0.44 for the unbundled loop cost (*Id.*).

18 The HAI model assumes an overhead factor of 10.4 percent, which is based on AT&T's own  
 19 operations (Qwest Ex. 29, at 58-59; Tr. 1452). In his direct testimony, AT&T/WorldCom/XO  
 20 witness Denney included a table comparing Qwest's ARMIS data for the corporate overhead  
 21 accounts to Qwest's operating revenues. The table shows that Qwest's five-year average corporate  
 22 overhead factor, from 1996 through 2000, was 10.4 percent. From this data, Mr. Denney concluded  
 23 that the HAI model's default overhead factor of 10.4 percent is reasonable (AT&T/WorldCom/XO  
 24 Ex. 3, at 36-37). Mr. Denney conceded on rebuttal that his calculation of Qwest's corporate overhead  
 25 factor should have subtracted corporate overhead expense from operating revenues in his calculation  
 26 (AT&T/WorldCom/XO Ex. 5, at 6). However, his recalculation of Qwest's five-year average of 11.6  
 27

28 <sup>9</sup> Before the Iowa Utilities Board, *Final Decision and Order*, Docket No. RPU-96-9 (April 23, 1998), at 24.

1 percent does not change his recommendation that the HAI model's default 10.4 percent factor is  
2 reasonable (*Id.*).

3 We agree with the CLECs that Qwest's proposed overhead factor of 13.0 percent significantly  
4 overstates the overhead that should be assumed for an efficient carrier in a forward-looking  
5 environment. As Mr. Denney shows in his rebuttal testimony, compared to other Regional Bell  
6 Operating Companies ("RBOCs"), Qwest consistently has the highest corporate operations  
7 percentages. Mr. Denney testified that the RBOC average for the year 2000 was 8.3 percent, which is  
8 less than even the HAI model's default value, and substantially less than the 13.0 percent factor  
9 advocated by Qwest (*Id.*). Based on the record presented in this proceeding, we believe that the HAI  
10 default value is reasonable and should be adopted.

11 **viii. MST Function**

12 The HAI model uses a right-angle routing feature called Minimum Spanning Tree ("MST") to  
13 take account of groups of customers within a cluster group. CLEC witness Denney states that the  
14 MST is used by the FCC in the FCC Synthesis Model (AT&T/WorldCom/XO Ex. 5, at 2). He noted,  
15 however, that the MST function can overestimate required distribution cable because it uses right  
16 angle routing, rather than minimum distance routing. Mr. Denney claims that the MST likely spreads  
17 customers out further than they are in reality, thereby overestimating required cable (*Id.*).

18 Qwest is critical of the HAI Model's MST function because, according to Qwest, real world  
19 customers are not on a blank page and a real world network must be placed around natural and man-  
20 made obstructions such as buildings and lakes (Qwest Ex. 29, at 36). Dr. Fitzsimmons contends that  
21 the MST function results in understated distribution cable requirements in low-density rural areas (*Id.*  
22 at 37). Qwest requests that, if the Commission adopts the HAI model, the MST function should be  
23 turned off to mitigate the understatement Qwest alleges results from deployment of the HAI model.  
24 Dr. Fitzsimmons states that turning off the MST function would result in an increase in the loop  
25 investment per line by \$31 and the per month unbundled loop cost by \$0.76 (*Id.* at 39).

26 We believe that the HAI Model's MST function properly reflects legitimate network design  
27 inputs for modeling distribution plant. As Mr. Denney suggests, the surrogate customer location  
28 methodology employed by the MST is likely to overstate distribution requirements because the model

1 assumes a uniform spacing of customer locations along roads and does not recognize clusters of  
 2 customers that often exist in small towns (AT&T/WorldCom/XO Ex. 3, at 24). Therefore, contrary  
 3 to Qwest's assertions, we believe that the HAI model provides a reasonable estimate of the actual  
 4 distribution distances required and that the model produces sufficient distribution plant to serve  
 5 customers on a forward-looking basis.

6 **ix. Depreciation Values for Drops, NIDs and SAIs**

7 Qwest contends that the depreciation values used in the HAI model for serving area interfaces  
 8 ("SAIs"), network interface devices ("NIDs"), and drops are inappropriate because they are much  
 9 longer than those for comparable classes of outside plant (Qwest Ex. 29, at 61). Ms. Gude claims  
 10 that, although the HAI model appears to isolate investments associated with NIDs, SAIs, and drops,  
 11 the capital carrying costs for the investments should still reflect the depreciation parameters for the  
 12 proper investment accounts as they were authorized by the Commission in its most recent  
 13 depreciation order (Qwest Ex. 27, at 38). She asserts that the HAI model uses an adjusted  
 14 depreciation "projection life" of 19 years for NIDs, SAIs, and drops, rather than employing the  
 15 Commission's designated depreciation life and related "adjusted projection life" values of 11.21  
 16 years for 45C, Account 2423 – Buried Cable Metallic; 9.45 years for 52C, Account 2421 – Aerial  
 17 Cable Metallic; and 14.15 years for 5C – Account 2422 – Underground Cable Metallic. Ms. Gude  
 18 asserts that these substantial departures from Commission-approved depreciation rates in the HAI  
 19 model results in improper reductions to the interconnection and unbundled element cost outputs (*Id.*).

20 No party rebutted Qwest's proposed adjustments to these depreciation elements and, on brief,  
 21 the CLECs stated that they do not contest Qwest's proposed corrections (AT&T/XO Reply Brief at  
 22 21). We will, therefore, adopt Qwest's position on this issue and adjust the NID, SAI, and drop  
 23 depreciation parameters in accordance with Qwest's recommendation.

24 **x. Line Counts**

25 According to Qwest witness Fitzsimmons, the CLECs' HAI model continues to count many  
 26 digital access lines on an access line equivalent basis, thereby improperly reducing Qwest's costs on  
 27 a per line basis (Qwest ex. 29, at 40-41). Qwest claims that the issue raised is whether digital access  
 28 lines should be included in a cost study on a "channel equivalent" basis or on a "physical pair" basis.



1 Qwest contends that earlier versions of the HAI model treated digital access lines on a channel  
2 equivalent basis, resulting in DS1s being counted as 24 physical lines and DS3s counted as 672  
3 physical lines. Qwest states that, by treating DS1s and DS3s in this manner, the HAI model  
4 previously added thousands of "lines" over which the cost of loops was determined, thereby  
5 artificially reducing the per loop cost.

6 Qwest claims that the FCC and a number of other state commissions determined that access  
7 lines should be treated on a physical pair basis and, as a result, the proponents of the HAI model have  
8 attempted to treat access lines in this manner. However, according to Qwest, the problem has not  
9 been fully corrected by the HAI 5.2a model presented in this case because business access lines, such  
10 as provided by ISDN Primary Rate service, continue to be treated on a channel equivalent basis  
11 (Qwest Ex. 29, at 40-41). Qwest argues that there is no valid reason to treat access line counts  
12 differently and that, in fact, CLEC witness Denney agreed that treating business access lines on a pair  
13 equivalent would be consistent with his treatment of special access lines in the model (Tr. 1404-  
14 1408). Qwest contends that, if the Commission relies on the HAI model, Dr. Fitzsimmons'  
15 sensitivity analysis should be deployed thereby increasing the loop investment per line by \$16 and the  
16 per month loop cost by \$0.42 (Qwest Ex. 29, at 41).

17 The CLECs argue that, contrary to Qwest's assertions, the FCC's Synthesis Model has  
18 rejected Qwest's position and counts digital circuits on a channel basis in the same manner that the  
19 CLECs calculated them in this proceeding.<sup>10</sup> According to the CLECs, use of per channel line counts  
20 permits continued reliance on public information rather than on proprietary information that can be  
21 obtained only from Qwest. Indeed, the CLECs point out that Qwest's own proprietary line count  
22 information contained significant anomalies that Dr. Fitzsimmons was unable to explain on cross-  
23 examination (*See*, Tr. 1038-1041).

24 We agree with the CLECs that, whenever possible, it is important to rely on publicly available  
25 data and information. We are likewise concerned that Qwest's own witness was unable to explain  
26 why the line counts relied upon by Qwest contained numbers that Dr. Fitzsimmons was unable to  
27

28 <sup>10</sup> *Line Counts Order*, at 16; *Inputs Order*, ¶393.

1 reconcile with the number of digital facilities assumed by Qwest's calculations. Moreover, the FCC  
2 has not accepted the modifications recommended by Qwest. Accordingly, we find that Qwest has  
3 failed to sustain its burden of proof on this issue and we therefore reject Qwest's proposed  
4 modifications to the digital line counts assumed in the HAI model. We conclude that the CLECs'  
5 proposed input is reasonable and appropriate.

6 Having determined that digital circuits are properly calculated by the CLECs in this  
7 proceeding, we turn now to the question of determining line counts. The calculation used is, total  
8 loop investment divided by line count. According to Qwest witness Buckley, regardless of the model  
9 selected to estimate loop costs, it would be inappropriate to use loop investment data from one year  
10 and line count data from another year. The results of such a mismatch distort actual costs by either  
11 underestimating the cost of average lines or overestimating the cost of average lines. Either approach  
12 is clearly not in accordance with TELRIC.

13 According to AT&T witness Denney, Arizona is one of the fastest growing states in the  
14 nation, yet the HAI model relies on 1997 customer location data (which doesn't reflect 1997-2000  
15 growth) to determine total loop investment and *divides* that number by year 2000 line count (which is  
16 reflective of that growth). The result is that the line count used (year 2000) is higher than the 1997  
17 line count while the customer location data used (year 1997) to determine total loop investment is  
18 lower than the 2000 customer location data.

19 The CLECs' earlier, well-reasoned arguments that using Qwest's data to determine digital line  
20 counts would require an unreasonable reliance on proprietary data run counter to their position in this  
21 instance, where the vendor of the HAI model has refused to provide the customer location  
22 information relied upon in the HAI model. Thus the Commission cannot here determine the impact  
23 of using different years for different parts of the equation.

24 Accordingly, we agree with Qwest that in order to accurately reflect TELRIC, we must  
25 corroborate the data used in this equation by ensuring that both the denominator and the numerator  
26 reflect, as closely as possible, data from equivalent points in time, in this case, the year 2000.  
27 Therefore, we ordered Qwest to provide year 2000 customer location data within 30 days of the April  
28 11, 2002 Open Meeting. Qwest subsequently provided the 2000 customer location and line count

1 data, and the data was processed by TNS. On May 24, 2002, the results of the run of the HAI model  
2 using the 2000 customer information were filed. Accordingly, the 2000 customer data will be used to  
3 determine loop costs, as set forth in the May 24, 2002 filing.

4 **xi. General Support Assets**

5 “General support” costs refer to Qwest’s investment and expenses related to furniture, office  
6 equipment, general purpose computers, motor vehicles, garage work equipment, and other work  
7 equipment. Qwest argues that the HAI model artificially reduces these costs by over 50 percent by  
8 applying “allocators” to both estimated investment and expenses for these assets (Qwest Ex. 27, at  
9 43). Ms. Gude claims that the documentation supporting the HAI model provides no explanation for  
10 applying these allocators, which she claims reduces costs for investment and expenses by 50.33  
11 percent and 54.22 percent, respectively. Ms. Gude states that the HAI model’s reductions to these  
12 costs should be rejected by the Commission (*Id.*).

13 AT&T/XO argue that the HAI model properly allocates general support expenses between  
14 wholesale and retail. The CLECs claim that HAI reduces these expenses to recognize that they are  
15 incurred primarily for the benefit of Qwest’s retail operations. The CLECs contend that retail  
16 expenses must be excluded from the TELRIC model in accordance with FCC rules.<sup>11</sup> The CLECs  
17 assert that Qwest’s run of the HAI model which included all general support expenses, without a  
18 corresponding reduction for the furniture, office equipment, general purpose computers, and other  
19 equipment used by Qwest’s retail operations, was inappropriate.

20 We agree with the CLECs that it is improper for Qwest to include these general support  
21 expenses as part of the wholesale rate structure. Qwest’s inclusion of clearly retail expenses in its  
22 alternative model run is inconsistent with TELRIC principles and will be rejected. As the CLECs  
23 point out, the HAI model produces an allocation of such expenses between wholesale and retail costs.  
24 We will, therefore, adopt the CLECs’ position on this issue.

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<sup>11</sup> 47 C.F.R. §51.505(d).

1                    **xii.    Network Operations Expenses**

2            The network operations factor includes expenses associated with providing network  
3 administration, testing, plant operations, administration, and engineering. Qwest contends that the  
4 HAI model's default input for this factor assumes that Qwest could immediately cut its network  
5 operations expense in half in a forward-looking TELRIC environment (Qwest Ex. 29, at 55). Dr.  
6 Fitzsimmons testified that, if the Commission were to adopt the HAI model's network operations  
7 factor, it would send a message to Qwest that it needs to perform network operations functions with  
8 only 50 percent of the resources it uses currently. Dr. Fitzsimmons explained that, although network  
9 operations expenses declined between 1995 and 1997, since that time these expenses have remained  
10 relatively flat (*Id.* at 56-57). Qwest requests that the Commission reject the HAI model's 50 percent  
11 reduction assumption and reset the network operations expense factor to its year 2000 level.

12            The CLECs argue that the deployment of forward-looking technologies will necessarily lead  
13 to expense reductions. Therefore, the HAI model uses a network operations factor of 50 percent,  
14 applied to Qwest's Arizona actual network operations expenses, to recognize Mr. Denney's assertion  
15 that these expenses are incurred on an antiquated network (AT&T/WorldCom/XO Ex. 3, at 37-38).  
16 As an example, the CLECs claim that the deployment of SONET-based transport lessens the  
17 likelihood of outages, which in turn lessens network administration expenses. The CLECs further  
18 contend that retail expenses must be removed from Qwest's network operations expenses to develop  
19 appropriate TELRIC pricing. The CLECs claim that the per-line network operations expense factor  
20 developed by the HAI model in this docket is very close to the per-line expense developed by the  
21 FCC in its *Inputs Order* (Tr. 1440-1447). Accordingly, the CLECs assert that the HAI model's  
22 network operations expense reduction should be adopted by the Commission.

23            We do not believe that it is realistic to assume that Qwest's costs for this expense would be 50  
24 percent less, even under the application of a forward-looking TELRIC methodology. Although the  
25 CLECs contend that the HAI default results in a per-line factor that is close to the FCC's per-line  
26 expense, the CLECs' witness was not aware that the FCC also allocates an additional \$1.05 for  
27 special access (Tr. 1447-1448). We do not believe that the CLECs have adequately supported the  
28 HAI model's default factor that results in a 50 percent reduction to Qwest's actual Arizona network

1 operations expense. On the other hand, we agree with the CLECs that some recognition should be  
2 given to the likelihood that forward-looking technologies will ultimately reduce Qwest's network  
3 operations expenses. Accordingly, we will maintain the 85 percent factor adopted in the *First Cost*  
4 *Docket Order* (See, AT&T/WorldCom/XO Ex. 5, at 5). Adoption of the current 85 percent factor  
5 recognizes that forward-looking technologies will likely have an effect in reducing network  
6 operations expenses while, at the same time, not imposing on Qwest the unrealistic assumption that  
7 these expenses should be immediately reduced by 50 percent.

8 **b. Geographic Deaveraging**

9 In Phase I of this docket (Decision No. 63753), the Commission approved US West's  
10 proposed methodology for establishing three geographically deaveraged rates. We noted that,  
11 although the proposals advocated by Staff and AT&T reflected costs more accurately than US West,  
12 the Commission's retail rate setting policy also needed to be considered. We indicated that to do  
13 otherwise could result in retail rates that were not cost-based competing with wholesale rates that are  
14 cost-based. Accordingly, we approved US West's geographically deaveraged rates for UNEs of  
15 \$18.96 for the base rate area (which includes approximately 90 percent of access lines); \$34.94 for  
16 zone one; and \$56.73 for zone two (*Phase I Order*, at 5-7). Qwest's current statewide average loop  
17 rate is \$21.98. We also stated that these rates were interim, and subject to refund at the time  
18 permanent rates are established in Phase II, the proceeding that is the subject of this Decision (*Id.* at  
19 8).

20 In this docket, Qwest originally sought to deaverage loops by calculating loop costs at the  
21 wire center level and assigning wire centers to deaveraged zones based on costs. In response to  
22 AT&T/WorldCom/XO witness Denney's testimony, Qwest revised its recommendations and now  
23 proposes to deaverage loops by calculating loop costs at the wire center level and assigning wire  
24 centers to deaveraged zones using an optimization program proposed by Mr. Denney. This  
25 optimization program has been adopted in Washington and Minnesota (Qwest Ex. 18, at 57). Under  
26 its revised recommendation, Qwest proposes to group the two lowest cost wire centers in Arizona  
27 (Phoenix Main and Tempe) into Zone 1 and to use the deaveraging optimization program to  
28 determine the appropriate breaking point between Zones 2 and 3. Qwest's proposal results in the

1 following three-zone UNE rates: Zone 1 - \$16.89 (5.6 percent of access lines); Zone 2 - \$22.57 (63.1  
2 percent of access lines); and Zone 3 - \$34.34. (31.3 percent of access lines). Qwest's revised  
3 recommendation produces a statewide average loop rate of \$25.95 (*Id.* at 59).

4 As indicated above, the CLECs have proposed deaveraging unbundled analog and high-  
5 capacity loops on a wire center basis, and applying the optimization program that divides the Qwest  
6 wire centers into three groups based on the costs for serving loops within the wire center  
7 (AT&T/WorldCom/XO Ex. 3, at 44-49). The CLECs acknowledge that Qwest has revised its  
8 position and Qwest now agrees with the CLECs' methodology, including the optimization program.  
9 However, the CLECs argue that Qwest's analysis improperly applies the methodology by using  
10 results from Qwest's LoopMod model. The CLECs also criticize Qwest's recommendation because  
11 Qwest utilizes the AT&T optimization program for two of the three zones, but then develops a third  
12 by simply placing the two lowest cost wire centers into one zone. The CLECs claim that Qwest  
13 provided no rationale to support this approach and that it should be rejected by the Commission. The  
14 CLECs' proposed statewide average loop rate is \$10.11. This average is produced as a result of the  
15 following proposed CLEC zone structure: Zone 1 - \$7.34 (68.1 percent of access lines); Zone 2 -  
16 \$11.23 (24.6 percent of access lines); and Zone 3 - \$32.06 (7.3 percent of access lines).

17 Staff argues that its proposed statewide average loop rate of \$12.35 was derived from  
18 application of the HAI model as a starting point, along with input values recommended by Staff.  
19 Staff then recommends deaveraging the statewide average loop rate as follows: Zone 1 - \$9.93; Zone  
20 2 - \$14.60; and Zone 3 - \$35.41. Staff recommends using the same zone structure proposed by the  
21 CLECs (*i.e.*, 68.1 percent of access lines in Zone 1, 24.6 percent in Zone 2, and 7.3 percent in Zone  
22 3). Staff indicates that its proposed statewide average rate is very close to the proxy rate of \$12.85  
23 originally proposed by the FCC for Arizona in its *Local Competition Order*.<sup>12</sup> Staff's proposed  
24 deaveraging incorporates the CLECs' concept of minimizing the deviation between the average cost  
25 for a zone and the individual wire center costs in those zones (Staff Ex. 30, at 74). Mr. Dunkel  
26 testified that this program groups the wire centers so as to make as small a difference as possible

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28 <sup>12</sup> 47 C.F.R. §51.513.

1 between the cost of each wire center, and the average cost for the zone which includes that wire  
2 center. Mr. Dunkel stated that this procedure is less arbitrary than other methods that divide wire  
3 centers between zones (*Id.*). Staff compares Qwest's current loop rates (where approximately 90  
4 percent of access lines are in the base rate area at loop rate of \$18.96) with Qwest's proposal here  
5 (where only 5.6 percent of access lines are in the base rate area at a loop rate of \$16.89). Staff points  
6 out that Qwest's proposal in this docket results in a substantial rate increase for more than 80 percent  
7 of wholesale access lines. Accordingly, Staff recommends that the Commission reject Qwest's  
8 geographic deaveraging proposal.

9 As indicated in the *Phase I Order* (Decision No. 62753), the purpose of geographic  
10 deaveraging is to recognize "geographic cost differences" while "minimiz[ing] implicit subsidies"  
11 (*Id.* at 3). We also stated in that Decision that "Commission policy" must be considered "in setting  
12 geographic deaveraged UNE rates" (*Id.* at 5). As Staff points out, the best way to reflect geographic  
13 price differences is to group the majority of low-cost urban loops in Zone 1. Indeed, this is precisely  
14 what the Commission did, at the request of US West, in establishing the interim deaveraged rates  
15 with a Zone 1 that included approximately 90 percent of access lines (*Id.* at 3).

16 We agree with Staff and the CLECs that Qwest should not be permitted to adopt the  
17 optimization program utilized in Washington and Minnesota, on the one hand, and then apply the  
18 program only where it is beneficial to the Company. Under Qwest's recommendation, Zones 2 and 3  
19 would utilize the optimization program, while a Zone 1 is arbitrarily created by Qwest for the two  
20 lowest cost wire centers. These two wire centers would make up the entirety of Qwest's Zone 1, and  
21 would include only 5.6 percent of the Company's access lines. If, as Qwest concedes, the  
22 optimization program is a legitimate approach to deaveraging, it should be used across all zones and  
23 not simply to effect an increase for the vast majority of Qwest's wholesale access lines. Accordingly,  
24 we will adopt Staff's geographic deaveraging recommendation.

### 25 **III. NONRECURRING COSTS**

26 Nonrecurring costs are the one-time charges Qwest proposes to impose when a CLEC orders  
27 an unbundled element to allow the CLEC to serve its own retail customer. Qwest states that these  
28 costs usually arise from specific activities or transactions that Qwest performs to fill a CLEC order

1 for service or for a UNE. In this proceeding, Qwest has presented its Enhanced Nonrecurring Cost  
 2 Studies ("ENRC"), which is a collection of cost studies developed by Qwest to estimate the  
 3 nonrecurring TELRIC for UNEs and interconnection services (Qwest Ex. 16, at 26). Ms. Million  
 4 testified that the ENRC calculates nonrecurring costs for provisioning and installation activities based  
 5 on time estimates and probabilities of occurrence associated with performing the necessary tasks  
 6 (*Id.*). Ms. Million stated that the ENRC calculates the direct nonrecurring costs for each UNE and  
 7 interconnection service based on time estimates and labor rates associated with each job function.  
 8 The ENRC next applies expense factors to the direct nonrecurring costs to provide the TELRIC for  
 9 each UNE and interconnection service, followed by an allocation of common costs to each  
 10 nonrecurring cost element (*Id.* at 72).

11 According to Qwest, the studies used by the Company in this process are based on the actual  
 12 provisioning of services in place today, or scheduled to be implemented, and include charges  
 13 anticipated by subject matter experts. Ms. Million claims that component and placement prices  
 14 associated with these costs are taken directly from vendor quotes, and that the assumptions contained  
 15 in the cost studies are verified through discussions with these internal experts (*Id.* at 28).

16 According to the FCC's *Local Competition Order*, nonrecurring charges may pose barriers to  
 17 entry.<sup>13</sup> The CLECs assert that the FCC's rules require that nonrecurring charges must be developed  
 18 using the same TELRIC principles used in developing recurring rates, and that a state commission  
 19 may require an ILEC to recover nonrecurring costs through recurring charges in order to reduce  
 20 barriers to entry for competitive carriers.<sup>14</sup> The CLECs also point to this Commission's *First Cost*  
 21 *Docket Order*, wherein we stated that the proposed nonrecurring charges ("NRCs"), if approved,  
 22 "would act as barriers to competition,"<sup>15</sup> and that US West's proposed NRCs "could significantly  
 23 affect its [a CLEC's] ability to compete" (*Id.*). The Commission therefore approved, on an interim  
 24 basis, Qwest's tariffed retail charges for NRCs, less an 18 percent avoided cost discount (*Id.* at 28-  
 25 29). On review, however, the federal court for Arizona reversed and remanded the Commission's  
 26 decision on this issue, holding that the Commission "must price NRCs on the basis of forward-

27 <sup>13</sup> *Local Competition Order*, ¶¶747, 749.

28 <sup>14</sup> 47 U.S.C. §51.507(e).

<sup>15</sup> *First Cost Docket Order*, at 29.



1 looking costs without regard to the retail price.”<sup>16</sup>  
2 Qwest contends that, contrary to the CLECs’ assertions, it has presented in this case  
3 documentation that supports the times and probabilities, as well as labor rates, used in the Company’s  
4 nonrecurring cost studies (Qwest Ex. 18, at TKM-3R). Qwest also claims that its proposed NRC  
5 studies are forward-looking, as evidenced by its assumed flow-through rate of 85 percent for UNE-P  
6 products and a flow-through rate of 60 percent for most other loop products. Qwest disputes the  
7 CLECs’ contention that, for POTS loops, there can be a flow-through of 98 percent with no manual  
8 processing activity. Qwest argues that, in the real world, orders placed by CLECs often require some  
9 amount of manual processing.

10 Qwest also claims that the CLECs’ NRC model omits a number of nonrecurring costs that  
11 Qwest will incur to provide interconnection services and access to UNEs. For example, Qwest  
12 asserts that the CLEC’s NRC model does not produce any nonrecurring costs or rates for entrance  
13 facilities, DS1 and DS3 trunk rearrangements, DS1 and DS3 channel regeneration, and loop  
14 installations. In addition, Qwest contends that the CLECs’ NRC model fails to include any costs  
15 associated with Qwest’s interconnect service center (“ISC”). The personnel at Qwest’s ISC perform  
16 tasks necessary to process CLEC UNE orders, including the provision of corrective measures for  
17 orders that are submitted incorrectly and do not “flow-through” automatically. According to Qwest,  
18 it is unreasonable to assume that the activities performed by the ISC would never be required and that  
19 no human interaction would ever be required to process orders. Qwest also criticizes the CLEC’s  
20 NRC model because it assumes that certain nonrecurring costs will be recovered through recurring  
21 rates. Qwest claims that the CLECs’ exclusion of these costs leaves a gap between the costs Qwest  
22 recovers in its recurring rates and the activities the Company performs to accommodate CLEC orders  
23 and provisioning.

24 The CLECs take a different approach to the determination of nonrecurring costs. The CLECs’  
25 nonrecurring cost model assumes that manual processing of orders will be kept to a minimum by the  
26 implementation of forward-looking OSS systems (AT&T/WorldCom/XO Ex. 6, at THW-14). The  
27

28 <sup>16</sup> *US West Communications v. Jennings*, 46 F. Supp 2d 1004, 1013 (D. Ariz. 1999).

1 CLECs cite to a decision by an ALJ at the Minnesota Commission wherein the same model proposed  
2 by the CLECs in this case was adopted on the basis that it reflected what would be experienced in a  
3 forward-looking environment.<sup>17</sup>

4 The CLECs argue that Qwest's NRC studies simply take a list of tasks Qwest claims will be  
5 necessary to establish each service, multiplied by an estimate of the probability that the task will be  
6 performed and by Qwest's labor rates. The CLECs contend that Qwest's studies are derived from  
7 estimates provided by the Company's subject matter experts based on Qwest's current OSS systems.  
8 The CLECs claim that Qwest has failed to take into consideration the efficiencies that forward-  
9 looking OSS systems achieve. The CLECs also claim that the Minnesota Commission, in the same  
10 decision cited above, rejected Qwest's NRC studies on the basis that they did not include forward-  
11 looking assumptions (*Minnesota Report*, ¶285).

12 The CLECs are also critical of Qwest's proposed imposition of both connection charges and  
13 disconnection charges at the time a CLEC orders an unbundled element. According to the CLECs, in  
14 most circumstances where Qwest is providing UNEs there is no basis for imposing a disconnection  
15 charge because most often there is no need to disconnect elements when service by a new entrant is  
16 terminated.

17 As an example of the alleged unreasonableness of Qwest's proposed NRCs, the CLECs point  
18 to Qwest's installation charges for UNE analog loops, which range from \$88.29 to \$232.25,  
19 compared with Qwest's own nonrecurring charges for basic service installation to retail customers of  
20 \$35.00 for residential customers and \$56.00 for flat-rate business customers. The CLECs assert that  
21 this wide disparity between such inappropriate and unsupportable wholesale prices and the  
22 corresponding retail prices will necessarily result in a "barrier to competition." The CLECs complain  
23 that Qwest supports these prices by assuming significant manual intervention is required to process  
24 and provision unbundled loops. The CLECs criticize Qwest's Interconnect Service Center because  
25 Qwest assumes, for example, that the ISC will be required to manually process 15 percent of all

26  
27 <sup>17</sup> *In the Matter of a Generic Investigation of US Qwest Communications, Inc.'s Cost of Providing Interconnection*  
28 *and Unbundled Network Elements*, OAH Docket No. 12-2500-10956-2, Report of the Administrative Law Judge  
(November 17, 1998) at ¶285 ("*Minnesota Report*"). The Minnesota Public Utilities Commission affirmed the ALJ's  
decision by Order issued May 3, 1999.

1 unbundled loop orders that are received electronically. The CLECs contend that their NRC model  
2 more appropriately assumes that, in a forward-looking environment, there will be minimal manual  
3 interaction needed to process CLEC orders.

4 For high capacity loops, the CLECs claim that Qwest's NRC assumptions are even more  
5 egregious. Qwest proposes installation charges for these services ranging from \$144.15 for basic  
6 installation to more than \$300 for coordinated installation and testing. The CLECs assert that it is  
7 unreasonable for Qwest to assume that all high capacity loop orders will be reviewed by the Qwest  
8 ISC because such an assumption discriminates against new entrants. The CLECs claim that, in a  
9 forward-looking system, a CLEC would be able to place orders directly to Qwest's OSS without  
10 manual intervention.

11 As WorldCom, AT&T and XO's witness Lathrop testified, "[a] typical NRC study includes  
12 the specification of tasks that must be performed manually, the amount of time required to perform  
13 the tasks, the frequency with which the tasks must be performed, and the hourly labor cost of the  
14 personnel performing the task. With forward-looking OSS operating in an efficient fashion, manual  
15 activities for pre-ordering, ordering and provisioning should be very infrequent. Thus, NRCs are, as  
16 witness Lathrop described, "the sum of, for all steps required, the time required to complete each  
17 step, multiplied by the frequency with which that step must be taken, multiplied by the labor cost of  
18 any manual activity required to complete that step." Qwest's studies fail to recognize efficiencies  
19 that would likely be realized with a fully mechanized OSS system.

20 For example, the Qwest studies that developed these costs show that currently manual  
21 processing is often required to provision a CLEC UNE order. Qwest witness Million testified that  
22 while recent data showed 24 percent of CLEC orders required manual intervention, 85 to 95 percent  
23 of orders in a forward-looking system would be processed without the need for manual intervention.  
24 The HAI model, on the other hand, assumes that manual processing will occur less than 2 percent of  
25 the time in a forward-looking environment. CLEC witness Lathrop testified that "[m]any of the  
26 major inputs to the model, such as travel time, are made user-adjustable." While we believe that the  
27 CLEC-sponsored NRC model generally recognizes the efficiencies that will occur in a forward-  
28 looking network and we will adopt the CLEC model in this proceeding, we will adopt Staff's

1 recommended costs and charges, as stated in its rebuttal testimony, for the following: basic loop  
2 installation, coordinated loop installations with or without testing and the provision of the UNE  
3 platform over lines not currently in use.

4 **A. Specific NonRecurring Cost Issues**

5 **1. Access to Conduits**

6 Another issue raised by Qwest's nonrecurring cost studies relates to access to conduits.  
7 Qwest's NRCs include proposed charges for this service requested by CLECs. Although the CLECs'  
8 NRC study does not develop costs for this element, the CLECs claim that Qwest's proposed charges  
9 for this item are unsupported and should be rejected.

10 As an example, the CLECs point to Qwest's proposed charge for "field verification for  
11 conduit occupancy," which would impose a charge for inspecting each manhole along the proposed  
12 route to ensure that sufficient space is available to accommodate the CLECs' fiber. The CLECs  
13 contend that no such activity should be necessary because Qwest can review its existing records for  
14 such information. In addition, the CLECs claim that Qwest is compensated for the records review  
15 through a separate conduit occupancy inquiry fee.

16 The CLECs argue that, even if it were appropriate for Qwest to assess a field verification  
17 charge, the proposed fee of \$450 per manhole is excessive. The CLECs claim that this charge  
18 assumes that more than 6.5 hours will be required to enter each manhole to determine whether spare  
19 conduit exists. According to the CLECs, this task should take no more than 2 hours to perform. The  
20 CLECs contend that, in any event, Qwest has not produced evidence that it actually performs the  
21 verifications for which it proposes to charge CLECs.

22 Qwest asserts that it has presented documentation that supports the times and probabilities  
23 used in its nonrecurring studies (Qwest Ex. 18, TKM-3R). Qwest claims that the submitted  
24 documentation includes assumptions that underlie the studies and memoranda from subject matter  
25 experts. Qwest contends that, while the CLECs challenged some of the work times used in Qwest's  
26 studies, they did not challenge many others. Qwest states that the absence of challenges to many of  
27 the assumptions in Qwest's studies in effect validates those assumptions.

28

1 We agree with the CLECs that Qwest's underlying assumptions for this charge appear to be  
2 excessive. A charge of \$450 for Qwest to discover whether its own network has sufficient space  
3 available to serve CLECs is not appropriate in a forward-looking environment and will contribute to  
4 erecting barriers to competition. We believe that, in a TELRIC model, it should be assumed that  
5 Qwest has sufficient information available to verify whether conduit is available to accommodate  
6 CLEC cable requirements.

7 However, if we assume that some facilities verification activity is necessary, a significantly  
8 reduced charge should be assessed. CLEC witness Knowles testified that Qwest does not inspect  
9 every manhole along the proposed CLEC route but, instead, inspects only the manholes on either end  
10 of the route (AT&T/WorldCom/XO Ex. 12, at 18). Therefore, we will reduce Qwest's charges for  
11 conduit occupancy verification to no more than two hours of engineering time, and the charge should  
12 apply to no more than half of the manholes along the conduit route requested by the CLEC.

## 13 2. Loop Conditioning

14 ILECs, including Qwest, have in the past installed devices such as "load coils" and "bridge  
15 taps" on longer loops to ensure an adequate quality signal for voice communications. Digital services  
16 such as DSL will not function over a loop with load coils and bridge taps and such devices must,  
17 therefore, be removed prior to provisioning digital services over the loop. This removal process is  
18 referred to as "loop conditioning." Qwest contends that, if a CLEC requests that load coils and  
19 bridge taps be removed in order to serve a migrating customer, Qwest should be entitled to recover  
20 the costs incurred in removing the devices. Qwest has proposed a nonrecurring charge of \$652.83 for  
21 loop conditioning, whether the CLEC orders 1 or 25 conditioned loops at a given location (Qwest Ex.  
22 18, at 11; Attach. TKM-01R, at 8).

23 The CLECs argue that there is no basis for a loop conditioning charge because bridge taps and  
24 load coils are not placed in a forward-looking network and, therefore, Qwest should not be permitted  
25 to charge CLECs to bring its network up to standards necessary to provide advanced services. The  
26 CLECs also contend that such costs may already be recovered in Qwest's recurring rates, thereby  
27 raising the possibility of double recovery with the imposition of a nonrecurring charge for loop  
28 conditioning (AT&T/WorldCom Ex. 14, at 21-23). The CLECs claim that, even if the Commission

1 were to impose a loop conditioning charge, Qwest's proposal is excessive. The CLECs point out that  
 2 the Commission, in Decision No. 60635 (at pages 26-27), found Qwest's proposed loop conditioning  
 3 charge of \$557.12 was "significantly overstated." Finally, the CLECs assert that Qwest has failed to  
 4 support its estimated charges for deloading the loops. They claim that Qwest's proposal is a barrier  
 5 to entry for competitors and should be rejected.

6 Staff and Sprint concede that Qwest should be permitted to recover a fee for load coil and  
 7 bridge tap removal. However, both Staff and Sprint agree that Qwest's proposed charge is excessive.  
 8 Sprint witness Farrar testified that in North Carolina, where Sprint operates as an ILEC, its cost study  
 9 produced a cost for loop conditioning of less than \$40 for loops under 18,000 feet and \$64.28 for  
 10 loops greater than 18,000 feet. Mr. Farrar stated that Qwest's proposed loop conditioning costs are  
 11 overstated because the Qwest study contains excessive engineering and work time, Qwest fails to  
 12 recognize the lower incremental cost of performing additional unloadings at the same time and  
 13 location, and Qwest's studies include excessive allocations of shared and common costs (Sprint Ex.  
 14 2, at 11-14).

15 Staff witness Dunkel agreed with Sprint that Qwest's proposed conditioning charges are  
 16 excessive. Mr. Dunkel stated that it is not efficient for Qwest to send a person out to unload a single  
 17 loop at a time. Mr. Dunkel proposed a rate of \$40 per loop to remove load coils or bridge taps under  
 18 18,000 feet; \$70 per location for aerial and buried loops over 18,000 feet; and \$400 per location for  
 19 underground loops. For loops over 18,000 feet, Mr. Dunkel would also impose a \$2 charge for each  
 20 additional coil or tap at the same time, location, and cable (Staff Ex. 30, at 51-52; Sched. WD-8).

21 The FCC has stated that an ILEC has the right to recover costs associated with conditioning  
 22 existing loops. When a CLEC seeks to provide digital loop functionality, such as DSL, the ILEC  
 23 must condition the loop to permit the transmission of digital signals if it is technically feasible to do  
 24 so. The requesting CLEC must, however, "bear the cost of compensating the incumbent ILEC for  
 25 such conditioning."<sup>18</sup> We agree that Qwest is entitled to compensation for conditioning a loop under  
 26 the circumstances described in the FCC's Order. However, as we indicated in Decision No. 60635,  
 27

28 <sup>18</sup> *First Report and Order*, ¶682.

1 Qwest's proposed conditioning cost is "significantly overstated." We believe that Staff witness  
2 Dunkel's proposal will appropriately compensate Qwest for its loop conditioning costs when an  
3 unbundled loop is requested by a CLEC. As indicated by Staff and Sprint, it is not reasonable for  
4 Qwest to assume that only a single loop will be unloaded when a technician is sent to provision the  
5 CLEC's order. Rather, an efficient provider should unload the entire binder group when the binder is  
6 opened by the technician and, accordingly, the costs associated with performing the conditioning  
7 function will be spread over a greater number of loops than the single loop assumed by Qwest. We  
8 believe Staff's proposal fairly recognizes the costs incurred by Qwest and we, therefore, adopt Staff's  
9 position on this issue.

#### 10 IV. COLLOCATION

11 Collocation in a Qwest central office is the means by which CLECs are able to place their  
12 telecommunications equipment for purposes of interconnecting to Qwest's network and purchasing  
13 UNEs from Qwest. In order to collocate within Qwest's central office, CLECs are assessed charges  
14 for costs incurred by Qwest to provide the necessary space. In a physical collocation arrangement,  
15 the CLEC pays the ILEC for the use of the central office space and is permitted to enter the central  
16 office to install, maintain and repair collocated equipment (AT&T/WorldCom/XO Ex. 13, at 22).

17 Qwest's collocation cost estimates are based on the Company's analysis of 41 cageless  
18 collocation jobs that were performed by Qwest. According to Qwest witness Fleming, Qwest  
19 assembled averages of the cost of all the tasks needed to install collocation sites, after removing the  
20 jobs with the highest and lowest costs. The tasks necessary for installing a collocation site include  
21 engineering, installing HVAC ductwork and cable racking, and running power cables to the  
22 collocated equipment. Where necessary, Qwest made additional adjustments to the cost data from  
23 the cageless jobs to include costs for caged jobs (Qwest Ex. 8, at 53). Qwest claims that because  
24 demand for collocation has fluctuated in its service areas, the Company assumed that outside  
25 contractors would be used for a substantial portion of the collocation preparation work. Qwest's  
26 study assumed the use of 50 percent outside vendor installations and 50 percent internally installed  
27 sites by Qwest employees.

28

1       The CLECs contend that Qwest's collocation study produces inflated costs because none of the  
2 41 jobs in the study were located in Arizona central offices. AT&T/WorldCom/XO witness Rex  
3 Knowles stated that Qwest's study is also unreliable because all of the jobs were for cageless  
4 collocation and thus cannot be used to support the Company's cost estimates for entrance facilities or  
5 cage construction (AT&T/WorldCom/XO Ex. 11, at 4.). WorldCom also criticizes Qwest's studies  
6 because they are based on the current office technology, rather than being forward-looking. As an  
7 example, WorldCom argues that Qwest's existing central offices accommodate new technologies by  
8 adding floors or extending buildings horizontally, rather than using forward-looking strategies that  
9 minimize the overall, long-term requirement for equipment space (AT&T/WorldCom/XO Ex. 13, at  
10 27). According to WorldCom, these practices result in central offices that have congested cable  
11 racking and require cable lengths for CLECs that are longer than necessary (*Id.*). WorldCom asserts  
12 that a forward-looking central office would be fully air-conditioned and would be prepared to accept  
13 CLEC telecommunications equipment, thereby eliminating the need for additional space preparation  
14 or conditioning. WorldCom is also critical of Qwest's studies based on 41 cageless collocation jobs  
15 because the invoices from the jobs lack the detail necessary to determine the reasonableness of the  
16 costs.

17       Staff criticized Qwest's collocation study for being unrepresentative of Qwest's actual  
18 experiences for collocation installations. Staff claims that Qwest's study should reflect the fact that  
19 the majority of Qwest's collocation installations are performed by Qwest's own personnel, at a cost  
20 that is much less than that required for the outside vendors included in Qwest's study. Staff points  
21 out that in the year 2000, Qwest's internal installation affiliate, QTI, completed 79 percent of the  
22 collocation jobs in Arizona, while only 21 percent of the jobs were performed by outside vendors  
23 (Staff Ex. 11). For the year 2001 in Arizona (as of July), 83 percent of the collocation jobs were  
24 performed by QTI and 17 percent by outside vendors (*Id.*). Despite these actual experiences, Qwest  
25 continues to maintain that the 41 jobs it relied upon in its study are reflective of the Company's actual  
26 collocation costs.

27       We agree with Staff and the CLECs that Qwest's allegedly "actual" collocation costs are not  
28 representative for purposes of establishing TELRIC-based costs in this proceeding. Contrary to



1 Qwest's claims, the 41 collocation jobs relied upon in its cost study do not reflect its actual  
2 experience, especially in Arizona. Accordingly, we find that Staff's calculation using 80 percent  
3 labor provided by QTI and 20 percent provided by contract labor is consistent with Qwest's  
4 experiences in Arizona, and with a forward-looking network, and should be adopted in this case.

5 Each of the specific price elements associated with Qwest's other proposed collocation rates is  
6 addressed below.

7 **A. Specific Collocation Costs**

8 **1. Entrance Facilities**

9 Entrance facilities refer to the fiber connectivity between the first manhole outside the ILEC's  
10 central office and the CLEC's equipment (AT&T/WorldCom/XO Ex. 13, at 23). Qwest initially  
11 assumed that a separate utility hole dedicated to collocation would be placed outside of every central  
12 office. Qwest later revised its studies to assume that a separate collocation manhole would be needed  
13 only when network congestion requires a separate facility, which the Company estimates will be 10  
14 percent of the time (Qwest Ex. 8, at 31-32).

15 The CLECs argue that Qwest's revised assumption remains unsupported and therefore a zero  
16 percent assumption of separate manholes should be used by Qwest for collocation purposes.  
17 WorldCom also contends that Qwest overestimated the total demand for cable racking because Qwest  
18 ignores the fact that CLEC cables share cable racking with Qwest cables, especially when they share  
19 the same manholes. WorldCom further asserts that Qwest's studies assume that the manholes,  
20 conduit, and cable racking will be dedicated to the use of only three CLECs, rather than being shared  
21 with additional CLECs and Qwest. WorldCom claims that all of these deficiencies in Qwest's  
22 studies cause the Company's studies to result in excessive costs.

23 We agree with WorldCom that Qwest has not adequately supported its claims on this issue. In  
24 a forward-looking environment, Qwest should assume that an entrance enclosure is part of the  
25 Company's central office that is shared by all occupants and not just collocators. Further, Qwest  
26 should not assume that cable racking is used exclusively by collocators but, rather, that CLEC cables  
27 share cable racking and support with Qwest's cables. For these reasons, we will adopt the CLECs'  
28 position on this issue.

1           **2.     Quote Preparation Fee**

2           When a CLEC inquires about available collocation in a central office, Qwest assesses the  
3 CLEC a "quote preparation fee" which is a "non-refundable, non-recurring charge for the work  
4 required to verify space, power, cable terminations, review design requested, and develop a price  
5 quote for the total costs to the CLEC" (Qwest Ex. 5, at 18). As a result of the prior wholesale cost  
6 docket (Decision No. 60635), Qwest was authorized to charge a \$1,381.54 quote preparation fee to  
7 perform these services (AT&T/WorldCom/XO Ex. 13, at 43). In this case, Qwest's proposed quote  
8 preparation fee has more than tripled to \$4,763.06 for caged collocation and \$4,380.68 for cageless or  
9 virtual collocation (*Id.*).

10           Qwest argues that its quote preparation fee is based on time estimates of Qwest personnel  
11 involved in processing the quotes. The Company states that each task was identified and assigned  
12 time requirements, with appropriate labor rates applied to the time requirements. Qwest claims that  
13 the quote preparation fee is necessary to guard against cancellations of collocation orders. In order to  
14 accomplish this goal, Qwest proposes to credit the quote preparation fee against the space  
15 construction charge once the CLEC proceeds with the collocation job (Qwest Ex. 7, at 7).

16           As WorldCom points out, the document supporting the proposed quote preparation fee  
17 includes a number of items that, on their face, appear unreasonable (WorldCom, Ex. 7). For  
18 example, the quote preparation fee includes, among other things, one hour for making copies, one  
19 hour for preparing a form letter, and multiple hours for preparing a chart (*Id.*). Based on the record,  
20 we believe that Qwest should maintain its quote preparation fee at its current rate of \$1,381.54, and  
21 should credit the fees against the space construction charge if the CLEC proceeds with the collocation  
22 job.

23           WorldCom also requests that a separate "augment" fee should be identified by Qwest for  
24 collocation requests that seek only to add power to connectivity cabling to an existing collocation  
25 arrangement. As explained by Mr. Lathrop, such requests do not require the same extent of  
26 information verification or design review and, therefore, a separate reduced charge should apply. We  
27 agree with WorldCom that requests for collocation "augments" should have a separate reduced price.  
28 Qwest's rate for this service should be no more than \$345, or approximately one-fourth of the price

1 established for the full quote preparation fee for new collocation requests.

2 **3. Engineering Costs**

3 Qwest also assesses charges for collocation engineering tasks. For caged and cageless  
4 collocation, the engineering charges are based on an average from the 41 least expensive jobs  
5 (AT&T/WorldCom/XO Ex. 13, at 44-45). Qwest claims that these engineering costs amount to  
6 approximately \$10,000 (*Id.* at 2). Qwest contends that its engineering charges are unfairly criticized  
7 by the CLECs and Staff. Qwest claims that the costs are derived from estimates by experienced  
8 subject matter experts who have been involved in provisioning numerous collocation and similar  
9 central office jobs (Qwest Ex. 8, Attach. 6).

10 WorldCom claims that Qwest's documentation does not support its proposed engineering  
11 charges. WorldCom asserts that Qwest's engineering costs included within the space construction  
12 charge are unreasonably high and should not exceed \$2,000. Although Qwest claims that the  
13 engineering costs were derived from its actual costs in the collocation model, Mr. Knowles testified  
14 that Qwest simply averaged the costs for engineering from its 41-job study, but did not provide  
15 documentary support for how the costs were incurred. Mr. Knowles also noted that Qwest's  
16 proposed engineering costs are several times higher than the collocation engineering rate of \$1,129  
17 that Verizon charges in Washington (AT&T/WorldCom/XO Ex. 11, at 12).

18 We agree with the CLECs that Qwest's proposed engineering charges for collocation requests  
19 appear to be excessive. Mr. Lathrop testified that Qwest's claimed engineering costs are not  
20 specifically supported on a per-activity basis and that Qwest's charges for engineering are inefficient  
21 because they assume that caged and cageless collocation arrangements will be engineered one job at a  
22 time rather taking into account efficiencies that are likely to occur as Qwest gains experience  
23 (AT&T/WorldCom/XO Ex. 13, at 45-46). Although Qwest discounts the relevance of comparisons  
24 to other states, we believe that the engineering costs identified in Washington, which are many times  
25 less than those proposed by Qwest in this docket, warrant some consideration as a check on the  
26 reasonableness of Qwest's charges. We will, therefore, adopt Mr. Lathrop's recommendation to  
27 reduce Qwest's proposed collocation engineering charge by one-half. We believe that adoption of  
28 this recommendation allows Qwest to recover a reasonable amount for costs associated with these

1 engineering activities.

2 **4. Floor Space Rental Cost**

3 Qwest also proposes to assess collocators a charge of \$3.96 per square foot for floor space  
4 rental. In developing this cost, Qwest used the *RS Means Construction Cost Data Book*, a text widely  
5 used in the construction industry for estimating costs. Qwest used the median value from *RS Means*  
6 and added costs for architectural fees, land costs, site work, landscaping, and Qwest's project  
7 management. Mr. Lathrop stated that these additional costs account for almost 30 percent of the total  
8 investment developed by Qwest (AT&T/WorldCom/XO Ex. 13, at 48).

9 WorldCom argues that, although *RS Means* states it does not *generally* include architectural  
10 costs, land costs, or site work, Qwest has improperly assumed that *RS Means never* includes such  
11 costs (*Id.*). WorldCom recommends that Qwest's proposed per foot space rental charge should be  
12 reduced by 10 percent to account for potential double counting of these costs. Mr. Lathrop also  
13 asserts that Qwest failed to justify why it changed from a three-zone rate structure proposed in the  
14 last cost docket, ranging from \$2.06 to \$2.75 per square foot, to one-zone structure in this case at a  
15 rate of \$3.96.

16 Qwest claims that no duplication of charges is contained in its proposed floor space rental  
17 charge. According to Mr. Fleming, Qwest affirmed that *RS Means* provides legitimate cost  
18 information and, ultimately, made adjustments to remove duplicative costs from the floor space rental  
19 fee (Tr. 435-437).

20 We do not believe that Qwest has provided adequate justification for the significant increase  
21 in floor space rental cost from the last cost docket, which was conducted only three years ago.  
22 Although Qwest contends that its proposed charge is based on objective cost criteria, it is not clear  
23 that all duplicative costs for HVAC, electrical, architectural fees, land costs, site work, landscaping,  
24 and Qwest project management were removed from its proposed charge. Accordingly, we will adopt  
25 WorldCom's recommendation to reduce Qwest's proposed floor space rental charge by 10 percent to  
26 account for duplicative costs and to keep the cost closer to the amount that was approved less than  
27 three years ago. Qwest should adjust its collocation floor space rental charge to no more than \$3.56  
28 per square foot.

1           **5.     Power Costs**

2           Qwest proposes to charge collocators \$15.05 or \$18.73 per amp, in addition to the power  
3 cabling charges (see discussion below), depending on whether the usage is less than 60 amps or  
4 greater than 60 amps (WorldCom Ex. 1, §8.1.3). Qwest's power usage charge includes the cost of  
5 purchasing power from the electric company and the cost of the power plant and maintenance to  
6 provide power to the CLEC equipment (Qwest Ex. 16, Attach. TRM-06, page A-10).

7           Mr. Lathrop stated that Qwest's proposal is excessive, given that Qwest's FCC power charges  
8 range from \$8.70 to \$12.66 in Arizona and that, generally, other ILEC power charges are less than  
9 \$10.00 per amp (AT&T/WorldCom/XO Ex. 13, at 56). Mr. Lathrop testified that Qwest did not  
10 provide sufficient information to determine whether the proposed power investments are  
11 representative of power plants that would be installed in the Company's Arizona central offices. Mr.  
12 Lathrop recommends that, given the range of central office sizes, it would be more appropriate to  
13 develop an average of the investments for different sized central offices (*Id.* at 57).

14           Qwest argues that WorldCom's comparisons have different structures and vintages and are  
15 not appropriate for comparison. Qwest claims that its FCC tariff for virtual collocation relies on a  
16 completely different power charge system. Qwest contends that some other ILECs charge for "fused  
17 amps," which are up to 100 percent higher than the "amps-used" number charged by Qwest.

18           On August 16, 2001, Sprint filed a Motion to Strike certain testimony that had been admitted  
19 during the hearing due to alleged inconsistencies between Qwest witness Fleming's testimony and  
20 Qwest's actual practices. Attached to the motion was an affidavit of David Stahly that Sprint  
21 requested be admitted in the event that the Commission denies the Motion to Strike<sup>19</sup>. Sprint claims  
22 that Mr. Fleming erroneously indicated that Qwest bills CLECs for actual power usage over 60 amps  
23 because, according to Mr. Stahly's affidavit, Qwest does not measure power usage at any level.  
24 Sprint contends that Qwest charges CLECs per amp ordered regardless of whether the CLEC's power  
25 cable is fed from the central office's power board or the battery distribution fuse board ("BDFB").

26 \_\_\_\_\_  
27 <sup>19</sup> Qwest filed a response to the motion on September 6, 2001 opposing Sprint's request to strike Mr. Fleming's  
28 testimony, but agreeing that Mr. Stahly's affidavit may be admitted into the record. Based on Qwest's response, Sprint  
withdrew its Motion to Strike on the condition that the Commission admits Mr. Stahly's affidavit. Since admission of the  
affidavit is not opposed by Qwest, we shall admit it into the record of this proceeding.

1 Qwest argues on brief that Sprint misunderstood Mr. Fleming's testimony and is confused  
2 about the difference between fused amps and load amps. According to Qwest, it bills for load amps  
3 which can be more than the amount actually used, but corresponds to the amount ordered. Fused  
4 amps, on the other hand, reflect the maximum capacity of the cabling, which usually exceeds the load  
5 amps by 50 percent. Qwest claims that it does not bill for fused amps or redundant feeds and that,  
6 although Sprint's bills may not reflect the new collocation rate structure, Sprint can opt into the new  
7 system if it is approved by the Commission.

8 We agree with Qwest that WorldCom's comparisons are not appropriate in this instance.  
9 Although Qwest's proposed power costs exceed the rates cited by WorldCom, Qwest explained the  
10 reasons why the comparisons are not valid. Therefore, we will adopt Qwest's proposed power costs.  
11 As a final matter, we note that Qwest agreed during the hearing to remove the cost of the BDFB<sup>20</sup>  
12 from the per amp cost developed for power fees in excess of 60 amps (Tr. 386-387). With respect to  
13 Sprint's issue, we believe Qwest has adequately explained how it intends to bill CLECs for power  
14 costs. Therefore, Qwest's proposal on this issue is adopted.

#### 15 **6. Power Cabling Costs**

16 WorldCom also believes that Qwest's proposed costs for power and grounding cable are  
17 excessive. WorldCom asserts that the industry guides, *RS Means* and *Cobra Wire & Cable*, show  
18 material costs ranging from several percent less for power cable to 10 to 15 percent less than Qwest's  
19 proposals for grounding cable (Tr. 711-714; World Com Exs. 9 and 10). WorldCom contends that  
20 Qwest's cost study shows the actual Phoenix cost for ground wire was below the average but Qwest  
21 chose to use the average cost, thereby increasing the cost for Arizona CLECs. WorldCom  
22 recommends that the Commission adopt an average of the two quotes using the industry guides for  
23 power and grounding cable costs. WorldCom claims that such an approach is reasonable given the  
24 probability that Qwest's costs are even lower due to the Company's ability to negotiate volume  
25 discounts (AT&T/WorldCom/XO Ex. 13, at 58-59).

26  
27  
28 <sup>20</sup> The battery distribution fuse board is essentially an intermediate circuit breaker, for runs of 60 amps or less  
(AT&T/WorldCom/XO Ex. 11, at 10).

1 WorldCom also argues that Qwest's power cable lengths are overstated and inconsistent.  
2 WorldCom claims that, according to Qwest witness Fleming, the average cable length in Arizona is  
3 177 feet (Qwest Ex. 8 at 31). WorldCom points out that in Qwest's space rent study, using a typical  
4 central office, Qwest only includes 70 feet as a standard length for cabling (WorldCom Ex 6, App. At  
5 1). WorldCom recommends, therefore, that the lower number used in the space rent study should be  
6 used in this proceeding.

7 Qwest argues that WorldCom has misconstrued the data and that the data Qwest relies upon  
8 was taken directly from the 41 jobs in Qwest's study. According to Qwest, the costs contained in the  
9 *RS Means* and *Cobra Cable & Wireless* manuals are not necessarily reflective of rates in Arizona.  
10 Mr. Fleming testified that actual costs of the cables used in constructing a particular facility is a better  
11 gauge of costs than a price list in a manual (Qwest Ex. 8, at 78). Mr. Fleming also disagreed with  
12 WorldCom's assertions regarding cable lengths. Mr. Fleming stated that the average length of cables  
13 in Arizona running directly to the power board is 177 feet and the average cable length running to a  
14 BDFB is 80 feet. He indicated that, because the average lengths used in Qwest's model are 183 feet  
15 and 83 feet, respectively, the model's results are reasonably reflective of actual results in Arizona (*Id.*  
16 at 79).

17 We agree with WorldCom that an average of the *RS Means* and *Cobra Cable & Wireless*  
18 manuals is a more appropriate measure of proper cabling costs, especially since Qwest's estimates are  
19 not Arizona specific but were developed based on a sample of five non-Arizona central offices.  
20 Although the cost manuals cited by WorldCom are not specific to Arizona, they provide an objective  
21 measure of costs for cabling. As recommended by Mr. Lathrop, Qwest should use an average of the  
22 *RS Means* and *Cobra Cable & Wireless* manuals for calculating power cabling costs.

### 23 7. Fencing Costs

24 WorldCom argues that the fencing component of the standard space construction charge for  
25 caged collocation is overstated. According to Mr. Lathrop, Qwest used a multi-state average for  
26 developing fencing costs, despite the fact that the Arizona specific costs in the study are significantly  
27 less than the average (AT&T/WorldCom/XO Ex. 13, at 31-32). WorldCom also claims that the cage  
28 costs contained in the Qwest rent study (WorldCom Ex. 6) are derived from the *RS Means* cost

1 manual and include 16 percent for general overhead profit, 13 percent for consulting fees, and 5  
2 percent for real estate project management. WorldCom points out that, despite these significant  
3 additional costs, the *RS Means* costs are approximately one-half the costs used by Qwest in its cost  
4 study (AT&T/WorldCom/XO Ex. 13, at 53; WorldCom Ex. 8). WorldCom requests that the  
5 Commission use the *RS Means* data for determining Qwest's caged fencing costs.

6 We agree that, for caged collocation fencing costs, Qwest should use the *RS Means* cost  
7 guidelines identified in Mr. Lathrop's testimony. As Mr. Lathrop indicated, Qwest's cage  
8 construction estimates are based on an average of quotes obtained from 13 vendors, but no evidence  
9 was presented to verify whether these quotes took into account cost reductions related to installing  
10 multiple adjacent cages. Nor did Qwest present evidence that the cage estimates excluded activities  
11 such as demolition and reconstruction (AT&T/WorldCom/XO Ex. 13, at 53). We believe the *RS*  
12 *Means* data fairly represents a reasonable cost for cage construction.

#### 13 **8. Terminations**

14 Terminations are the elements needed to connect a CLEC's collocated equipment with ILEC  
15 unbundled loops, including DS-1 and DS-3 loops (AT&T/WorldCom/XO Ex. 11, at 13). A  
16 termination is located between a CLEC collocation arrangement and Qwest's intermediate  
17 distribution frame ("IDF"), and one element of the termination is the termination block. Mr.  
18 Knowles testified that Qwest's proposed termination rates are significantly higher than comparable  
19 rates approved for Verizon by the Washington Utilities and Transportation Commission. Mr.  
20 Knowles claims that the nonrecurring charges for 100 DS-0 terminations for Verizon total \$622.24,  
21 which is less than half of what Qwest has proposed in this case. For 28 DS-1 terminations, the  
22 Verizon rates in Washington total \$595.32, again less than half the rate proposed by Qwest (*Id.* at  
23 14). Mr. Knowles recommends that the Commission adopt the Verizon rates approved in  
24 Washington as a ceiling on Qwest's rates.

25 Qwest argues that the CLECs have failed to provide any supporting evidence as to Verizon's  
26 rate structure in Washington. Accordingly, Qwest contends that without adequate information upon  
27 which to base a valid comparison, the Commission should not rely on the comparisons posed by Mr.  
28 Knowles. Qwest claims that its actual expenditures are a better gauge of costs than the CLECs'



1 recommendation. According to Mr. Fleming, Qwest's termination costs were developed on the basis  
2 of its 41 collocation job study, which is a much more accurate assessment of Qwest's costs than costs  
3 approved in another state for a different company (Qwest Ex. 8, at 81).

4 We agree with the CLECs that Qwest's proposed termination rates are excessive and should  
5 be reduced. As noted by Mr. Knowles, Qwest's supporting information for its proposed rates does  
6 not provide sufficient data to adopt its proposal. We further agree that, as a benchmark, Qwest's  
7 rates for collocation termination should, at this time, be set at no more than the rates identified in Mr.  
8 Knowles's testimony (AT&T/WorldCom/XO Ex. 11).

9 **9. Regeneration**

10 A regenerator, or repeater, is a type of circuit equipment that amplifies or regenerates  
11 electronic digital signals as they travel along cables within the central office. AT&T/WorldCom/XO  
12 witness Lathrop described the circumstances when such equipment is required. He stated that, when  
13 DS1 and DS3 circuit lengths exceed 650 feet and 450 feet, respectively, a repeater is used to  
14 regenerate the signal (AT&T/WorldCom/XO Ex. 13, at 62). Mr. Lathrop testified that, although  
15 Qwest has identified regeneration costs as optional, collocators should not be assessed any charges  
16 for this service because the collocators have no control over where in the central office their  
17 equipment is placed (*Id.*). He indicated that the FCC has specifically precluded ILECs from charging  
18 regeneration costs. Mr. Lathrop recommended that if a collocator requires regeneration as a  
19 consequence of where its equipment is located within a central office, the service should be provided  
20 without charge (*Id.* at 63).

21 We agree with the CLECs that if regeneration is required for DS1 and DS3 circuit lengths  
22 over 650 feet and 450 feet, respectively, the service should be provided without charge. As the  
23 CLECs point out, Qwest controls where in its central offices a CLEC's collocated equipment will be  
24 located. Therefore, CLECs should not bear the costs associated with provisioning an adequate signal  
25 over these lengths. This conclusion is consistent with the FCC policy.<sup>21</sup>

26  
27 <sup>21</sup> See, *In the Matter of Local Exchange Carrier's Rates, Terms and conditions for Expanded Interconnection*  
28 *Through Physical Collocation for Special Access and Switched Transport*, CC Docket No. 93-162 (rel. June 13, 1997),  
§117.

1           **10.    Cable Racking**

2           WorldCom contends that Qwest's proposed cable racking charges are excessive because,  
3 while Qwest and CLECs share virtually all cable racking in the central office, Qwest assumes that  
4 100 percent of the caged and 50 percent of the cageless collocation arrangements require new cable  
5 racking aerial support (AT&T/WorldCom/XO Ex. 13, at 36). According to WorldCom, the amount  
6 of cable racking dedicated to any one collocator would be minimal if Qwest placed CLEC equipment  
7 in the same manner in which Qwest places its own equipment. WorldCom claims that, if Qwest  
8 decides to place all collocators in a separate area of the central office, instead of utilizing available  
9 pockets of space, more cable racking is required unnecessarily (*Id.*). Mr. Lathrop recommends that,  
10 because Qwest has the ability to minimize the amount of cable racking used for CLECs, no cable  
11 racking or aerial support should be included in the costs for cageless collocation. For caged  
12 collocation, Mr. Lathrop claims that the percentage of jobs requiring major cable racking and aerial  
13 support should be set at 10 percent and the percentage of jobs requiring any cable racking and aerial  
14 support should be set at 20 percent (*Id.* at 37).

15           We disagree with WorldCom's arguments on this issue. As discussed in the preceding section  
16 on regeneration, Qwest generally has discretion with respect to the location of collocation equipment.  
17 Qwest may also have legitimate reasons for grouping collocators in a separate area of the central  
18 office, such as for security and ease of collocation construction. We do not believe that Qwest should  
19 be required to place collocators in any available pocket of central office space simply to  
20 accommodate a CLEC's desire to minimize cable racking costs. However, Qwest should make every  
21 effort to accommodate CLECs in locating both caged and cageless equipment as close as possible to  
22 Qwest's switching facilities, without jeopardizing Qwest's legitimate and nondiscriminatory location  
23 policies.

24           **11.    CLEC-to-CLEC Connections**

25           CLEC-to-CLEC connections allow a CLEC collocated in a Qwest central office to connect  
26 collocated equipment either to its own collocated equipment located elsewhere in the central office,  
27 or to another CLEC's collocated equipment. Mr. Knowles stated that often such equipment is located  
28 a short distance away because Qwest generally groups collocating CLECs together within the central

1 office (AT&T/WorldCom/XO Ex. 11, at 15-16). As a result, he claims that connection of collocated  
2 equipment should be simple and inexpensive in the majority of circumstances. Mr. Knowles asserts  
3 that Qwest's proposed charges of \$1,353.22 to engineer central office cross-connections and \$425.99  
4 to open and close an existing cable hole are excessive (*Id.*). Mr. Knowles recommends that Qwest  
5 should be authorized to charge no more than the \$244.82 nonrecurring charge, and no recurring  
6 charges, consistent with Qwest's current charges for such connections in its Arizona central office  
7 (AT&T/WorldCom/XO Ex. 13 at 2-3).

8 Qwest argues that its costs for this item are supported by a separate stand-alone cost study  
9 attached to Ms. Million's testimony. Ms. Million testified that Qwest will not charge CLECs for  
10 installing cable racking if they use existing cable racking. She states that Qwest's cost study for  
11 CLEC-to-CLEC connections assumes that a CLEC will utilize existing cable racking 95 percent of  
12 the time and that 5 percent of the time such connections will require installation of an additional 20  
13 feet of new cable racking. Ms. Million noted in her rebuttal testimony that this assumption had not  
14 been carried through to the engineering time required for CLEC-to-CLEC connections and, as  
15 corrected, the engineering component charge is reduced from \$1,353.22 to \$791.63 (Qwest Ex 18 at  
16 13-15).

17 We agree with the CLECs that Qwest's CLEC-to-CLEC connection charge should be  
18 maintained at its current level of a \$244.82 nonrecurring charge, with no recurring charge. Qwest  
19 shall also be permitted to assess a nonrecurring engineering charge of \$791.63, when necessary, in  
20 accordance with Ms. Million's rebuttal testimony and Mr. Lathrop's recommendation that this  
21 engineering cost should be based on no more than 10 hours (AT&T/WorldCom/XO Ex. 13, at 47-48).

22 **12. Reusability of Collocation Facilities**

23 The CLECs contend that Qwest's proposal to assess a nonrecurring charge for space  
24 construction would result in complete cost recovery each time a new entrant begins to use a  
25 collocation cage. In order to minimize the risk of over-recovery by Qwest, Mr. Lathrop  
26 recommended that, instead of imposing a nonrecurring charge, Qwest should use a recurring cost  
27 spread over a period of five years (*Id.* at 51). Time Warner expressed a concern that Qwest could  
28

1 unilaterally impose new contract terms on CLECs, including imposition of a new collocation  
2 decommissioning fee that would include decommissioning fees.

3 Qwest argues that the FCC has determined that an ILEC may assess nonrecurring charges for  
4 equipment dedicated to a particular CLEC, regardless of whether the equipment is reusable by a  
5 subsequent collocator.<sup>22</sup> In that proceeding, the FCC stated that requiring the first collocator "to pay  
6 the full cost of the equipment up front is reasonable because LECs should not be forced to underwrite  
7 the risk of investing in equipment dedicated to the interconnector's [CLECs] use, regardless of  
8 whether the equipment is reusable" (*Id.*). Qwest also points out that its experience shows abandoned  
9 collocation installations are generally not being reused in Arizona (Qwest Ex. 7, at 18). Qwest  
10 contends that its "collocation decommissioning policy" provides CLECs with an appropriate means  
11 of vacating a collocation site. Under this policy, Qwest will reimburse a vacating CLEC for the  
12 reusable elements of the vacated site for up to one year after decommissioning. CLECs may also  
13 negotiate terms and conditions with other CLECs for occupying an abandoned collocation site (*Id.*).

14 With respect to Time Warner's concerns, Qwest states that it cannot unilaterally impose a new  
15 collocation decommissioning policy on CLECs that conflicts with an existing interconnection  
16 agreement. Qwest points out that its proposed SGAT makes this clear. According to Qwest, in any  
17 conflict between a new Qwest policy and an existing interconnection agreement, the terms of the  
18 existing agreement would prevail. Accordingly, Qwest claims that CLECs are protected from any  
19 new policy regarding collocation decommissioning.

20 We agree with Qwest that its collocation decommissioning policy provides reasonable  
21 protections for CLEC collocators with respect to the reusability of collocation facilities. Not only are  
22 CLECs entitled to transfer occupancy of collocation sites, but Qwest will reimburse the vacating  
23 CLEC for reusable equipment at the CLEC site for up to one year. Qwest indicates that it also  
24 accounted for reusability by establishing recurring charges for almost half of the costs of collocation.

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<sup>22</sup> Second Report and Order, *In the Matter of the Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, CC Docket No. 93-162 (rel. June 13, 1997), ¶33.

**V. LINE SHARING**

1  
2 "Line Sharing" is a technology that enables CLECs the opportunity to offer advanced data  
3 services simultaneously with an existing end user's analog voice-grade ("POTS") service on a single  
4 copper loop. Under this arrangement, Qwest would continue to provide POTS service to the end user  
5 while a CLEC uses the high frequency portion of the loop ("HFPL") to provide the same end user  
6 with data services, such as digital subscriber line ("DSL") service (Qwest Ex. 10, at 5). This  
7 "splitting" of the loop is accomplished by employing a POTS splitter, provided by the CLEC, which  
8 is placed in either a collocation or common area of Qwest's central office (*Id.* at 7).

9 Qwest proposes to charge CLECs \$5.00 per month per loop for use of the HFPL, in addition  
10 to a number of other nonrecurring and recurring charges associated with provisioning the line sharing  
11 service (*Id.*). Staff recommends that the line sharing price should be set at 20 percent of the proposed  
12 statewide average unbundled loop rate of \$12.35, or \$2.47 per month (Staff Ex. 30, at 8; Staff Ex. 32,  
13 Sched. WD-17, at 11). Sprint and Z-Tel both argue for a \$0 charge for use of the HFPL by CLECs.

14 According to Qwest, the HFPL is a valuable piece of property that may not be used by a  
15 competing entity without appropriate compensation. Qwest argues that the 1996 Act and FCC rules  
16 require the Commission to reject the CLECs' claim that the HFPL should be assigned a cost of \$0.  
17 Qwest asserts that the HFPL should be assigned a positive price that compensates Qwest for the  
18 forced surrender of its property. Qwest contends that, pursuant to the FCC's *First Report and Order*,  
19 just compensation is defined as the "fair market value of the property subject to the taking."<sup>23</sup> Qwest  
20 claims that in a competitive market the HFPL would have a positive price and that, when it leases the  
21 HFPL to the competitor, Qwest is thereby precluded from providing xDSL service itself over the  
22 HFPL.

23 With respect to its proposed \$5.00 loop rate for the HFPL, Qwest argues that all of the costs  
24 associated with the unbundled loop are rendered "common costs" because of the presence of  
25 dedicated connections from a single customer to two different providers. Qwest claims that, because  
26 the FCC's pricing rules require a "reasonable allocation" of common costs, the Company's proposed  
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28 <sup>23</sup> *First Report and Order*, ¶740.

1 allocation of common costs between the two dedicated connections on the loop is reasonable and  
2 consistent with the 1996 Act's requirement of just and reasonable rates. Qwest further contends that  
3 a price of \$0 for the HFPL would distort competition and discourage investment in alternative  
4 methods of providing high-speed data services.

5 In the FCC's *Line Sharing Order*,<sup>24</sup> the FCC directed state commissions to establish the price  
6 for the HFPL "in the same manner as they set the price for other unbundled network elements."  
7 Qwest witness William Fitzsimmons stated that, although there is no "correct" method of allocating  
8 common costs, any such allocation must pass a reasonableness test. According to Dr. Fitzsimmons,  
9 Qwest's proposed HFPL price is consistent with the FCC's intent to establish UNE prices that are in  
10 accordance with the result in a competitive market. Dr. Fitzsimmons stated that the allocation of  
11 common costs resulting in a positive price for the HFPL furthers competition in a nondiscriminatory  
12 manner (Qwest Ex. 28, at 11-12). Qwest also argues that a loop price of \$0 for the HFPL would give  
13 a competitive advantage to DSL providers over other high-speed data service providers using  
14 technology such as cable modems or satellite. Qwest claims that the result of such a competitive  
15 advantage will be a decreased incentive to invest in new technologies or, for DSL providers, a  
16 disincentive to build their own facilities (*Id.* at 17-19). Qwest asserts that, contrary to the CLECs'  
17 arguments, there is no evidence that Qwest is already recovering the cost of the loop through its retail  
18 prices. Qwest also states that the 1996 Act and FCC rules require that all UNEs must be cost-based,  
19 without consideration of retail rates.

20 Sprint and Z-Tel argue that the HFPL should be set at \$0 because Qwest already recovers the  
21 full cost of the loop through its retail prices and thus any additional revenue from the loop will result  
22 in an over-recovery. They contend that if a positive price is charged for the HFPL, the low frequency  
23 portion of the loop must be reduced. Sprint and Z-Tel further assert that, because CLECs must pay  
24 substantial recurring and nonrecurring charges for interconnection and line sharing services, any  
25 additional charge to access the HFPL will result in a windfall for Qwest.

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27 <sup>24</sup> Third Report and Order in CC Docket No. 98-147, Fourth Report and Order in CC Docket No. 96-98, *In the*  
28 *Matter of the Implementation of the Local Competition Provisions of the Telecommunications Act of 1996* (rel. December  
9, 1999) ("*Line Sharing Order*").

1 Staff agrees with Qwest that the HFPL should carry a positive price. Moreover, Staff states  
2 that its proposed \$2.47 charge, which is 20 percent of its recommended statewide unbundled loop rate  
3 average, is comparable to Qwest's proposed \$5.00 charge, which approximately equals 20 percent of  
4 the Company's proposed unbundled loop cost. However, Staff argues that there is no explanation in  
5 the record for how Qwest actually calculated its proposed \$5.00 recurring charge for HFPL.

6 We agree with Staff that the HFPL should carry a positive price. We also agree that Qwest  
7 has failed to support how it arrived at its proposed \$5.00 charge. Staff's recommended charge of  
8 \$2.47 recognizes that there are some common costs that should be allocated to users of the service  
9 while, at the same time, providing a reasonable price to reflect an allocation of those costs.  
10 Consistent with Staff's recommendation, the HFPL charge should be established at 20 percent of the  
11 statewide unbundled loop average determined in this proceeding.

12 **A. Line Splitting**

13 The FCC has defined "line splitting" as the delivery of voice and data services provided by  
14 competitive carriers over a single loop. In a line splitting arrangement, two different CLECs split the  
15 low and high frequency portions of the loop, with the voice CLEC controlling the loop (Qwest Ex.  
16 11, at 5-6). By comparison, line sharing occurs where the ILEC occupies the low frequency portion  
17 of the loop for voice-grade service, and a single CLEC occupies the high frequency portion of the  
18 loop to provide data service (Id.). Qwest has not provided any new cost studies that are specific to  
19 line splitting because the costs associated with line splitting are addressed with proposed or existing  
20 rates (Qwest Ex. 11, at 7). Qwest recommends that the Commission refrain from ordering firm  
21 deadlines for deployment of line splitting and that the Commission instead allow for a collaborative  
22 process to determine the operational impacts of line splitting before establishing a deployment  
23 schedule.

24 No party objected to Qwest's proposal to engage in a collaborative process regarding line  
25 splitting. We believe Qwest's recommendation is reasonable and we direct Qwest to contact the  
26 other parties within 30 days of the date of this Decision for purposes of establishing a collaborative  
27 process on this issue. The parties to the collaborative should address operational impacts of line  
28

1 splitting and the establishment of a deployment schedule, as well as any other relevant concerns  
2 related to this issue.

3 **B. Operational Support System Costs**

4 Qwest's Operational Support System ("OSS") is a computer system that does not directly  
5 provide telecommunications service to customers, but supports employees performing operational  
6 duties such as issuing service orders, testing trunks and maintaining switching systems (Qwest Ex. 3,  
7 at 3). Qwest claims that, pursuant to Section 252(d)(1) of the 1996 Act, it is entitled to recover the  
8 costs of providing access to UNEs. Qwest also cites the FCC's Line Sharing Order for the  
9 proposition that Qwest may recover OSS costs associated with providing line sharing.

10 Qwest is seeking to recover \$12,826,720 in costs it claims were incurred in modifying its  
11 OSS. The majority of this amount (\$11.9 million) is related to a contract with Telcordia for delivery  
12 of a long-term line sharing solution. Qwest seeks a \$2.74 recurring per line per month charge to  
13 recover the costs of modifying its OSS for a long-term solution to line sharing. Qwest claims that  
14 these costs are solely attributable to line sharing and would not be necessary if not for modifications  
15 needed to support line sharing (Qwest Ex. 3, at 24). Qwest states that, in order to accommodate line  
16 sharing, it was required to engage in a series of developmental and implementation activities with  
17 CLECs. Qwest participated in a number of meetings with interested CLECs in order to develop a  
18 process associated with ordering, provisioning, billing, and maintenance of OSS for line sharing (Id.  
19 at 12). Qwest contends that its efforts working with the "joint team" on this issue required a  
20 significant amount of resources that should be compensated.

21 According to Qwest, the modifications to its OSS were essential to the CLECs' ability to  
22 access Qwest's OSS in order to perform line sharing functions. Qwest argues that it made the OSS  
23 changes solely for the purpose of enabling CLECs to provide xDSL service over the same line on  
24 which Qwest provides voice service. Qwest claims that, because it does not need these OSS  
25 modifications to provide its own xDSL product, CLECs should bear the entire cost of the OSS  
26 modifications (Id. at 24).

27 Staff argues that because the majority of Qwest's claimed OSS costs are related to a custom  
28 contract with Telcordia, these costs should be disallowed as imprudently incurred. According to



1 Staff, if Qwest had waited for a nationwide rollout of Telcordia's line sharing solutions, the  
 2 Company's costs would likely have been lower. In addition, Staff contends that it is improper for  
 3 Qwest to assess nearly the entire cost of the OSS improvements to CLECs based on Qwest's  
 4 assertion that the OSS modifications did not need to be made to support its own xDSL service. Staff  
 5 claims that Qwest's proposed exemption of its own affiliate from supporting the OSS improvements  
 6 violates the 1996 Act's requirement of nondiscriminatory access to CLECs, and amounts to a subsidy  
 7 for Qwest and its DSL affiliate. Staff recommends that the proposed OSS charge for line sharing be  
 8 reduced to \$0.10 per shared line per month (Staff Ex. 30, at 36).

9 We agree with Staff that Qwest's proposed line sharing OSS charge is excessive and  
 10 discriminatory. As Staff witness Dunkel points out, under Qwest's proposal, the \$2.74 OSS charge  
 11 would be charged to unaffiliated xDSL providers but not to Qwest's affiliate, Broadband Services,  
 12 Inc. (Id. at 33). Moreover, although Qwest's OSS would only be used by CLECs when an order is  
 13 placed or service is required, the Company's proposed OSS charge would remain in place indefinitely  
 14 on a recurring monthly basis. In addition, Qwest did not look into the possibility that OSS costs  
 15 associated with the Telcordia contract could be shared with other telecommunications providers but,  
 16 instead the Company opted for a custom solution (Id. at 35). For these reasons, we agree with Staff  
 17 that the recurring line sharing OSS charge should be reduced to \$0.10. The charge will be applicable  
 18 to all providers of xDSL service, including Qwest affiliates that are using the HFPL through line  
 19 sharing.

## 20 VI. OTHER ISSUES

### 21 A. Avoided Cost Discount

22 The avoided cost discount reflects the rate discount applies to wholesale services it sells to  
 23 CLECs for resale to an end-use customer. In the First Cost Docket Order, the Commission  
 24 established wholesale discount rates of 12 percent for residential basic exchange service and 18  
 25 percent for all other services to which the discount applies. The Arizona District Court remanded this  
 26 issue to the Commission, directing the Commission "to consider the range of cost savings for  
 27 different categories of service, as well as the potential for abuse through selective ordering tactics,  
 28 and determine whether additional discount rates are needed."

1 Although Qwest argued for reductions in the current discount rates, Staff witness Dunkel  
 2 testified that Staff does not have the information needed to more accurately identify the cost savings  
 3 associated with various services. Mr. Dunkel claims that the Uniform System of Accounts  
 4 (“USOA”) records, Automated Reporting Management Information System (“ARMIS”) reports, and  
 5 other records kept by the Company do not show the avoided costs by product lines, and what portion  
 6 of those costs would be avoided by product line. According to Mr. Dunkel, Qwest’s allocation of  
 7 costs to product lines, and the determination of what portion of those costs would be avoided, was  
 8 based primarily on managerial judgment. Accordingly, Mr. Dunkel stated that “there is no factual  
 9 basis on which to establish a more accurate disaggregation of the avoided cost discounts than was  
 10 established in Decision No. 60635” (Staff Ex. 30, at 55). Based on these facts, Mr. Dunkel  
 11 recommended that the Commission maintain the current discounts.

12 On July 25, 2001, Staff and Qwest entered into a stipulation whereby Qwest agreed to  
 13 maintain the current wholesale discounts now in effect. No party opposed the agreement between  
 14 Staff and Qwest to maintain the existing discount rates. We will adopt the stipulation between Staff  
 15 and Qwest to maintain the current discount rates of 12 percent for basic residential service and 18  
 16 percent for all other services to which the discount rate applies.

17 **B. Subloop and Access to Wire in Multi-Tenant Environments**

18 Cox raises the argument that access to subloops, especially in a multi-tenant environment, is  
 19 critical to competition, especially facilities-based competition. Cox provides competitive telephone  
 20 services to end users via a hybrid fiber-coaxial (“HFC”) network. For purposes of this proceeding,

21 Cox is concerned that Qwest’s proposed rates and practices with respect to accessing subloops  
 22 and wire used to serve residential tenants in apartment complexes and other multi-dwelling units  
 23 (“MDUs”), and for business customers in high rise office buildings and other multi-tenant  
 24 environments (“MTEs”), may preclude such customers from receiving the benefits of competition.

25 The FCC has defined subloops as “portions of the loop that can be accessed at terminals in the  
 26 incumbent’s outside plant.”<sup>25</sup> Cox contends that access to subloops is critical to competition because

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 28 <sup>25</sup> *In the Matter of the Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*,  
 CC Docket No. 96-98, Third Report and Order, FCC 99-238 (rel. Nov. 5, 1999) (“UNE Remand Order”) at ¶206.

1 the subloop is a part of the access puzzle that is not easily duplicated by CLECs. The FCC indicates  
 2 that unbundling of subloops will promote efficiencies because a requesting CLEC "will not have to  
 3 buy the entire loop in order to connect its own facilities with wiring on the customer premises."<sup>26</sup>

4 Cox also cites to the FCC's *MTE Order*<sup>27</sup> to support its assertion that the FCC is concerned  
 5 with competitive access to subloops in multi-tenant environments. In that order, the FCC indicated  
 6 that incumbent LECs can use their control over "on-premises" wiring to frustrate competitive access  
 7 in multi-tenant buildings. In this case, Cox claims that Qwest's pricing proposal acts as a barrier to  
 8 competition because the Company proposes to charge \$12.12 (in Zone 1) regardless of how much of  
 9 the subloop is used by the CLEC. According to Cox, Qwest's proposal discourages CLECs from  
 10 extending their networks. Cox also argues that Qwest's proposal will allow Qwest to over-recover  
 11 costs related to provisioning these facilities. As an example, Cox points out that Qwest's costs for  
 12 provisioning a 1,000 foot "campus wire" pair is substantially less than the \$12.12 the Company seeks  
 13 in this case.

14 Cox further contends that CLECs need an appropriate price for campus wire because there are  
 15 many existing MDU/MTE configurations where Qwest owns the campus wire and, in order to create  
 16 competition for those tenants, a CLEC will need access to that wire. Cox complains that Qwest has  
 17 created an arbitrary distinction between "intrabuilding cable" and "campus wire." In defining "inside  
 18 wire," the FCC recognized that such wiring may be located not only within single family premises,  
 19 but also "within a campus, a commercial park, or a garden apartment complex."<sup>28</sup> The FCC also  
 20 noted that "inside wire is often out of doors, as in the case in garden apartments and campuses,  
 21 among other places" (*Id.*).

22 In accordance with the FCC's definitions, Cox maintains that this Commission should define  
 23 both "campus wire" and "intrabuilding cable" as "on-premises wire" for purposes of UNE pricing.

24 <sup>26</sup> *UNE Remand Order* at ¶212.

25 <sup>27</sup> *In the matter of the Promotion of Competitive Networks in Local Telecommunications Markets*, WT Docket No.  
 26 99-217; *Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, CC Docket No. 96-  
 27 98; *Review of Sections 68.104 and 68.213 of the Commission's Rules Concerning Connection of Simple Inside Wiring to*  
 28 *the Telephone Network*, CC Docket 88-57; *First Report and Order and Further Notice of Proposed Rulemaking*, WT  
 Docket No. 99-217; *Fifth Report and Order and Memorandum Opinion and Order*, CC Docket No. 96-98; and *Fourth*  
*Report and Order and Memorandum Opinion and Order*, CC Docket No. 88-57, FCC No. 00-366 (rel. Oct 25, 2000)  
 ("MTE Order").

<sup>28</sup> *UNE Remand Order* at ¶170.

1 According to Cox, "on-premises wire" should be priced at the rate proposed by Qwest for  
2 "intrabuilding cable," and a "campus wire" subloop should be priced the same as the "intrabuilding  
3 cable" subloop.

4 Cox also argues that, upon request of a MDU/MTE wiring owner, Qwest should be required  
5 to create a single demarcation point at the minimum point of entry ("MPOE") and relinquish  
6 ownership of the wire on the customer side of the demarcation point. The MPOE and demarcation  
7 point are the point at which the local exchange carrier's network ends and the property owner's  
8 telecommunications facilities begin (Cox Ex. 3, at 9). Cox cites to the FCC's *MTE Order*, where the  
9 FCC stated that in multi-unit premises, "the incumbent carrier must move the demarcation point to  
10 the MPOE upon the premises owner's request."<sup>29</sup> Although the ILEC's obligation to move the  
11 demarcation point is apparently settled, the question of compensation for the relinquished wire  
12 remains at issue. Cox contends that the relinquished wire and facilities should be priced at "residual  
13 value," which Cox defines as the initial cost borne by Qwest, less accounted depreciation up to the  
14 time of conveyance.

15 Although Qwest did not address this issue in its initial brief, in its reply brief Qwest argues  
16 that Cox improperly assumes that its distribution plant excludes cable on private property. Qwest  
17 claims that its LoopMod design contains underground cabling placed in building owner provided  
18 duct. According to Qwest, this cable provides connectivity between the SAI and the building  
19 terminals at each building in a MDU/MTE environment (Qwest Ex. 2, at 28-29).

20 Qwest asserts that it should not be required to break out costs and separately price campus  
21 wire because campus wire or intrabuilding cable in MDUs is simply one form of subloop distribution  
22 plant (Qwest Ex. 8, at 101-102). Qwest claims that both the HAI model and Qwest's ICM produce a  
23 distribution subloop that blends MDU and non-MDU architectures. Qwest maintains that campus  
24 wire should not be treated as a separate element because such treatment would cause all other  
25 subloop prices to increase significantly. Qwest argues that adoption of Cox's proposal would lead to  
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28 <sup>29</sup> *MTE Order* at ¶54.

1 excessive deaveraging of subloops, resulting in prices in other areas above the level that stimulates  
2 competition.

3 Qwest also opposes Cox's recommendation regarding relocation of the demarcation points to  
4 the MPOE. Qwest concedes that, pursuant to the FCC's *MTE Order*, MDU owners may request  
5 ILECs to move the demarcation point to the MPOE. However, Qwest maintains that because  
6 property owners are not public service corporations, adoption of Cox's proposal would raise serious  
7 issues regarding the Commission's jurisdiction over wiring and facilities. Qwest concludes that if the  
8 Commission makes any determination regarding pricing on this issue, the appropriate measure of  
9 compensation should be based on the fair market value of the property or on a TELRIC basis.

10 We agree with Cox that Qwest's pricing proposal could indeed act as a barrier to competition  
11 and discourage CLEC investment in facilities. We believe that Cox's proposal to treat campus wire  
12 and intrabuilding wire synonymously as "on-premises wire" is appropriate. In order to compete in  
13 MDU situations, CLECs need to have access to Qwest-owned campus wire because to do otherwise  
14 would allow Qwest to maintain control over such wire and thereby frustrate competition.  
15 Accordingly, Qwest should price both campus wire and intrabuilding cable at the same "on-premises  
16 wire" price, as proposed by Cox.

17 With respect to the relocation of the demarcation point and purchase of campus wire facilities,  
18 we also agree with Cox's proposal. In the event that a MDU/MTE owner requests the demarcation  
19 be moved to the MPOE, Qwest is obligated to relinquish wire on the property owner's side of the  
20 demarcation, and to price those facilities at residual value. Residual value should be determined by  
21 taking into account Qwest's initial costs (assuming Qwest first proves ownership of the wire) less  
22 depreciation up to the time of conveyance.

23 Although property owners would not be required to reconfigure the demarcation point and  
24 MPOE, or purchase the inside wire, adoption of this proposal gives the property owners additional  
25 options in dealing with Qwest regarding the price for any on-premises wire. As Cox points out, the  
26 cost of any such reconfiguration of the demarcation point could be borne by a CLEC that is interested  
27 in serving tenants in a building, thereby relieving the building owner of the cost of reconfiguration  
28 and allowing tenants to enjoy the benefits of competitive choice. Accordingly, we adopt Cox's

1 recommendations on this issue. The Intrabuilding Cable and On Premises Wire price should be  
 2 \$.2955, as set forth in Mr. Hydock's testimony (AT&T/WorldCom Ex. 15).

3 **C. Operator Services/Directory Assistance**

4 In its UNE *Remand Order*, the FCC found that ILECs are not required to unbundle operator  
 5 services and directory assistance ("OS/DA") unless the ILECs do not provide customized routing.  
 6 The FCC stated, in relevant part:

7 We find that where incumbent LECs provide customized routing, lack  
 8 of access to the incumbents' OS/DA service on an unbundled basis  
 9 does not materially diminish a requesting carrier's ability to offer  
 10 telecommunications service. The record provides significant evidence  
 11 of a wholesale market in the provisioning of OS/DA services and  
 12 opportunities for self-provisioning OS/DA services . . . Accordingly,  
 13 incumbent LECs need not provide access to OS/DA as an unbundled  
 14 network element.<sup>30</sup>

15 Qwest states that the FCC's decision makes sense given the ability of customized routing to  
 16 enable CLECs "to self-provide or select among other providers of interoffice facilities, operator  
 17 services and directory assistance" (Qwest Ex. 12, at 3). Qwest claims that the FCC's decision makes  
 18 clear that a TELRIC-based UNE need not be offered, as long as the ILEC offers customized routing.  
 19 Qwest witness Brohl stated that customized routing enables a CLEC "to designate a particular  
 20 outgoing trunk that will carry certain classes of traffic originating from [the] CLEC's end-users,"  
 21 including OS/DA service (*Id.*). According to Qwest, it offers customized routing and has developed  
 22 a process whereby CLECs may request and receive the service, although no CLECs have yet  
 23 requested custom routing service from Qwest (*Id.* at 4; Tr. 562). Qwest asserts that, despite the  
 24 arguments raised by the CLECs, pricing customized routing on an individual case basis ("ICB") does  
 25 not diminish the fact that the service is available (*Id.*). As such, Qwest contends that it is not required  
 26 to offer OS/DA as a separate unbundled element.

27  
 28 <sup>30</sup> *UNE Remand Order*, ¶¶441-442

1 WorldCom claims that Qwest must continue to offer OS/DA as an unbundled element at cost-  
2 based rates until it actually provides customized routing. According to WorldCom, Qwest's mere  
3 offer of service at an ICB rate is not sufficient to qualify for the exemption from UNE pricing as set  
4 forth in the FCC's *UNE Remand Order*.<sup>31</sup> WorldCom argues that, even if customized routing is  
5 provided, OS/DA must be made available on a nondiscriminatory basis, not only with respect to  
6 prices between competing carriers but also as to what price Qwest charges itself. WorldCom  
7 contends that Qwest has not provided a cost study in this docket that shows what Qwest charges itself  
8 for OS/DA services and, therefore, Qwest must continue to provide OS/DA as a UNE, at cost-based  
9 prices.

10 Aside from the arguments described above, WorldCom maintains that the customized routing  
11 issue cannot be resolved in this phase of the docket because Qwest has only recently filed its  
12 customized routing cost study, which will be considered in Phase II(A) of this proceeding.  
13 According to WorldCom, until the Commission has reviewed that cost study and has established  
14 prices for that service, OS/DA must be offered at TELRIC prices.

15 We agree with WorldCom that, until such time as the Commission has considered Qwest's  
16 cost study dealing with customized routing in the next phase of this docket, no decision should be  
17 made with respect to the pricing of OS/DA on an ICB basis. Accordingly, Qwest should continue to  
18 offer OS/DA as a UNE at a TELRIC price pending our decision in Phase II (A) of this proceeding.

19 **D. Reciprocal Compensation**

20 In its order addressing reciprocal compensation for internet traffic, the FCC has recently ruled  
21 that such traffic is interstate in nature and, as such, the FCC has exclusive jurisdiction to decide the  
22 issue.<sup>32</sup> The FCC further stated that, given the interstate nature of such traffic, "state commissions  
23 will no longer have authority to address this issue."<sup>33</sup> Based on the FCC's ruling, the parties agreed  
24 to remove all testimony regarding reciprocal compensation from this proceeding. Therefore we need  
25 not address the issue in this docket.

26 <sup>31</sup> *UNE Remand Order* ¶462.

27 <sup>32</sup> Order of remand and Report and Order, *In the Matter of Implementation of the Local Competition Provisions in*  
28 *the Telecommunications Act of 1996, Intercarrier Compensation for ISP-Bound Traffic*, CC Docket Nos. 96-98 and 99-68  
(rel. April 27, 2001).

<sup>33</sup> *Id.* at ¶82.

1 **E. Unbundled Network Element-Platform**

2 Unbundled Network Element-Platform ("UNE-P") refers to an arrangement where a CLEC  
3 orders unbundled network elements that remain connected together. The UNE-P is essentially a  
4 complete bundled set of UNEs (*i.e.*, NID, local loop, switch port, transport facilities) which enables a  
5 CLEC to purchase a complete end-to-end voice circuit from the ILEC. Under a UNE-P arrangement,  
6 Qwest provides service to the CLEC ordering the service using the same facilities that Qwest would  
7 use to provide service to a retail customer. Qwest continues to provide the services using the same  
8 equipment, with the exception that the service is billed as UNE-P service to the CLEC, instead of  
9 being billed as retail service to the end user. The group of services that make up UNE-P are the  
10 unbundled loop, port, shared transport, local switching and, under Qwest's proposal, a separate  
11 charge for any features provided. The CLEC would need only to provide supporting services such as  
12 directory assistance and operator services (Staff Ex. 30, at 49). Staff witness Dunkel recommends  
13 that this issue be resolved in the Section 271 workshop, if possible.

14 In this proceeding, Qwest proposes a number of nonrecurring charges for the UNE-P. These  
15 charges range from \$0.68 for conversion of an existing basic POTS service to \$82.49 for a manual  
16 UNE-P POTS connection. The CLECs claim that Qwest has assumed that many UNE-P orders will  
17 require manual intervention in Qwest's ISC, and that significant manual processing will be required  
18 even when a mechanized order flows through the system. The CLECs argue that Qwest's manual  
19 interaction assumptions are not based on a forward-looking TELRIC environment and should,  
20 therefore, be rejected.

21 We agree with Staff that, in the event these UNE-P issues are not resolved through  
22 negotiations, Qwest should be required to connect traffic that originates on a CLEC-subscribed UNE-  
23 P line to its appropriate destination within the LATA at the rates the Commission has established for  
24 the various UNE-P functions. We therefore adopt Staff's position on this issue.

25 **VII. SUPPLEMENTAL DISCUSSION AND FINDINGS**

26 On November 8, 2001, a Recommended Opinion and Order was issued in Phase II of this  
27 proceeding to address issues related to Qwest Corporation's ("Qwest's") pricing of wholesale  
28 products and services. The parties were directed to file exceptions to the Recommended Order, as



1 well as a joint price schedule, by November 28, 2001. By joint request, the date for filing exceptions  
2 was extended to December 12, 2001 and the date for filing the joint price list was extended to  
3 December 19, 2001.

4 Exceptions were filed by Qwest, Staff, jointly by AT&T of the Mountain States, Inc. and XO  
5 Arizona, Inc. ("AT&T"), WorldCom, Inc. ("WorldCom")<sup>34</sup>, Time Warner Telecom of Arizona, LLC  
6 ("Time Warner"), and Cox Arizona Telecom, LLC ("Cox"). Compliance price schedules were filed  
7 individually by Qwest, Staff, and AT&T on December 19, 2001. In their exceptions and compliance  
8 filings, the parties raised arguments disagreeing with the findings in the Recommended Opinion and  
9 Order and requesting clarification of issues that they believed were either unclear or not discussed in  
10 the Recommended Order. On January 3, 2002, Qwest filed a response to other parties' exceptions.  
11 Oral argument on these issues was held on January 25, 2002. The CLECs and Staff filed responses to  
12 Qwest's exceptions on February 1, 2002. On February 8, 2002, Qwest filed a reply to those  
13 responses. On February 15, 2002, AT&T filed a motion to strike and response to Qwest's February  
14 8, 2002 reply. On February 26, 2002, Qwest filed a response to AT&T's motion to strike.

15 Based on the additional arguments relating to issues the parties believed were unclear or not  
16 resolved, we make the following findings:

17 A. **Terminal and Splice Inputs**

18 The terminal is the box located in a customer's yard where the drop cable to the house  
19 connects to the incumbent local exchange company's ("ILEC's") distribution facilities. In the prior  
20 cost docket (Decision No. 60635), the Commission established the investment for these costs at  
21 \$70.00 per line. The Terminal and Splice investment default values in the HAI model are \$42.50 for  
22 buried cable and \$32.00 for aerial cable. Staff seeks clarification whether the intent in the  
23 Recommended Order was to adopt the HAI default values or the \$70.00 cost from the prior decision.  
24 Both Staff and Qwest recommend that the \$70.00 cost per line adopted previously should be retained  
25 in this docket.

26

27

28 <sup>34</sup> AT&T and WorldCom will be referred to jointly as "the CLECs."

1 We agree with AT&T that the HAI model default values of \$42.50 for buried cable and  
2 \$32.00 for aerial cable should be used in this proceeding, consistent with our adoption of the HAI  
3 model for determining recurring loop costs. Qwest did not specifically question these default values  
4 during the hearing and no party addressed this issue in the post-hearing briefs. We believe it is  
5 appropriate to use the HAI default values for this issue.

6 **B. Calculation of Four-Wire Costs**

7 Once the two-wire loop costs are established, it is necessary to determine the loop cost for  
8 four-wire loops. Staff and Qwest proposed that the four-wire loop cost should be calculated by  
9 doubling the two-wire loop investment, and then subtracting the cost of one network interface device  
10 ("NID"). The CLECs proposed that the four-wire cost be calculated by multiplying the two-wire cost  
11 by a factor of 1.3.

12 We agree with the CLECs that the four-wire loop cost should be calculated by multiplying the  
13 two-wire cost by a factor of 1.3. No evidence was presented to support the conclusion that placing a  
14 four-wire loop should be significantly more expensive than placing a two-wire loop. Our resolution  
15 of this issue is consistent with our conclusion in the *First Cost Docket Order* where we determined  
16 that the four-wire loop charge should be only 4.2 percent higher than the two-wire loop charge.

17 **C. High Capacity Loops**

18 The HAI model does not calculate the cost for high capacity "DS1 Capable" or "DS3  
19 Capable" loops. Staff claims that the CLECs' proposed rates for these elements are generally half of  
20 Qwest's proposed rates (*See, Ex. MH-1R, at 11-12*). Because the HAI outputs do not provide  
21 guidance for the level of these costs, Staff suggests that the CLECs' proposals should be adopted to  
22 determine the costs associated with these high capacity loops.

23 In calculating high capacity loop costs, Qwest employed the Network Access Channel  
24 ("NAC") model, a specialized version of Qwest's LoopMod. Qwest used the NAC to develop the  
25 cost of placing the copper or fiber loop facility between a Qwest wire center and a customer location,  
26 plus the additional optical-digital electronics and other equipment needed at the wire center and the  
27 customer location to allow digital transmission (Qwest Ex. 18, TKM-07R).

28

1                   **1.     Equipment Prices**

2           The CLECs contend that Qwest's NAC model overstates high capacity loop costs because  
3 LoopMod, in general, overstates the required investment. The CLECs also claim that Qwest's  
4 equipment prices are overstated because they rely on 1999 prices, which are not reflective of the most  
5 current vendor contract prices. Qwest's witness agreed that the most recent equipment prices should  
6 be used which would reduce equipment costs by approximately 20 percent compared to Qwest's  
7 model (Tr. 862). In accordance with Qwest's agreement, the most recent equipment contract prices  
8 should be employed.

9                   **2.     Fill Factors**

10           The next issue that affects the cost of high capacity loops is the utilization or "fill" factors  
11 used in the model. The CLECs assert that Qwest's NAC model assumes fill rates that are  
12 significantly lower than reasonable levels. According to the CLECs, Qwest's fill rates are reflective  
13 of its current usage for high-capacity loop architectures, rather than what would be achieved on a  
14 forward-looking basis. The CLECs claim that distribution cable fills cannot be used for comparison  
15 because optical-digital equipment is much easier to install than loop facilities, and could therefore be  
16 reinforced at a lower cost (AT&T/WorldCom Ex. 6, at 48-49).

17           However as Qwest witness Million points out, on January 8, 2001, the United States Court of  
18 Appeals for the Eighth Circuit, in Southwestern Bell Telephone Company v. Missouri Public Service  
19 Commission, 2001 U.S. App. LEXIS 156 (8th Cir. 2001), stated that "it [is] not permissible for [a]  
20 PSC 'to set prices based on the forward-looking costs of an idealized network', . . . ." Citing its  
21 reasoning in Iowa Utils. Bd. v. FCC, 219 F. 3d. 744, 751 (8th Cir. 2001), the Court stated that "[a]t  
22 bottom. . . , Congress has made it clear that it is the cost of providing actual facilities and equipment  
23 that will be used by the competitor (and not some state of the art presently available technology  
24 ideally configured but neither deployed by the ILEC nor to be used by the competitor) which must be  
25 ascertained and determined."

26           We find that the fill factors proposed by the CLECs represent even more than the "ideal  
27 configuration neither deployed by the ILEC nor to be used by the competitor." Instead, the CLEC fill  
28 factors represent an idealization that contradicts actual deployment of DS1 and DS3 architectures and

1 is contrary to the economic principles of "economies of scale." TELRIC requires reasonable  
2 assumptions about both utilization and architecture deployment that the CLEC proposal fails to meet.  
3 According to Qwest witness Million, "it could be the next century" before DS1 demand reaches the  
4 utilization levels postulated by the CLECs (Qwest Ex. 18, at 36). By that time, the architecture will  
5 have been increased to ensure economies of scale and the fill factors predicted by the CLECs will still  
6 not materialize.

7 Therefore we adopt the fill factors proposed by Qwest, which vary with the type of  
8 architecture involved and range from 37 percent to 100 percent.

9 **3. Total Installed Factors**

10 Total Installed Factors ("TIFs") are applied by Qwest to material investments to account for  
11 costs such as installation, transportation, warehousing, power costs, and taxes. The CLECs contend  
12 that Qwest improperly calculates TIFs based on embedded costs. The CLECs claim that, because  
13 Qwest's TIFs are based on its booked expenditures, rather than reflecting costs in a forward-looking  
14 TELRIC environment, the TIFs are significantly overstated.

15 Qwest argues that its TIFs are appropriate because, in the real world, it must have warehouse  
16 facilities available to store materials, it incurs transportation and labor costs associated with installing  
17 equipment, and it incurs network operations costs to maintain and operate the network.

18 We find that the TIFs employed in Qwest's cost studies fail to reflect a forward-looking  
19 environment in compliance with TELRIC standards. Mr. Weiss testified that a forward-looking  
20 analysis would eliminate warehousing costs because modern just-in-time ordering and delivery of  
21 equipment minimize the need to store much of the equipment necessary to provision local  
22 interconnection and UNEs to CLECs (AT&T/WorldCom Ex. 6, at 57-58). Similarly, the  
23 transportation component and vendor and labor components significantly overstate costs in a  
24 forward-looking environment. We agree with the CLECs that TELRIC methodology requires TIFs  
25 that are reflective of forward-looking costs, as opposed to embedded costs. We will, therefore, adopt  
26 Mr. Weiss' recommendation to employ TIFs of 1.34 and 1.14 for plug-in and hard-wired equipment,  
27 respectively.

28

1                   4.     **High Capacity Loop Pricing**

2             Based on these fill factors and TIFs, and applying the CLECs' recommended expense factors,  
3 we therefore adopt a statewide average DS1 and DS3 loop rates in accordance with the conforming  
4 price list that is to be submitted within 30 days of the date of this Decision.

5             **D. Plant Mix**

6             We have found that an aerial cable ratio of 19 percent would "give recognition to the  
7 declining trend in the use of such cable" (*Infra*, at 15). That rate could be applied in one of two ways:  
8 by assuming 19 percent standard aerial placement for each density group or by varying the aerial  
9 percentage by density group with the average for all density groups equaling 19 percent. The CLECs  
10 assumed that the most densely populated areas would have the highest proportion of aerial cable,  
11 whereas Qwest's cost studies assumed that the placement of aerial plant is proportionately higher in  
12 rural areas. Qwest claims that its assumption is consistent with the FCC's distribution of aerial plant  
13 in its *Inputs Order*.

14             We believe that the 19 percent aerial cable ratio should be applied equally across all density  
15 groups. This treatment gives recognition to the parties' divergent views of whether aerial cable  
16 should be assumed to be placed in greater proportion in urban or rural areas. According to Qwest's  
17 compliance filing, using the constant 19 percent aerial ratio in all distribution groups raises the per  
18 line loop cost by \$0.49.

19             **E. IDLC Unbundling Cost**

20             In our discussion of Integrated Digital Loop Carrier (IDLC) unbundling costs, we stated that  
21 "[T]here is wide disparity in the positions taken by Qwest and the CLECs, and we do not believe that  
22 either position is appropriate. We conclude that an input of 10 percent IDLC loops will properly  
23 recognize the likelihood of increased purchases and use of IDLC loops on a forward-looking basis."

24             Qwest claims that to implement this finding would raise the loop cost by \$1.03 because  
25 UDLC systems utilize more expensive line cards which would have to be factored in to the HAI  
26 model compliance.

27             We disagree with Qwest that the proposed adjustment needs to be made to the HAI model to  
28 give effect to our finding. Our resolution of this issue was intended to strike a medium ground to

1 reflect increased usage of IDLC loops on a forward-looking basis. No additional adjustments are  
2 necessary.

3 **F. Material Costs**

4 Staff points out that material costs were used as inputs in the proposed cost studies for  
5 collocation rates, line sharing rates, and CLEC-to-CLEC rates. Qwest based its proposed material,  
6 labor, and engineering costs on 41 actual collocation jobs that Qwest claimed were representative of  
7 costs that it would incur in placing collocation facilities. Staff and the CLECs argued that material,  
8 labor, and engineering costs based on the 41 jobs were unrepresentative of Qwest's true costs because  
9 the 41 jobs were performed by outside vendors, whereas approximately 80 percent of actual  
10 collocation jobs are done by Qwest Technologies Installation ("QTI") personnel.

11 Staff claims that, in addition to weighting labor costs at 80 percent QTI labor and 20 percent  
12 outside vendor labor, the material costs that were based on the same 41 collocation jobs should be  
13 adjusted. According to Staff, the material costs associated with Qwest's 41 outside vendor jobs are  
14 equally unrepresentative because they overstate the Company's actual equipment and material prices  
15 associated with collocation jobs that are performed primarily by Qwest personnel. Accordingly, Staff  
16 recommended that the material costs used in Qwest's cost studies should be reduced by 50 percent to  
17 recognize that the Company's cost studies significantly overstate its real world costs (Staff Ex. S-30,  
18 at 18).

19 Qwest argues that Staff's proposed 50 percent reduction to materials costs is unjustified.  
20 According to Qwest, Staff's claims are based on citation to several isolated claims of excessive costs,  
21 which are not sufficient justification to reduce all materials costs by 50 percent on an across-the-  
22 board basis.

23 We agree with Staff's contention that Qwest's material costs are significantly overstated.  
24 Consistent with our treatment of labor costs, we will reduce material costs by 50 percent. As Staff  
25 indicates, the record reflects that Qwest's cost study included material costs that were significantly  
26 higher than quotes received by the CLECs' witness from other material vendors (WorldCom Ex. 13,  
27 at 59). In addition, Staff points out that Qwest's cost studies included various materials at costs that  
28 were excessive (Tr. 804-807, 1131-1133). Based on the record, we agree with Staff that Qwest has

1 failed to sustain its burden of proof on this issue and that Qwest's cost study overstates its materials  
2 costs. Accordingly, material costs should be reduced by 50 percent to more accurately reflect the  
3 material costs in a forward-looking, least-cost environment.

4 **G. Engineering Costs**

5 We have found that Qwest's proposed engineering charge for collocation should be reduced  
6 by one-half to recognize the excessiveness of its proposed charges. Staff proposes that this reduction  
7 in engineering costs should apply not only to the "space construction" element of collocation, but to  
8 other engineering charges as well.

9 Our adoption of Mr. Lathrop's recommendation earlier in this Decision was limited to  
10 reducing collocation engineering charges by one-half (See, AT&T/WorldCom/XO Ex. 13, at 45-46).  
11 The engineering charge for CLEC-to-CLEC connections is specifically addressed in that section  
12 (RO&O at 48).

13 With respect to line sharing engineering, WorldCom argues that, although Qwest accepted  
14 Mr. Lathrop's recommendation of ten hours for CLEC-to-CLEC engineering costs, no similar  
15 adjustment was made for line sharing even though the functions performed are identical (WorldCom  
16 Ex. 13, at 47-48). Staff witness Dunkel agreed with Mr. Lathrop's proposal (Staff Ex. 32, Sched.  
17 WD-17). We agree with WorldCom and Staff that, since there is no distinction between the duties  
18 performed for engineering CLEC-to-CLEC connections and line sharing, Mr. Lathrop's  
19 recommendation should be adopted and the line sharing engineering should be modified consistent  
20 with WorldCom's proposal.

21 With respect to engineering a collocation bay related to line sharing, Qwest proposed that the  
22 charge for engineering a bay should apply each time a CLEC requires engineering of even a single  
23 shelf within the bay. Staff recommended that, because there are eight shelves in a bay, a lower  
24 engineering fee should apply when an additional shelf is added to an existing bay since that bay  
25 would already exist. We agree with Staff's analysis of this issue and clarify that the line sharing  
26 engineering charge should be reduced for subsequent shelves ordered within a bay. The rates  
27 recommended by Staff should be adopted as set forth in Staff Exhibit 32, Schedule WD-17

28

1           **H.     Power Cables**

2           WorldCom contends that the proper collocation power cable length for Arizona should be 70  
3 feet. Qwest, on the other hand, claims the average length of cables in Arizona running directly to the  
4 power board is 177 feet and the average cable length running to the battery distribution fuse board  
5 (“BFDB”) is 80 feet. Qwest witness Fleming stated that Qwest’s model used lengths of 183 and 83  
6 feet for cable running to the power board and BFBD, respectively, and therefore the model’s results  
7 are reasonably reflective of actual results in Arizona (Qwest Ex. 8, at 79).

8           We believe that the power cable length to be employed in this case should be 70 feet. We  
9 agree with WorldCom that using a 70 foot cable length is consistent with Qwest’s own space rent  
10 study which includes a standard length for cabling for a typical central office. The adoption of this  
11 shorter cable length is also consistent with the observance of a forward-looking network that includes  
12 modern central offices requiring shorter cable lengths.

13           **I.     Non-Recurring Charges**

14                 **1.     DS1 and DS3 Loops**

15           We have found that the CLEC sponsored non-recurring charge (“NRC”) model properly  
16 recognizes the efficiency that will occur in a forward-looking network and we have adopted the  
17 CLEC model. Staff points out that, although this conclusion addresses most of the NRCs, Qwest has  
18 proposed some NRCs, or a combination of NRCs, that are in addition to those proposed by the  
19 CLECs. Staff claims that Qwest is taking the position that, for any variations from the CLECs’  
20 supporting NRC schedule (Lathrop Ex. RL-2), Qwest’s proposed NRCs would apply. As an  
21 example, Staff states that Qwest proposed a NRC of \$144.15 for the first “DS1 Loop Installation,”  
22 while the CLEC NRC model establishes a rate of \$23.40 for this service. However, according to  
23 Staff, Qwest is attempting to recover a proposed NRC of \$153.26 for a slightly different DS1  
24 installation with “coordinated installation without cooperative testing.” Staff argues that Qwest’s  
25 position would create the anomalous situation where a DS1 loop would be installed for \$23.40 but an  
26 almost identical installation that is a “coordinated installation without cooperative testing” would  
27 have a rate of \$153.26.  
28



1 Qwest argues that the CLEC NRC model does not include costs for coordinated installations,  
2 coordinated installations with testing, and DS1 and DS3 installations. For coordinated installations,  
3 Qwest claims that it is necessary to coordinate with the CLEC to make sure the line is cut over.  
4 When testing is also requested by the CLEC, Qwest contends that it must send a technician out to the  
5 customer premises and test the line to ensure that it is working properly. Qwest argues that these are  
6 services required under its SGAT for which real costs are incurred by the Company to provision  
7 service to CLECs. Qwest asserts that the CLECs' assumption that these installations can be  
8 performed by a simple electronic transaction is unrealistic and will result in under-recovery of costs.

9 The CLECs contend that any testing costs incurred by Qwest, at the CLECS' request, could  
10 be recovered through a miscellaneous charge. With respect to coordinated cut-overs, the CLECs  
11 claim that the same steps are involved as for a non-coordinated cut-over and, therefore, no additional  
12 charges should be assessed by Qwest.

13 We agree with Staff and the CLECs that the anomalous results created by Qwest's proposed  
14 use of its NRC study were not intended. As Staff points out, Qwest's assertion that coordinated cut-  
15 overs are significantly more expensive than non-coordinated cut-overs is belied by Qwest's own  
16 pricing proposal for installation of a DS1 loop. For DS1 loop installations, Qwest has proposed a  
17 NRC of \$144.15 for non-coordinated and \$153.26 for coordinated cut-overs. The minimal difference  
18 between the two types of installations supports the CLECs' claim that no separate additional charge  
19 should apply for coordinated installations.

20 We also agree with the CLECs that the CLEC NRC model provides costs for all NRCs that are  
21 required for providing access to UNEs. Therefore, the CLEC model shall be adopted for purposes of  
22 establishing NRC prices in this docket.

## 23 2. Connection Charge NRCs

24 Staff also claims that Qwest's position on certain connection charge NRCs creates  
25 inconsistent results. As indicated above, we have adopted the CLECs' NRC model, the charges for  
26 which are incorporated in Mr. Lathrop's Exhibit RL-2. Mr. Lathrop's exhibit includes a NRC of  
27 \$7.60 for connecting DS1 and DS3 interoffice, but is silent as to the connection charges for similar  
28

1 facilities that are DS0, OC-3, or OC-12. Staff claims that Qwest is taking the position that the NRCs  
2 for these items should be set at the amount proposed by Qwest (*i.e.*, in excess of \$300).

3 We agree with Staff's arguments on this issue. It is not our intent to produce the result  
4 whereby Qwest's NRC for installing a DS0, OC-3, or OC-12 would be over \$300, while installing a  
5 DS1 or DS3 would result in a NRC of only \$7.60. We therefore adopt Staff's clarifying  
6 recommendation that the \$7.60 connection charge and \$0.53 disconnection charge contained in Mr.  
7 Lathrop's exhibit should also apply to all similar services including the DS0, OC-3, and OC-12  
8 installations.

### 9 3. Non-Recurring Charges for Features

10 Staff raised a related issue regarding NRCs for certain "features" for which Qwest had  
11 proposed NRCs but no separate NRC had been proposed by the CLECs.

12 At the oral argument, the parties agreed that this issue would be addressed in the "switching  
13 issues" phase of this proceeding, Phase II A (Oral Arg. Tr. 52). In accordance with the agreement of  
14 the parties, this issue will be considered in the Phase II A Order.

#### 15 J. Overhead Factor

16 We have found that Qwest's proposed overhead factor of 13.0 percent significantly overstated  
17 the Company's overhead costs, and have adopted the HAI model's default 10.4 percent overhead  
18 factor. Staff questioned what overhead factors should be used in the models other than the HAI  
19 model (such as the collocation model). Staff contends that in the *First Cost Docket*, Decision No.  
20 60635, the Commission adopted a 15 percent overhead factor, which included all directly attributable  
21 costs and common costs. Staff argues that the directly attributable costs included network operations  
22 and general support asset expenses. As such, Staff recommends that the Commission adopt the same  
23 15 percent overhead factor in this proceeding, without separate recognition of directly attributable  
24 and common costs.

25 The Commission adopted a 15 percent overhead factor in the *First Cost Docket* Decision, but  
26 separately recognized that an input for network operations was appropriate (*See*, Tr. 1444-1445).

27 We agree with Qwest that the 15 percent overhead factor advocated by Staff should be  
28 rejected. Although it is unclear what overhead costs were intended to be captured in the 15 percent

1 factor adopted in Decision No. 60635, the fact that the Decision separately recognized network  
2 operations expense lends credence to Qwest's argument that directly attributable costs were not  
3 actually captured within the 15 percent factor. Moreover, since we have adopted separate treatments  
4 for both network operations and general support assets costs, it is appropriate to adopt the 10.4  
5 overhead factor advocated by the CLECs for both the HAI model and the other models adopted in  
6 this proceeding.

7 **K. Access to Poles, Ducts, Conduits, and Rights of Way**

8 Qwest proposed a NRC of more than \$460 per manhole as a charge for field verification of  
9 conduit occupancy for determining whether sufficient space is available on a given route requested  
10 by a CLEC for placing its own fiber. We have found that Qwest's proposed charge was excessive  
11 and therefore limited the Company's charges for conduit occupancy verification to no more than two  
12 hours of engineering time, with the charge applying to no more than half of the manholes along the  
13 conduit route requested by the CLEC.

14 Staff requests that the rate for each of the other items in this category (i.e, access to poles,  
15 ducts, and rights-of-way) be set at the same proportion to the Qwest proposed rate as the rate adopted  
16 for conduit occupancy.

17 Although the NRCs associated with these various services are grouped together in a common  
18 price schedule category, we have addressed only the conduit occupancy charge, which was singled  
19 out for criticism by CLEC witness Knowles (AT&T/WorldCom Ex. 11, at 17-19). Mr. Knowles'  
20 testimony was limited to that specific charge in Qwest's cost proposal. No witness took issue with  
21 the other fees in this category and we decline, therefore, to extend this finding beyond that specific  
22 charge.

23 **L. Power and Land and Building Factors**

24 WorldCom witness Lathrop alleged that Qwest improperly applies power and land and  
25 building factors to cable racking and other investments (WorldCom Ex. 13, at 40). Mr. Lathrop  
26 claims that Qwest applies these factors as a means of spreading the costs of its central office power  
27 plants, as well as land and building investments, over its various services. According to Mr. Lathrop,  
28 collocation service is different from other general services because collocators pay directly for their

1 proportion of Qwest's power plant, and for their proportionate share of Qwest's land and building  
2 investment, through the space rental charge assessed to collocators (*Id.*). WorldCom claims that  
3 allowing Qwest to recover these general factors from collocators would result in double recovery of  
4 Qwest's costs.

5 We agree with Qwest that WorldCom's arguments are misplaced. As Qwest explained, the  
6 space within a CLEC collocation area is not assessed power and land and building factors under  
7 Qwest's cost study. However, outside the CLECs' collocation cages, where CLEC equipment runs  
8 through Qwest's central office space, it is appropriate for Qwest to assess these factors. We therefore  
9 reject WorldCom's position on this issue.

10 **M. HVAC and Electrical Costs**

11 WorldCom also alleges that Qwest double counts HVAC and electrical costs. According to  
12 Mr. Lathrop, this double counting results because Qwest adds HVAC and electrical costs as  
13 components of its "standard space construction" cost, while retaining HVAC and electrical costs in  
14 its per square foot floor space rental cost (*Id.* at 51-52).

15 Qwest contends that it specifically backed out \$23.51 per foot for mechanical and electrical  
16 delivery in its cost study. Qwest claims that Staff witness Dunkel verified that such costs were  
17 backed out of Qwest's study (*See*, Staff Ex. 30, at 23).

18 The record supports Qwest's contention that costs were backed out of Qwest's cost study in  
19 order to avoid the double recovery of HVAC and electrical costs for collocators (Qwest Ex. 8, at 73).  
20 In addition, we have adopted WorldCom's recommendation to reduce Qwest's proposed floor space  
21 rental charge by 10 percent, to no more than \$3.56 per square foot because it is not clear that all  
22 duplicative costs for HVAC, electrical, architectural fees, land costs, site work, landscaping, and  
23 Qwest project management were removed from Qwest's proposed charge. Based on the record  
24 evidence, we do not believe that any additional adjustments are appropriate

25 **N. Individual Case Basis ("ICB") Pricing**

26 WorldCom opposes Qwest's proposal to price certain services on an ICB basis, such as for  
27 Construction, Adjacent Collocation, and Field Connection Point Construction (WorldCom Ex. 13, at  
28

1 32)<sup>35</sup>. WorldCom claims that such ICB charges are problematic because they can only be quantified  
2 after a request is made for the service by a CLEC. WorldCom contends that ICB pricing also puts  
3 CLECs at a competitive disadvantage because of delays in getting a confirmed price, as well as  
4 Qwest's superior negotiating position if a CLEC has a need for a specific collocation space.  
5 WorldCom also states that ICB pricing of services gives Qwest little incentive to pursue efficiencies  
6 and improve the collocation implementation process (*Id.* at 34).

7 Qwest contends that ICB pricing is sometimes necessary because, for certain services, the  
8 Company has no experience or history that allows it to develop a cost study (Tr. 302). As an  
9 example, Qwest witness Hubbard stated that the Company has no experience in pricing a service such  
10 as adjacent collocation (collocation space placed just outside a central office due to space limitations)  
11 because no CLEC has previously requested the service (Tr. 306).

12 Although ICB pricing is, for many reasons, less desirable than UNE prices supported by a  
13 cost study, for the few remaining services offered on an ICB basis there is currently no alternative. If  
14 CLECs wish to order services such as Adjacent Collocation it is better to have the service available,  
15 even at a negotiated price, than to not have the service available at all. However, Qwest is directed to  
16 develop cost studies for all services offered in this docket on an ICB price basis in Phase III. Qwest  
17 should make every effort to develop reasonable cost-based prices for such services even if it has little  
18 or no experience actually provisioning the services.

19 **O. Market Pricing for Information Services and Databases**

20 WorldCom claims that Qwest has proposed unsubstantiated market-based pricing for  
21 numerous information services and database elements. WorldCom contends that there is not  
22 sufficient evidence in the record to determine if these market-based prices are reasonable.  
23 WorldCom argues that Qwest's witnesses were unable to explain the basis for these prices, other than  
24 to observe that there is a "profit" factor built into the rates (Tr. 565, 572-573). WorldCom cites to  
25 Decision No. 63487 (March 30, 2001) wherein the Commission approved a settlement agreement in  
26 Qwest's retail rate case that provided, among other things, that "Basket 2 services (including

27 \_\_\_\_\_  
28 <sup>35</sup> Qwest submitted a cost study for Remote Collocation in the Phase II A proceeding, thereby removing that ICB issue fr  
proceeding.

1 Discount Wholesale Offerings, and wholesale services such as PAL lines) will remain at their current  
2 rates until the specific pricing rules are changed or the Commission determines that other prices are  
3 appropriate" (Decision No. 63487 at 5). According to WorldCom, until Qwest can provide support  
4 for the reasonableness of these market-based prices, the Commission should strike all such prices.

5 Qwest takes the position that the FCC has "preempted" the Commission's authority to require  
6 that these market-based services be cost-based. According to Qwest, the services at issue have been  
7 determined by the FCC to be competitive wholesale services that are available from alternative  
8 providers and that it has provided prices for the services in this docket merely as a "courtesy" (Tr.  
9 688). Qwest claims that these rates do not need to be cost-based to be considered reasonable, and the  
10 protection against unreasonable rates is the competitive market. Qwest argues that the Commission's  
11 jurisdiction over the reasonableness of the rates is essentially limited to determining whether the rates  
12 are discriminatory amongst various CLECs. Qwest also contends that, as a practical matter, there is  
13 no alternative to the rates proposed by Qwest because the CLECs did not present any alternative  
14 prices for the Commission's consideration (*See*, Oral Arg. Tr. 86-98).

15 In the passage quoted above from Qwest's last rate case Decision, it is clear that the  
16 Commission intended to retain jurisdiction over the reasonableness of the wholesale rates contained  
17 in Basket 2 of Qwest's rates. We do not agree with Qwest's view of the limited scope of our  
18 jurisdiction over market-based rates and, although no alternative prices have been proposed by the  
19 intervenors in this proceeding, we do not believe that the record supports adoption of Qwest's pricing  
20 proposals on these issues.

21 In Qwest's last rate case, the Commission adopted a settlement agreement that provided,  
22 among other things, that Basket 2 (wholesale) services "will remain at their current rates until the  
23 specific pricing rules are changed or the Commission determines that other prices are appropriate"  
24 (Decision No. 63487, at 5). Qwest has not previously submitted these services for a determination  
25 that they should be deemed "competitive." Nor has Qwest provided sufficient justification for the  
26 reasonableness of its proposed rates, in the form of cost studies or other supporting documentation  
27 (Tr. 689).

28

1           Given the lack of supporting evidence, it is not appropriate at this time to approve Qwest's  
2 proposed prices for these services. If Qwest desires to have these services deemed competitive  
3 services, it should submit the appropriate tariff filings pursuant to the Commission's rules and  
4 Decision No. 63487. Until the Commission orders otherwise, the proposed prices will be denied.

5           **P.     Directory Assistance Listing ("DAL") Information Database**

6           WorldCom contends that Qwest must provide DAL information at cost-based, non-  
7 discriminatory rates. WorldCom asserts that, although the FCC has determined in the *UNE Remand*  
8 *Order* that directory assistance and operator services ("OS/DA") are not considered UNEs if  
9 customized routing is provided, DAL is distinguishable from OS/DA in that it is the underlying  
10 customer listing information that assists callers in finding a customer listing or completing a call.

11           Qwest argues that there is no legal basis for subjecting it to regulated rates for providing  
12 access to its DAL database because that database is part of the OS/DA UNE that the FCC removed  
13 from the list of elements to be unbundled, upon determining that it does not meet the "impairment"  
14 standard of 47 U.S.C. §251(d)(2). Qwest claims that the FCC's decision is dispositive of the issue  
15 raised by WorldCom and, therefore, the DAL database is not subject to cost-based UNE pricing.

16           According to WorldCom, even if the DAL database is no longer considered a UNE by the  
17 FCC, there is nothing that prevents the Commission from declaring it as such under §251 of the 1996  
18 Telecom Act. WorldCom contends that Qwest remains the only reliable source for DAL information  
19 and that, without such data, CLECs are placed at a direct competitive disadvantage. WorldCom  
20 claims that several states have treated DAL as a UNE, including New York and Texas, which have  
21 set DAL database prices at levels significantly lower than those proposed by Qwest. WorldCom  
22 witness Caputo testified that the DAL database rates set in Texas and New York range from \$0.001  
23 to \$0.005 per listing, compared to Qwest's proposed rate of 2.5¢ per listing (WorldCom Ex. 17, at  
24 11).

25           We agree with WorldCom that the FCC's UNE Remand Order does not preclude the  
26 Commission from setting reasonable DAL prices. However, as WorldCom suggested at the oral  
27 argument, the cost-based analysis of Qwest's provision of DAL database service would need to be  
28 addressed in a subsequent phase of this docket (Oral Arg. Tr. 99). Accordingly, we direct Qwest in

1 Phase III to submit a cost study that identifies its TELRIC-based costs in provisioning such service to  
2 CLECs.

3 **Q. ICNAM Database**

4 The proposed "ICNAM" service allows CLECs to query Qwest's ICNAM database to secure  
5 the listed name information associated with a requested telephone number, in order to deliver that  
6 information to the CLECs' end users. WorldCom proposed that the ICNAM database be made  
7 available to CLECs on a "batch" basis rather than on a per query basis.

8 The parties have agreed that, because this issue is being addressed through the Commission's  
9 §271 Workshop process, there is no need to separately decide the issue in this proceeding (*See*, Oral  
10 Arg. Tr. 102-103).

11 **R. Transport**

12 Qwest contends that, since we have adopted the HAI model sponsored by the CLECs, the  
13 outputs derived from the HAI model for transport rates should also be adopted. AT&T argues that it  
14 never sponsored the HAI model for the purpose of establishing transport rates but, rather, proposed  
15 that transport rates be determined by making adjustments to the Qwest model. AT&T states that  
16 Qwest never questioned the CLECs' transport pricing proposal until Qwest's exceptions to the  
17 Recommended Order were filed. AT&T claims that it is inappropriate to use the HAI model for  
18 transport pricing because HAI develops averaged pricing rather than breaking transport into a fixed  
19 piece, and then adding a per mile charge. AT&T states that this is the manner in which transport is  
20 typically priced and it is the method that was advocated by all parties in this proceeding.

21 AT&T further contends that it could not have used HAI to develop transport rates in this case,  
22 because it would have needed wire center specific information regarding the amount of traffic  
23 flowing between Qwest's central offices to develop such rates, and that information is within Qwest's  
24 exclusive control. AT&T also asserts that the Colorado Commission recently determined that  
25 average transport prices produced by the HAI model would produce discriminatory results because a  
26 CLEC that orders a shorter transport would be paying more than the cost of the element. AT&T  
27 argues that, since no party in this case advocated use of HAI for setting transport prices, it is  
28 inappropriate to use HAI for that purpose.



1 Qwest contends that AT&T's proposed rates for dedicated transport would fall significantly  
2 below the HAI model's results, below the norm in Qwest's region, and below the rates adopted in the  
3 states for which the FCC has granted Section 271 approval. Qwest argues that AT&T has not  
4 provided any plausible reason for selectively abandoning its own cost model for setting transport  
5 prices and that AT&T's own witness, Mr. Denney, endorsed the use of the HAI model of setting  
6 transport prices. Mr. Denney testified that the HAI model "employs numerous optimization routines  
7 that ensure ... efficient interoffice fiber optics transport rings" (AT&T/WorldCom Ex. 3, at 12).

8 Qwest further contends that although it was advocating the use of its own ICM model for both  
9 the loop cost and transport, it is entitled to ask that the HAI model be applied consistently and not just  
10 where it creates the greatest advantage for the CLECs.

11 We believe that consistency requires adoption of the HAI model's results for both loop costs  
12 and transport. As Qwest points out, any UNE pricing inquiry necessarily involves some cost  
13 averaging among different kinds of facilities. Even loop costs within a given zone require averaging  
14 of costs for different loop lengths within that zone. Accordingly, we will adopt the HAI model's  
15 results for purposes of pricing transport in this proceeding.

16 Although we are adopting the HAI model's results at this time, we believe that this issue  
17 should be re-examined in Phase III so that a full record may be developed. AT&T points out that in  
18 order to achieve appropriately deaveraged prices, it needs to input wire center specific data that is in  
19 Qwest's exclusive control. In Phase III, Qwest should provide the parties, through discovery, the  
20 wire center specific information necessary for the CLECs to determine how the HAI model can be  
21 deaveraged into appropriate fixed and per mile components.

22 **S. Campus Wire Element**

23 During the oral argument, counsel for Qwest stated that there was not sufficient evidence  
24 presented at the hearing to determine a campus wire rate, as was advocated by Cox (Oral Arg. Tr.  
25 120-122). Qwest is attempting to reargue an issue that we have fully discussed and decided. We  
26 have concluded that Qwest should price both campus wire and intrabuilding cable at the same "on-  
27 premises wire" price, as proposed by Cox. No additional discussion is required regarding this issue.

28

1           **T.     Miscellaneous Issues**

2           Staff stated that that there were a number of issues for which there was no evidence in the  
3 record to base a decision. Staff specifically named multiplexing, OC-3 and OC-12 UDIT, OC-12 and  
4 OC-48 (extended unbundled dedicated interoffice transport and side channelization), unbundled dark  
5 fiber, trunk ports, SS7, line information database, 8XX database query service, miscellaneous  
6 elements, channel regeneration, and UNE-P new connections as examples of issues where sufficient  
7 evidence does not exist in the record for purposes of rendering a decision (Staff Exceptions at 9).  
8 Staff suggests that, if no existing rate for these elements exists, the Commission should set interim  
9 rates using a default calculation based on a ratio of the statewide average loop rate approved by the  
10 Commission compared to the statewide average loop rate proposed by Qwest in this proceeding (*Id.*  
11 at 10).

12           AT&T argues that, “[B]ecause of the overwhelming number of rate elements proposed by  
13 Qwest in this proceeding, no party could specifically analyze each proposed cost study and model”  
14 (AT&T Response to Questions Raised During January 25, 2002 Oral Argument, at 7). AT&T  
15 recommends that, for those elements that the CLECs and Staff have been unable to provide specific  
16 evidence regarding the Qwest proposals, the Commission should adopt Staff’s recommendation to set  
17 interim rates based on a default calculation. AT&T argues that, at a minimum, the Commission  
18 should adjust the rates proposed by Qwest to recognize that those rates are based upon excessive  
19 overhead calculations as determined by the Recommended Order.

20           Qwest opposes Staff’s interim rate proposal for these miscellaneous elements. Qwest argues  
21 that it presented cost studies for its proposed rates and the time to challenge its studies or propose  
22 adjustments was during the evidentiary hearing.

23           We do not believe it is appropriate to adopt prices for services for which there is not an  
24 adequate record. Therefore, we will not adopt Qwest’s proposed rates for these miscellaneous  
25 services; nor will we adopt Staff’s proposed formula for calculating prices for these services. We  
26 believe it is in the best interests of all parties to promptly meet to attempt to resolve the pricing issues  
27 associated with these services and, if necessary, resolve them in Phase III.

28



1 prices established in other states, although obviously not binding, can be a useful tool for determining  
2 whether the costs and rates proposed in this case are within a zone of reasonableness.

3 As stated throughout this Decision, we believe that Qwest's UNE costs and prices must be  
4 reviewed in the context of an efficient provider's forward-looking network. We believe that the  
5 findings made herein are fully supported by the record, they reflect our weighing of the competing  
6 interests, and implement the 1996 Act in a manner that will provide benefits to Arizona customers.  
7 As such, we believe that the individual issues addressed herein have been decided in a reasonable and  
8 objective manner. Accordingly, we will adopt the findings stated herein.

9 \* \* \* \* \*

10 Having considered the entire record herein and being fully advised in the premises, the  
11 Commission finds, concludes, and orders that:

#### 12 FINDINGS OF FACT

13 1. Qwest is certificated to provide local exchange and intraLATA telecommunications  
14 services to the public in Arizona, pursuant to Article XV of the Arizona Constitution.

15 2. In the *First Cost Docket Order* (Decision No. 60635), the Commission set prices for  
16 interconnection and UNEs, as well as wholesale discounts.

17 3. The docket in this case was opened to address Qwest's pricing of wholesale products  
18 and services. Phase I of this proceeding, addressing geographic deaveraging, was considered on an  
19 expedited basis and resulted in a Decision being issued on July 25, 2000 (Decision No. 62753).

20 4. Phase II of this docket was opened in 2000 to address issues raised by subsequent  
21 FCC orders and judicial decisions, and to establish permanent geographically deaveraged rates.

22 5. On December 14, 2000, a Procedural Order was issued which stated that Qwest's  
23 existing UNE rates, as determined in Decision No. 60635, would also be reviewed in this Phase II  
24 proceeding.

25 6. Intervention in this case was granted to AT&T Communications of the Mountain  
26 States, Inc., XO Arizona, WorldCom, Inc., Cox Arizona Telecom, Inc., Z-Tel Communications, Inc.,  
27 McLeodUSA Telecommunications Services, Inc., Sprint Communications Co., L.P., and Time  
28 Warner Telecom of Arizona, LLC.

- 1           7.       Cost studies were submitted for recurring and nonrecurring charges by Qwest and the  
2 CLECs.
- 3           8.       Pre-filed direct expert testimony was filed by Qwest, Staff, and the intervenors
- 4           9.       The hearing in this docket commenced on July 16, 2001 and concluded on July 31,  
5 2001.
- 6           10.       On August 31, 2001, the parties filed their initial post-hearing briefs.
- 7           11.       On September 24, 2001, the parties filed their post-hearing reply briefs.
- 8           12.       On November 8, 2001, a Recommended Opinion and Order was issued.
- 9           13.       On December 12, 2001, various parties filed exceptions to the Recommended Order.
- 10          14.       On December 19, 2001, compliance price schedules were filed.
- 11          15.       On January 3, 2002, Qwest filed a response to the other parties' exceptions.
- 12          16.       Oral arguments were held on January 25, 2002 to discuss issues that were unresolved  
13 by the Recommended Opinion and Order.
- 14          17.       On February 1, 2002, the CLECs and Staff filed responses to Qwest's exceptions.
- 15          18.       On February 8, 2002, Qwest filed a reply to the CLEC and Staff responses.
- 16          19.       On March 8, 2002, a Supplement to the Recommended Opinion and Order was issued.  
17 Exceptions to the Supplement were filed by various parties.
- 18          20.       On April 11, 2002, the Commission conducted an Open Meeting to discuss the  
19 Recommended Order. The Commission directed that the record in this matter be reopened in order to  
20 gather year 2000 customer location and line count by location data. A second Open Meeting was  
21 held on this matter on May 30, 2002.
- 22          21.       The Commission has analyzed the issues and the evidence as presented by the parties  
23 and has resolved the issues as stated in the Discussion above.
- 24          22.       The Commission hereby adopts the Discussion and incorporates the parties' positions  
25 and the Commission's resolution of the issues herein.

#### CONCLUSIONS OF LAW

- 26
- 27          1.       Qwest Corporation is a public service corporation within the meaning of Article XV of  
28 the Arizona Constitution.

1 2. Qwest Corporation is an incumbent LEC within the meaning of 47 U.S.C. §252.  
2 3. The Commission has jurisdiction over the parties and of the subject matter in this  
3 docket.

4 4. The Commission's resolution of the issues pending herein is just and reasonable,  
5 consistent with the 1996 Act, FCC Orders and Rules, the Commission's Rules, and all applicable  
6 law, and is in the public interest.

7 5. The burden of proof to establish a proper cost basis under the 1996 Act is on Qwest  
8 Corporation.

9 6. The prices for unbundled network elements are "based on the cost (determined  
10 without reference to a rate of return or other rate-based proceeding) of providing the interconnection  
11 or network element...[and are] nondiscriminatory."

12 **ORDER**

13 IT IS THEREFORE ORDERED that the Commission hereby adopts and incorporates as its  
14 Order the resolution of the issues contained in the above discussion.

15 IT IS FURTHER ORDERED that the parties shall file within 30 days of the date of this  
16 Decision, a joint schedule setting forth all rates and charges approved herein.

17 IT IS FURTHER ORDERED that Qwest shall contact the other parties to this proceeding  
18 within 30 days of the date of this Decision for purposes of establishing a collaborative process with  
19 respect to the line splitting issue.

20 IT IS FURTHER ORDERED that to the extent issues are not addressed in this Decision, such  
21 issues are deferred to Phase III, and the rate treatment of those issues shall be as set forth in the  
22 discussion herein.

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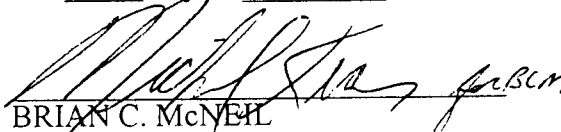
IT IS FURTHER ORDERED that the rates and charges approved herein shall be effective immediately.

IT IS FURTHER ORDERED that this Decision shall become effective immediately.

BY ORDER OF THE ARIZONA CORPORATION COMMISSION.

		
CHAIRMAN	COMMISSIONER	COMMISSIONER

IN WITNESS WHEREOF, I, BRIAN C. McNEIL, Executive Secretary of the Arizona Corporation Commission, have hereunto set my hand and caused the official seal of the Commission to be affixed at the Capitol, in the City of Phoenix, this 12<sup>TH</sup> day of JUNE, 2002.

  
 BRIAN C. McNEIL  
 EXECUTIVE SECRETARY

DISSENT \_\_\_\_\_  
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SERVICE LIST FOR:

QWEST CORPORATION

DOCKET NO.

T-00000A-00-0194

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