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IDAHO PUBLIC
UTILITIES COMMISSION

BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

IN THE MATTER OF DETERMINING PRICES FOR UNBUNDLED NETWORK ELEMENTS (UNEs) IN QWEST CORPORATION'S STATEMENT OF GENERALLY AVAILABLE TERMS (SGAT)	))))	**CASE NO. QWE-T-01-11**

DIRECT TESTIMONY OF

Teresa K. Million

QWEST CORPORATION

November 12, 2003

TESTIMONY INDEX

I. IDENTIFICATION OF WITNESS 1

II. PURPOSE OF TESTIMONY 3

III. TELRIC PRINCIPLES 8

A. SUMMARY OF TELRIC PRINCIPLES 8

B. THE TELECOMMUNICATIONS ACT AND FCC ORDER 18

IV. THE TELRIC STUDIES IN GENERAL 25

V. THE QWEST INTEGRATED COST MODEL 29

A. ICM MODEL DESCRIPTION 32

B. ICM RESULTS 34

C. ICM MODULES 35

1. The Loop Module *35*

2. The Switching Module *35*

3. Transport Module *52*

4. Capital Cost Module *56*

5. Expense Factors Module *57*

VI. THE ENHANCED NONRECURRING COST STUDIES (ENRC) 61

VII. OTHER METHODOLOGY ISSUES 65

A. FILL FACTORS 66

B. COST OF MONEY 71

C. DEPRECIATION LIVES 74

VIII. THE TELRIC STUDIES 75

A. THE ICM ELEMENTS 76

1. UNE Loop Deaveraging *78*

2. Switching *80*

3. Transport *80*

4. Other UNEs Calculated in ICM *84*

B. THE SEPARATE COST STUDIES 85

1. The UNE Remand Studies *87*

2. Other Stand Alone Cost Studies *95*

C. CUSTOMER TRANSFER CHARGE 110

IX. LINE SHARING 111

X. COLLOCATION 126

XI. CONCLUSION 144

I. IDENTIFICATION OF WITNESS

1 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS AND**
2 **POSITION WITH QWEST CORPORATION.**

3 A. My name is Teresa K. (Terri) Million. My
4 business address is 1801 California Street, Room 2050,
5 Denver, Colorado 80202. I am employed by Qwest Services
6 Corporation as a Staff Director in the Public Policy
7 organization. In this position, I am responsible for
8 preparing testimony and testifying about Qwest
9 Corporation's cost studies in a variety of regulatory
10 proceedings.

11 **Q. WHAT IS YOUR EDUCATIONAL BACKGROUND AND**
12 **PROFESSIONAL EXPERIENCE?**

13 A. I received a Juris Doctor from the University of
14 Denver, College of Law in 1994 and am licensed to practice
15 law in the state of Colorado. I also have a Master of
16 Business Administration from Creighton University and a
17 degree in Animal Science from the University of Arizona.

18 I have more than 20 years experience in the
19 telecommunications industry with an emphasis in tax and

1 regulatory compliance. I began my career with Qwest,
2 (formerly Northwestern Bell Telephone Company and U S WEST)
3 in 1983. Between 1983 and 1986 I administered Shared
4 Network Facilities Agreements between Northwestern Bell and
5 AT&T that emanated from divestiture. I held a variety of
6 positions within the U S WEST, Inc. tax department over the
7 next ten years, including tax accounting, audit, and state
8 and federal tax research and planning. In 1997, I assumed
9 a position with responsibility for affiliate transactions
10 compliance, specifically compliance with section 272 of the
11 Telecommunications Act of 1996 (the "Act"). 47 U.S.C.
12 §272. In September 1999, I began my current assignment as
13 a cost witness. In this position, I am responsible for
14 managing cost issues, developing cost methods and
15 representing Qwest in proceedings before regulatory
16 commissions.

17 **Q. HAVE YOU PREVIOUSLY APPEARED BEFORE THE IDAHO**
18 **PUBLIC UTILITIES COMMISSION?**

19 A. This is the first docket in which I have appeared
20 in Idaho.

1 **Q. HAVE YOU TESTIFIED BEFORE OTHER STATE REGULATORY**
2 **COMMISSIONS?**

3 A. Yes. I have presented cost testimony before
4 commissions on the issue of determining rates for unbundled
5 network elements ("UNEs") in Arizona, Montana, New Mexico,
6 South Dakota, Washington and Wyoming. In addition, I have
7 submitted testimony related to section 272 of the Act in
8 Arizona, Colorado and Nebraska. I have also filed cost
9 testimony in Colorado related to Operator Services.

II. PURPOSE OF TESTIMONY

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

11 A. The purpose of my testimony is to present Qwest's
12 Idaho recurring and nonrecurring incremental cost data for
13 unbundled network elements and interconnection services.
14 These data are utilized as the basis for Qwest's pricing
15 recommendations as presented in my Exhibit No. 1.

16 While Qwest believes that its cost studies produce
17 appropriate Total Element Long Run Incremental Cost
18 ("TELRIC") results under the FCC's pricing rules, Qwest
19 recognizes that in many cases the FCC and state commissions

1 have accepted a range of prices for unbundled elements that
2 have been deemed reasonable for purposes of TELRIC.
3 Therefore, although Exhibit No. 1 represents Qwest's TELRIC
4 advocacy in this cost proceeding, I also present, in
5 supplemental testimony, Attachment A to the Motion for
6 Approval of Negotiated Rates ("Motion for Approval") which
7 contains a list of UNE prices that have been agreed upon
8 during negotiations with Commission Staff.

9 **Q. WHY ARE YOU FILING THESE COST STUDIES AT THIS**
10 **TIME?**

11 A. Qwest originally filed testimony and cost studies
12 in this docket on June 29, 2001. Since that time, to
13 assist in negotiating with Commission Staff to reach
14 agreement on a large number of UNE rates, Qwest has
15 provided a variety of cost study runs reflecting different
16 depreciation lives and costs of capital. Qwest also filed
17 supplemental testimony to make certain corrections and/or
18 revisions to its original filing. As a result, Qwest has
19 provided a large amount of data representing many different
20 steps along the way to the present.

1 In the meantime, Qwest has updated several of its cost
2 studies and models to reflect more current data, added a
3 number of UNEs to the list of elements that were not a part
4 of the original filing, and calculated more current
5 factors. Thus, when Qwest and Commission Staff reached
6 agreement on the first set of rates included in the initial
7 phase of negotiation, it was agreed that Qwest would
8 withdraw all of its original testimony and cost studies and
9 models and replace them with testimony, cost studies and
10 models that reflect the changes, corrections and updates
11 that have occurred in the interim.

12 **Q. IF QWEST IS PRESENTING NEW COST RESULTS, DOES IT**
13 **INTEND TO SEEK RATES FOR ALL UNES?**

14 A. Yes. Exhibit No. 1 reflects the TELRIC rates for
15 all UNEs as produced by Qwest's cost studies and models.
16 Qwest intends to seek rates for all of the UNEs contained
17 in Exhibit No. 1. However, Attachment A to the Motion for
18 Approval, which is the same document that is attached to my
19 supplemental testimony as Exhibit No. 30, reflects rates
20 that have been agreed upon by Qwest and Commission Staff
21 during negotiations. For those elements, Qwest asks the
22 Commission to adopt the rates presented in Attachment A.

1 In addition, Qwest has executed an agreement with the
2 Commission that it will not seek rates in this cost docket
3 that are higher than its "benchmarked" rates for certain
4 elements. Benchmarking was the process Qwest followed
5 during the 271 filings to establish rates that reflected a
6 range that the TELRIC principles would produce using a
7 methodology developed by the FCC. It allowed the
8 Commission to establish rates for Idaho based on the
9 relationship of the rates produced by the FCC's Synthesis
10 Model ("SM") for Idaho to the rates it produced for a state
11 (Colorado) whose rates had been the subject of a TELRIC
12 proceeding. Although the Commission will see that Qwest's
13 cost studies produce TELRIC based rates that are higher
14 than the benchmark rates, Qwest is not seeking rates higher
15 than the benchmark rates at this time.

16 **Q. PLEASE DESCRIBE THE COST MODELS AND STUDIES THAT**
17 **YOU ARE PROVIDING AS A PART OF THIS TESTIMONY.**

18 A. My testimony introduces and describes the Qwest
19 Integrated Cost Model ("ICM"). The ICM is an integrated
20 cost model that calculates the recurring TELRIC for the
21 major unbundled network elements and interconnection
22 services. Additionally, I present Qwest's proposal for

1 deaveraging of the UNE loop, introduce the Qwest
2 collocation model and Line Sharing collocation study, and
3 discuss other recurring cost studies that are not part of
4 the ICM. The Collocation Model is an integrated model that
5 calculates both recurring and nonrecurring TELRIC for the
6 major collocation services. In addition, I present a
7 variety of stand-alone cost studies for collocation
8 services such as Space Optioning and Space Reservation.

9 I also introduce and describe the Qwest Enhanced
10 Nonrecurring Cost Studies ("ENRC") and present Qwest's
11 Idaho nonrecurring costs. The ENRC calculates the
12 nonrecurring TELRIC for all UNEs and interconnection
13 services. A complete listing of Qwest's cost studies, by
14 exhibit number and cost study ID number, is provided at the
15 end of this testimony in the Index of Exhibits.

16 **Q. ARE OTHER QWEST WITNESSES PROVIDING TESTIMONY**
17 **REGARDING COST ISSUES?**

18 A. Yes. Dick Buckley provides testimony that
19 describes in detail the methodology and assumptions
20 included in the Loop Module of the ICM.

1 **Q. HAS QWEST FILED COPIES OF EACH TELRIC STUDY,**
2 **ALONG WITH DETAILED STUDY DOCUMENTATION?**

3 A. Yes. My non-confidential cost study workpapers
4 (Exhibit Nos. 2 - 24) are provided electronically on
5 compact disc ("CD") including copies of each cost study.
6 The electronic documentation also includes all cost study
7 calculations (e.g., excel spreadsheets) and methodology
8 descriptions. In addition, the workpapers include the
9 supporting investment and expense cost models (along with
10 user manuals) used to calculate investments and expenses in
11 the studies. Using the workpapers, interested parties will
12 be able to follow the cost study calculations in each
13 TELRIC study, and replicate the Qwest TELRIC results, if
14 desired.

III. TELRIC PRINCIPLES

15 A. Summary of TELRIC Principles

16 **Q. PLEASE SUMMARIZE THE OVERALL ECONOMIC PRINCIPLES**
17 **THAT ARE APPLIED IN QWEST'S TELRIC STUDIES.**

18 A. The Qwest TELRIC studies identify the *forward-*
19 *looking* direct costs that are caused by the provision of an

1 interconnection service or network element in the *long run*,
2 plus the incremental cost of shared facilities and
3 operations. These studies identify *total element* costs -
4 the average incremental cost of providing the entire
5 quantity of the elements in the network. The assumptions,
6 methods, and procedures used in Qwest's cost studies are
7 designed to yield the forward-looking *replacement* costs of
8 reproducing the telecommunications network, considering the
9 most efficient, least-cost technologies that are currently
10 available.

11 **Q. HOW IS THE CONCEPT OF LONG RUN CONSIDERED IN THE**
12 **QWEST TELRIC STUDIES?**

13 A. The Qwest TELRIC studies consider a time period
14 over which all inputs are variable.[1] In this context, long
15 run does not relate to a specific period of time (e.g.,
16 five years, ten years, etc.) but refers to a time period
17 long enough that all inputs, including investments, are
18 variable. From a practical standpoint, this means that in
19 a long run study all investments related to the network

[1] *In the Matter of Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, FCC 96-325, CC Docket Nos. 96-98, 95-185, First Report and Order at ¶ 692 (Rel. August 6, 1996) ("First Report and Order").

1 element are considered variable, and the costs associated
2 with these investments are included in the TELRIC study
3 results.

4 **Q. PLEASE EXPLAIN HOW THE TELRIC STUDIES IDENTIFY**
5 **REPLACEMENT COSTS FOR THE TOTAL ELEMENT.**

6 A. The Qwest TELRIC studies consider the costs of a
7 network that is "built from scratch," assuming the existing
8 location of network "nodes" or switches. These long run
9 studies identify the total "replacement" costs of serving
10 all current and anticipated demand, rather than the costs
11 of adding equipment to an existing network to meet a small
12 increment in demand. Thus, the studies consider the
13 efficiencies associated with building a network to serve
14 total demand, assuming a single carrier.

15 In the Qwest TELRIC studies, the increment studied is the
16 total quantity of the network element. Therefore, the
17 studies calculate the average cost for all units of output,
18 rather than the marginal cost of the next or last unit of
19 output.

20 **Q. PLEASE EXPLAIN HOW THE FORWARD-LOOKING CONCEPT IS**
21 **CONSIDERED IN THE QWEST TELRIC STUDIES.**

1 A. The Qwest TELRIC studies identify the forward-
2 looking costs that are likely to be incurred in the future.
3 These studies consider the least-cost, forward-looking
4 technologies and methods of operations that are currently
5 available and practical to deploy in the network, given
6 current and anticipated demand for the total element.
7 Thus, in calculating appropriate TELRIC costs it is
8 important to consider, as Qwest has, what is currently
9 being deployed in the system, as well as, what will be used
10 by the competitor on a forward-looking basis.

11 **Q. IS IT IMPORTANT THAT TELRIC STUDIES CONTAIN**
12 **REALISTIC FORWARD-LOOKING ASSUMPTIONS?**

13 A. Yes. A TELRIC study must provide a realistic
14 estimate of forward-looking costs. In fact, in its
15 recently released TELRIC NPRM[2] the FCC tentatively concludes
16 that "our TELRIC rules should more closely account for the
17 real-world attributes of the routing and topography of an
18 incumbent's network in the development of forward-looking
19 costs." Thus, a TELRIC study must provide an estimate of

[2] *In the Matter of Review of the Commission's Rules Regarding the Pricing of Unbundled Network Elements and the Resale of Service by Incumbent Local Exchange Carriers*, Notice of Proposed Rulemaking, WC Docket No. 03-173, ¶ 52 (Rel. September 15, 2003) ("TELRIC NPRM").

1 the forward-looking costs that Qwest or any efficient
2 carrier *would be likely to incur* in the future without
3 losing sight of the real-world attributes of the existing
4 network. Consistent with this standard, the Qwest TELRIC
5 studies use the latest technologies and methods of
6 operations that are currently available. Only technologies
7 that are commercially available and that are currently
8 being deployed in the industry today are included in the
9 studies. The studies do not rely on technologies that
10 might be available in the future. There is too much
11 uncertainty about unproven, potential technologies to
12 permit their use in cost studies, including uncertainty
13 about whether the technologies will actually become
14 available, the potential cost of the technologies, and the
15 potential uses of the technologies.

16 Nor do the studies rely exclusively on "state-of-the-art"
17 technologies that may be available, but are impractical to
18 deploy in every situation. For example, fiber-based DS1
19 technologies are considered to be "state-of-the-art."
20 However, in circumstances where utilization is low (e.g.,
21 there is demand for only 1 or 2 DS1s at an end-user
22 location) and is not likely to increase in the foreseeable
23 future, it is impractical to deploy fiber rather than

1 copper-based DS1s. This is because a fiber-based DS1
2 technology, such as OC3, provides capacity for 84 DS1s at
3 only one location unless appropriate additional electronics
4 and fiber are deployed in multiple end-user locations. The
5 cost of fiber and these electronics causes fiber-based
6 architectures to be far more costly than copper on a per-
7 DS1 basis in low demand situations.

8 Some parties may advocate the use of a theoretical, least-
9 cost TELRIC methodology that employs unrealistic
10 assumptions to produce low cost estimates, such as assuming
11 high demand for DS1s at each end-user location to justify
12 an all-fiber network. The Commission should reject these
13 "fantasy cost" estimates, because pricing based on these
14 studies would prevent Qwest from recovering its legitimate,
15 realistic costs (e.g., by either not assuming enough cost
16 for necessary electronics or by overstating system
17 utilization). No firm could continue to invest in
18 infrastructure if it were forced to sell its services based
19 on "fantasy" costs that are below the actual costs the firm
20 incurs to build the infrastructure.

21 In its TELRIC studies, Qwest uses current market prices to
22 determine the costs for equipment and materials. Placement

1 costs are based on the expenditures that the network
2 organization currently incurs to perform the relevant
3 functions, based on actual contracts with vendors that work
4 with Qwest in Idaho. Expense factors are based on
5 currently incurred costs adjusted for known or anticipated
6 changes. Each assumption is designed to reflect the
7 forward-looking cost of placing the network.

8 **Q. CAN YOU PROVIDE SOME EXAMPLES OF HOW APPROPRIATE**
9 **FORWARD-LOOKING TECHNOLOGIES ARE CONSIDERED IN QWEST'S**
10 **TELRIC STUDIES?**

11 A. Yes. In developing investment costs, Qwest
12 models forward-looking, least-cost network designs. For
13 example, the ICM Loop Module described by Mr. Buckley
14 considers the least-cost, forward-looking mix of copper,
15 fiber and integrated pair gain equipment. Thus, the model
16 considers not just "state-of-the-art" technology (e.g.,
17 fiber), but also the "least-cost" way of providing the
18 element in a given network application. For unbundled
19 loops, copper facilities represent the least-cost
20 technology for shorter loops and where demand is relatively
21 low, while fiber and electronics represent the least-cost

1 technology for longer loops and where demand is relatively
2 high.

3 The Switching Module of ICM develops switching investment
4 for each service, using only digital switch technology.
5 The switching module does not use older, less efficient
6 technologies, such as analog switching equipment. In the
7 Transport Module, interoffice facilities are modeled
8 assuming 100% fiber and Synchronous Optical Network
9 ("SONET") based equipment. Signaling costs are developed
10 based on the forward-looking equipment in a Signaling
11 System 7 ("SS7") network.

12 The Qwest TELRIC studies also consider forward-looking
13 operating expenses. Qwest adjusts its recent expense
14 information to develop annual cost factors that estimate
15 forward-looking costs. Using historical information as a
16 starting point, Qwest adjusts its expense factors to
17 account for future efficiencies and expected
18 inflationary/deflationary price impacts.[3]

[3] This is accomplished via the "estimated cost savings" and "inflation" inputs in the Expense Factor Module.

1 **Q. YOU MENTIONED THAT TELRIC STUDIES IDENTIFY DIRECT**
2 **COSTS AND THE COST OF SHARED FACILITIES AND OPERATIONS.**
3 **PLEASE DEFINE EACH OF THESE TERMS.**

4 A. Direct costs are the costs that would be avoided
5 if the network element or service were not offered. Direct
6 costs include both volume sensitive costs (i.e., costs that
7 vary with the volume of a network element or service) and
8 volume-insensitive costs (i.e., costs that are caused by a
9 network element or service, but do not vary with volume).
10 Shared costs are the costs that are caused by the provision
11 of a group of services. Both direct and shared costs are
12 included in a TELRIC study, consistent with the FCC's
13 definition of TELRIC in the First Report and Order.[4]

[4] At paragraph 682 of the First Report and Order, the FCC stated, "We conclude that, under a TELRIC methodology, incumbent LECs' prices for interconnection and unbundled network elements shall recover the forward-looking costs directly attributable to the specified element, as well as a reasonable allocation of forward-looking common costs. . . . Directly attributable forward-looking costs include the incremental costs of facilities and operations that are dedicated to the element. Such costs typically include the investment costs and expenses related to primary plant used to provide that element. Directly attributable forward-looking costs also include the incremental costs of shared facilities and operations. Those costs shall be attributed to specific elements to the greatest extent possible. For example, the costs of conduits shared by both transport and local loops, and the costs of central office facilities shared by both local switching and tandem switching, shall be attributed to specific elements in reasonable proportions. More broadly, certain shared costs that have conventionally been treated as common costs (or overheads) shall be attributed directly to the individual elements to the greatest extent possible."

1 **Q. DO THE QWEST TELRIC STUDIES IDENTIFY COMMON**
2 **COSTS?**

3 A. Yes. As discussed above, Qwest's studies
4 identify the TELRIC for each element, which includes the
5 direct and shared costs. In addition, these studies
6 separately identify an allocation of forward-looking common
7 overhead costs. These costs (e.g., legal, planning,
8 executive, etc.) are not associated with a specific network
9 element, but represent general costs of doing business.
10 These are *real* costs that Qwest will efficiently incur on a
11 forward-looking basis, and that must be recovered in UNE
12 prices. In fact, the FCC's First Report and Order states
13 specifically that "under a TELRIC methodology, incumbent
14 LECs' prices for interconnection and unbundled network
15 elements shall recover the forward-looking costs directly
16 attributable to the specified element, as well as a
17 reasonable allocation of forward-looking common costs."[5]

18 **Q. HOW SHOULD THE QWEST TELRIC STUDIES BE UTILIZED**
19 **IN THIS PROCEEDING?**

[5] First Report and Order at ¶ 682.

1 A. The Commission should use the TELRIC data
2 presented in my testimony as the basis for setting prices
3 for UNEs, collocation and interconnection services. That
4 is, these data, including an allocation of common costs,
5 provide the Commission with the appropriate TELRIC basis
6 for determining the prices contained in Qwest's Statement
7 of Generally Available Terms ("SGAT") Exhibit A.[6] The
8 TELRIC rates produced by Qwest's cost studies are presented
9 in my Exhibit No. 1.

10 **B. The Telecommunications Act and FCC Order**

11 **Q. WHAT DOES THE TELECOMMUNICATIONS ACT OF 1996 SAY**
12 **ABOUT COSTS AND PRICES?**

13 A. The Act states that prices for network elements
14 shall be "nondiscriminatory," "based on costs" and "may
15 include a reasonable profit".[7]

---

[6] Nevertheless, Qwest recognizes that a range of prices exists for unbundled elements that have been deemed reasonable for purposes of TELRIC. Thus, Qwest and Commission Staff have reached agreement on UNE prices that both parties believe represent UNE rates within a range of TELRIC as determined in other Qwest states where TELRIC principles have been examined. The UNE prices for a large number of elements were agreed upon by the parties through negotiations between Qwest Commission Staff and are reflected in Attachment A to the Motion for Approval.

[7] 47 USC §252(d)(1).

1 **Q. IS QWEST'S TELRIC METHODOLOGY IN COMPLIANCE WITH**
2 **THE ACT?**

3 A. Yes.

4 **Q. DID THE FCC ESTABLISH COSTING AND PRICING RULES**
5 **IN ITS FIRST REPORT AND ORDER?**

6 A. Yes. The FCC proposed costing and pricing rules
7 in its First Report and Order, released on August 8, 1996.
8 In these rules, the FCC established overall TELRIC
9 principles and specified a TELRIC methodology.

10 **Q. DO QWEST'S TELRIC STUDIES FOLLOW A METHODOLOGY**
11 **THAT IS CONSISTENT WITH THE FCC'S TELRIC RULES?**

12 A. Yes. The Idaho TELRIC data filed by Qwest in
13 this proceeding are consistent with the FCC's TELRIC
14 principles, as defined in the FCC's First Report and Order.
15 For example, the TELRIC studies are consistent with the
16 following principles:

17 • "Under a TELRIC methodology, incumbent LECs' prices
18 for interconnection and unbundled network elements
19 shall recover the forward-looking costs directly

1 attributable to the specified element, as well as a
2 reasonable allocation of forward-looking common
3 costs." (¶682)

4 • "Per-unit costs shall be derived from total costs
5 using reasonably accurate "fill factors" (estimates
6 of the proportion of a facility that will be
7 "filled" with network usage); that is, the per-unit
8 costs associated with a particular element must be
9 derived by dividing the total cost associated with
10 the element by a reasonable projection of the actual
11 total usage of the element." (¶682)

12 • "Directly attributable . . . costs shall be
13 attributed to specific elements to the greatest
14 extent possible. . . . More broadly, certain shared
15 costs that have conventionally been treated as
16 common costs (or overheads) shall be attributed
17 directly to the individual elements to the greatest
18 extent possible." (¶682)

19 • "The forward-looking pricing methodology for
20 interconnection and unbundled network elements
21 should be based on costs that assume that wire

1 centers will be placed at the incumbent LEC's
2 current wire center locations, but that the
3 reconstructed local network will employ the most
4 efficient technology for reasonably foreseeable
5 capacity requirements." (¶ 685)

6 • "In a TELRIC methodology, the "long run" used shall
7 be a period long enough that all costs are treated
8 as variable and avoidable." (¶ 692)

9 • "An appropriate calculation of TELRIC will include a
10 depreciation rate that reflects the true changes in
11 economic value of an asset and a cost of capital
12 that appropriately reflects the risks incurred by an
13 investor." (¶ 703)

14 **Q. HAS THE FCC RECENTLY PROVIDED FURTHER GUIDANCE**
15 **WITH RESPECT TO THE TELRIC RULES?**

16 A. Yes. In its Triennial Review Order ("TRO")[8] the
17 FCC, in addition to addressing unbundling requirements for

[8] *In the Matter of Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers, Implementation of the Local Competition Provisions of the Telecommunications Act of 1996, Deployment of Wireline Services Offering Advanced Telecommunications Capability*, CC Docket Nos. 01-338, 96-98, 98-147, Triennial Review Order at ¶ 669, (Rel. August 21, 2003)("Triennial Review Order").

1 UNEs, reiterates that "TELRIC equates the current market
2 value of the existing network that could provide all the
3 services its current network provides, to meet reasonably
4 foreseeable demand, using the least-cost, most efficient
5 technology currently available." The FCC also provides
6 clarification of the TELRIC rules with respect to two
7 issues; cost of capital and depreciation.

8 First, with regard to the cost of capital the FCC clarifies
9 that "states should establish a cost of capital that
10 reflects the competitive risks associated with the risks of
11 participating"[9] in the competitive market assumed by TELRIC.
12 The FCC further clarified that the risk of losing customers
13 to other facilities-based carriers should be reflected in
14 TELRIC prices, and specifically rejected AT&T's claim that
15 states are limited to considering only the actual
16 competitive risk the ILEC currently faces in providing
17 UNEs. In rejecting AT&T's claim the FCC stated that such
18 an approach would "reduce artificially the value of the
19 ILEC network and send improper pricing signals to
20 competitors."[10]

---

[9] *Id.* at 681.

[10] *Id.* at 682.

1 Second, with regard to depreciation, the FCC clarified that
2 "[t]he rate of depreciation over the useful life should
3 reflect the actual decline in value that would be
4 anticipated in the competitive market TELRIC assumes."[11]
5 This allows an ILEC to use economic depreciation rates to
6 calculate its TELRIC costs and accelerate recovery of
7 initial capital outlay for an asset over its life to
8 reflect any anticipated decline in the asset's value.

9 **Q. DID THE FCC'S TRIENNIAL REVIEW ORDER PROVIDE ANY**
10 **OTHER GUIDANCE WITH RESPECT TO THE PROVISION OF UNES?**

11 A. Yes. The TRO, issued on August 21, 2003,
12 discusses at length the standard to be used to determine
13 whether CLECs are impaired without access to certain UNEs.
14 In some cases the FCC has directed the state commissions to
15 conduct reviews to make such determinations at a local
16 level. These reviews will be conducted in proceedings that
17 are separate from the cost docket. For other elements, the
18 FCC determined that CLECs are not impaired without access
19 to those elements. Thus, the FCC effectively eliminated
20 the obligation for ILECs to provide certain network

[11] *Id.* at 689.

1 elements at TELRIC rates pursuant to section 251 of the Act
2 of 1934, as amended.

3 **Q. IS QWEST REMOVING THOSE ELEMENTS FROM ITS SGAT**
4 **EXHIBIT A IN THE CONTEXT OF THE CURRENT COST DOCKET?**

5 A. No. Attachment A to the Motion for Approval
6 includes agreed upon rates for a large number of UNEs that
7 Qwest filed costs for in its original filing in this cost
8 docket. Among the elements listed in that document are
9 rates for elements such as OCn transport, OCn loops, which
10 were removed from the list of elements that Qwest has an
11 obligation to provide under section 251. In addition, my
12 Exhibit No. 1 contains TELRIC based rates for all of the
13 elements in Qwest's original filing including the unbundled
14 packet switching elements that were removed from the list
15 of UNEs. The components of the network that Qwest is no
16 longer obligated to provide as UNEs under the Act is not
17 limited to those identified above, however. Qwest is in
18 the process of identifying all the impacts of the TRO and
19 is beginning the process of renegotiating its
20 interconnection agreements to implement the change of law
21 created by the TRO. While Qwest is not removing any
22 elements from those listed in Attachment A and Exhibit No.

1 1 at this time, Qwest wants to be clear that the TELRIC
2 rates it is agreeing to in this proceeding are for the sole
3 purpose of pricing these elements until the rates change or
4 become effective under the renegotiated agreements. Thus,
5 with regard to prices for network elements that the FCC has
6 found are no longer subject to the provisions of section
7 251, a CLEC will only be able to obtain those elements
8 until its interconnection agreement is amended to eliminate
9 those elements as UNEs.

IV. THE TELRIC STUDIES IN GENERAL

10 **Q. YOU SAID THAT THE TELRIC DATA FORM THE BASIS FOR**
11 **RECURRING AND NONRECURRING COSTS. PLEASE DEFINE THESE**
12 **COSTS.**

13 A. Recurring costs are the ongoing costs associated
14 with providing a service or network element. Recurring
15 costs are generally investment-related and include both
16 capital costs and operating expenses. These costs are
17 often presented as a cost per-month or per-unit of usage
18 (e.g., minute of use) and are incurred throughout the time-
19 period the service or network element is provided to a
20 customer.

1 Nonrecurring costs are the one-time costs associated with
2 establishing a service or network element. Nonrecurring
3 costs are generally activity or transaction-related and are
4 calculated by multiplying the length of time necessary to
5 perform an activity by a specified labor rate.

6 **Q. PLEASE EXPLAIN HOW RECURRING COSTS ARE CALCULATED**
7 **IN THE TELRIC STUDIES PRESENTED IN IDAHO.**

8 A. All Qwest cost studies in Idaho employ the same
9 basic procedures to arrive at a monthly recurring TELRIC
10 cost estimate:

11 1. Define the Network Element or Service. While
12 Qwest's cost studies anticipate replacement of the
13 entire network, the cost analyst works with product
14 management and technical staff to define each of the
15 elements or services to be studied. This step
16 includes identification of all the network
17 components that are needed to provide particular
18 elements or services, and an estimation of total
19 demand for the element or service, including Qwest's
20 own demand.

2. Development of Investment. The investment required to provide the service or element includes the actual vendor prices for material and equipment, plus the cost to place the equipment, including capitalized labor costs. Determination of the correct amount of investment is key to the accuracy of any predictive cost model. Therefore, in addition to utilizing actual vendor information, and contractor or internal placement costs, Qwest relies on sound engineering practices to model the amount of investment necessary to provide a given service at a particular level of usage or demand.

3. Estimation of Investment-related Capital Costs. Capital costs comprise a large portion of total service cost, and the level of capital cost is impacted by the depreciation lives for the relevant plant accounts and the weighted cost of debt and equity capital. Investment-related capital costs (depreciation and cost of money) in Idaho are based on FCC prescribed rates. For example, Qwest uses the FCC prescribed rate of 11.25% for cost of money.

4. Estimation of Operating Costs. Operating expenses are estimated, in most cases, utilizing annual cost factors. Investment-related operating expenses (e.g., maintenance expense) are calculated based on annual cost factors that are applied to investment, while other operating expenses (e.g., marketing expenses) are normally calculated based on factors that are applied to the investment-related costs. These cost factors consider the historic relationships between expenses and investment that the Company has experienced in the past, adjusted for inflation/deflation and productivity increases. These operating expenses are added to the capital costs to provide the TELRIC for the network element.

An appropriate share of common costs is allocated to the TELRIC costs to yield the total cost (TELRIC plus Common).

5. Validation of Results. After costs have been estimated, these data are reviewed and cross-checked with other cost data to assure reasonableness. Results are compared across states and across

1 services. TELRIC results may also be compared with
2 cost results derived from other cost models.

3 **Q. HOW DOES THE DEVELOPMENT OF NONRECURRING COSTS**
4 **DIFFER FROM DEVELOPMENT OF RECURRING COSTS?**

5 A. Nonrecurring costs are generally expense-based,
6 and result from the development of direct costs associated
7 with the tasks necessary to perform a one-time activity.
8 Similar to the process described above, the tasks
9 associated with establishing particular services or
10 elements are identified by product management. Time
11 required to perform tasks are modeled, probabilities are
12 assigned to reflect the likelihood that an activity will
13 take place, and the result is multiplied by appropriate
14 labor rates to develop the direct costs of the activity.
15 Operating expenses are added to the direct expenses to
16 provide the TELRIC for the network element. Finally, a
17 share of common costs is applied to produce "TELRIC plus
18 Common" nonrecurring costs.

V. THE QWEST INTEGRATED COST MODEL

19 **Q. PLEASE BRIEFLY DESCRIBE THE INTEGRATED COST**
20 **MODEL ("ICM").**

A. The ICM is a cost model developed by Qwest that is designed to estimate the *recurring* TELRIC for UNEs and interconnection services. Exhibit No. 3. The ICM produces recurring costs for the major UNEs and interconnection services, including the unbundled loop, switching, transport and other elements listed below in Section VIII of my testimony.

Q. PLEASE DESCRIBE THE KEY DESIGN FEATURES OF THE ICM.

A. The ICM calculates the costs for UNEs using the same basic methodological approach that is used for all of Qwest's TELRIC models and studies. However, the ICM addresses past criticisms of Qwest's TELRIC models and incorporates several stand-alone modules into a single model that is:

- **simple** and **user friendly.** The model can be run on most windows-based personal computers.[12] It contains a "point and click" interface that is easily navigated by the user. The user can view results, study assumptions, study inputs, etc., and make

[12] See documentation for specific computer requirements.

1 changes when desired. A user can run a new TELRIC
2 study, based on the user's specifications, in a
3 relatively short period of time. In sum, the ICM is
4 an easy to use model that does not require users to
5 be trained as model "experts." Any interested party
6 can run the model by following the user guide
7 instructions.

8 • The ICM is an **open model.** The model makes it easy
9 for the user to view the study inputs, calculation
10 processes, and output results. All aspects of the
11 model are open to investigation by the user -
12 eliminating any "black box" concerns.

13 • The ICM is **integrated.** In the past, costs for
14 different UNEs had to be calculated in separate
15 models. For example, switching costs were
16 calculated via the Switching Cost Model ("SCM") and
17 Windows Personal Computer Cost Calculator ("WINPC3")
18 models. Loop costs were calculated using the
19 Regional Loop Cost Analysis Program ("RLCAP") and
20 WINPC3. Transport costs were calculated in a
21 separate transport model. With ICM, costs for the
22 major UNEs, including the loop, switching and

1 transport, are calculated in the same easy-to-use
2 integrated model. ICM replaces WINPC3 and performs
3 the functions previously provided through separate
4 runs of WINPC3. The integrated nature of the ICM
5 assures that all annual cost factors are applied
6 consistently.

7 **A. ICM Model Description**

8 **Q. IS QWEST PROVIDING A MANUAL THAT PROVIDES A**
9 **DETAILED DESCRIPTION OF THE ICM AND ITS MODULES?**

10 A. Yes. Qwest is filing the ICM User Manual,
11 located on the CD in the documentation folder under the ICM
12 model, which instructs the user about how ICM operates.
13 This manual contains detailed instructions for running ICM,
14 including, for example, how to change inputs to the model.
15 This manual also provides detailed documentation that
16 describes each of the five ICM modules (i.e., switching,
17 loop, transport, capital costs and expense factors).

18 **Q. HOW IS THE ICM DESIGNED TO OPERATE?**

19 A. The ICM runs each of the modules and inserts the
20 results from each module into the Output Workbook. The

1 Output Workbook uses the results of each module, along with
2 special study inputs, to calculate the TELRIC for each UNE
3 and interconnection service. First, investment-related
4 factors are applied to investments to provide the
5 investment-related monthly costs (e.g., depreciation, cost
6 of money, income tax and maintenance) for each UNE and
7 interconnection service. Second, the expense-related
8 factors are applied to the investment-related costs to
9 yield the monthly cost for operating expenses, such as
10 product management and network operations and support.
11 Third, the Output Workbook sums all of the monthly costs to
12 provide the monthly TELRIC for the UNE. Finally, the
13 Output Workbook provides an allocation of common costs
14 (e.g., executive, planning, other general and
15 administrative expenses) to each UNE and interconnection
16 service.

17 **Q. DOES THE ICM ALLOW THE USER TO MODIFY INPUTS?**

18 A. Yes. The ICM provides input forms for each of
19 the modules, which allow the user to change key input
20 assumptions. The input forms display the default value for
21 each input item and allow the user to override these values
22 if desired. For example, the Loop Module provides input

1 forms that allow the user to view the default values that
2 are used to reflect how often different placement methods
3 are used to place buried cable and, if desired, to change
4 those values to reflect different assumptions about
5 placement methods.[13] After all desired changes are made to
6 the inputs, the user can easily rerun the ICM to produce
7 UNE cost results based on the new user assumptions.

8 **B. ICM Results**

9 **Q. DOES ICM PROVIDE UNE COST RESULTS THAT REFLECT**
10 **THE PROPER APPLICATION OF TELRIC PRINCIPLES?**

11 A. Yes. The ICM and its modules contain recommended
12 default inputs. For example, as described below in Section
13 VII of my testimony, the ICM utilizes fill factors that are
14 designed to provide a "reasonable projection of actual
15 total usage of the element," as required by the FCC.[14] In
16 addition, my discussion of the ICM modules, in the current
17 section, explains how the key inputs are determined. If
18 the model is run with these inputs, it produces results, as
19 delineated in Exhibit No. 1, that properly reflect the

[13] Mr. Buckley provides a thorough discussion of Loop Module inputs in his testimony.
[14] First Report and Order at ¶ 682.

1 TELRIC principles described earlier in my testimony. The
2 ICM model, using the default inputs, provides a proper
3 estimate of the recurring TELRIC for UNEs in Idaho. These
4 results should be used by the Commission as a barometer for
5 determining the reasonableness of Qwest's recurring prices.

6 **C. ICM Modules**

1. The Loop Module

7 **Q. DO YOU PLAN TO DESCRIBE THE ICM LOOP MODULE IN**
8 **YOUR TESTIMONY?**

9 A. No. Mr. Buckley provides a detailed description
10 of the ICM Loop Module in his testimony.

2. The Switching Module

11 **General Description**

12 **Q. PLEASE BRIEFLY DESCRIBE THE SWITCHING MODULE OF**
13 **ICM THAT IS USED TO CALCULATE SWITCHING COSTS.**

14 A. The Switching Module of the ICM calculates costs
15 using the Switching Cost Model ("SCM") program, which is
16 incorporated into the ICM. The purpose of SCM is to

1 calculate the unit investments for local and tandem
2 switching usage, and various types of switch ports. Once
3 the SCM calculates the investments for these elements, the
4 ICM Output Workbook converts these investments into costs
5 (e.g., a monthly cost per port and a per minute cost for
6 switching usage).

7 The SCM is contained entirely in a single Excel workbook,
8 labeled "SCM Core," which is included in the "Switch"
9 folder within the ICM. SCM, Version X1.01, represents a
10 significant departure from the SCM that has been filed
11 previously in Idaho and other states. While the new
12 version of the SCM follows the same methodological
13 principles as previous versions of the SCM, the model is
14 now much simpler and easier to audit since it is entirely
15 contained in one Excel workbook without any complicated
16 macros or visual basic programming.

17 While the overall SCM workbook is labeled as "SCM Core," it
18 may be characterized as containing four modules: *SCM Core,*
19 *SCM Calls, SCM Usage and SCM Ports.* I will briefly
20 describe these modules below.

21 **Q. HOW IS THE DATA FROM THE SCM USED IN THE ICM?**

1 A. The Switching Module calculates switching
2 investments for local switching usage, tandem switching
3 usage, line ports and trunk ports. These investments are
4 converted to monthly or per minute of use costs in the ICM
5 Output Workbook.

6 It is important to note that the SCM calculates investments
7 based on an analysis of every switch location in Idaho and
8 considers the forward-looking digital switch technology
9 that would be used in each location. The model also
10 incorporates specific input data for each switch location
11 (e.g., number of lines). Thus, the SCM produces an Idaho-
12 specific switching investment data based on a computation
13 of the specific investments for every switch location in
14 Idaho.

15 **SCM Modules**

16 **Q. PLEASE BRIEFLY DESCRIBE SCM CORE.**

17 A. *SCM Core* calculates unit investments by switching
18 functional category ("FCAT"). SCM Core uses discounted
19 vendor prices and ratios that enable it to partition these
20 vendor prices into functional categories. Both the prices
21 and the partitioning ratios may be input by the user. The

1 investment for each functional category is then divided by
2 its demand to provide a unit cost for each function
3 performed by the switch. For each switch in Idaho, SCM
4 Core produces costs for FCATs such as the:

5 • Investment per analog line
6 • Investment per processor millisecond
7 • Investment per network Centi-Call Second ("CCS")
8 • Investment per 3-port conference circuit

9 The SCM Core methodology is described in more detail in the
10 SCM User Manual provided on the CD in the ICM documentation
11 folder (see pages 3-5).

12 **Q. PLEASE BRIEFLY DESCRIBE SCM CALLS.**

13 A. *SCM Calls* develops the busy hour ("BH") unit
14 investments for various types of calls:

15 • Line to line
16 • Line to trunk
17 • Trunk to line
18 • Trunk to trunk

1 For each type of call, *SCM Calls* calculates the investment
2 per BH call set up and the investment per conversation CCS.
3 These calculations use *SCM Core* FCAT outputs along with
4 multiplier algorithms (e.g., how much of an FCAT is
5 consumed to set up a specific type of call). These BH
6 usage investments are then used by the SCM Usage Module.
7 The SCM Calls methodology is described in more detail in
8 the SCM User Manual provided on the CD in the ICM
9 documentation folder (see pages 5-7).

10 **Q. PLEASE BRIEFLY DESCRIBE SCM USAGE.**

11 A. *SCM Usage* utilizes the BH call set up and
12 conversation CCS investments from *SCM Calls* to compute the
13 annual per call and per conversation minute investments for
14 switching. These investments are then input into the ICM
15 Outputs Workbook, where they are converted into a switching
16 cost per minute of use. The SCM Usage methodology is
17 described in more detail in the SCM User Manual provided on
18 the CD in the ICM documentation folder (see page 8).

19 **Q. PLEASE BRIEFLY DESCRIBE SCM PORTS.**

20 A. *SCM Ports* calculates the investment for various
21 types of ports, using the FCAT data from *SCM Core*. For

1 example, the "UNE Line Port" investment is developed based
2 on the "MDF COE Investment" (i.e., main distribution frame
3 central office equipment investment), "Analog Line
4 Investment," "Digital Line Investment" and "Processor per
5 Working Line" FCATS. SCM Ports develops an investment per
6 analog line ("MDF COE Investment" plus "Analog Line
7 Investment" FCATs) and an investment per digital line
8 ("Digital Line Investment" FCAT) and weights these
9 investments based on the percentage of analog versus
10 digital lines. The "Processor per Working Line" FCAT is
11 added to this to derive the "UNE Line Port" investment,
12 which is used as an input into the ICM Output Workbook.
13 The SCM Ports methodology is described in more detail in
14 the SCM User Manual provided on the CD in the ICM
15 documentation folder (see page 8).

16 **Q. DOES THE SCM CALCULATE THE COST OF FEATURE**
17 **INVESTMENT?**

18 A. Yes. SCM Ports calculates the investment for
19 vertical switching feature hardware. In the ICM Outputs
20 Workbook, these features investments are added into the
21 investment for ports, and converted to a monthly cost. For

1 example, the standard line port UNEs include the cost of
2 standard feature hardware.

3 **Switch Partitioning**

4 **Q. DOES THE SCM CONSIDER THE LATEST SWITCH VENDOR**
5 **CONTRACTS?**

6 A. Yes. If run with the Qwest default equipment
7 price inputs, which I will discuss below, the SCM
8 incorporates the latest contracts between Qwest and switch
9 vendors.

10 **Q. HOW DOES QWEST PAY VENDORS FOR SWITCHING**
11 **EQUIPMENT VIA THESE CONTRACTS?**

12 A. Today, Qwest pays for a large portion of
13 switching equipment on a "per line"[15] or "per trunk" basis.
14 However, it is important to understand that while Qwest
15 pays for a large portion of switching equipment on a per
16 line basis, in the long run, the costs of the switch are
17 caused by the usage of various switch components. In the
18 long run, increases in switch usage lead to increases in

[15] While vendors charge Qwest for equipment on a per line basis, the per line price increases as usage (e.g., CCS) increases.

1 switching costs, and decreases in usage will lead to
2 decreases in costs.

3 **Q. WHY IS THIS THE CASE?**

4 A. Regardless of how a switch vendor charges Qwest
5 for switching equipment, the switch must be engineered, not
6 only based on the number of lines, but also based on the
7 anticipated usage of those lines. As busy hour usage
8 (calls or CCS) increases or decreases, the traffic
9 sensitive portions of the switch are engineered to handle
10 the increase or decrease in traffic. More busy-hour usage
11 means more switch fabric, trunks, conference circuits,
12 interactive announcements and processors, etc. Less busy
13 hour usage means less switch fabric, trunks, conference
14 circuits, interactive announcements and processors, etc.
15 While line ports are dedicated to a customer, the trunk and
16 switch fabric components of the switch are shared by all
17 customers. If the average usage per port increases, the
18 usage-sensitive portions of the switch must be engineered
19 to accommodate this. The key point here is that some
20 portions of the switch are, in fact, engineered based on
21 usage, not lines.

1 In the long run, even if a vendor were to recover all of
2 its costs via a per line charge, it would have to recover
3 the additional costs it would incur to accommodate more
4 usage. For example, assume that Vendor A is charging Qwest
5 for all switching equipment on a per line basis. When
6 Vendor A sets this price, the price per line is designed to
7 compensate the vendor for all of the switching equipment it
8 installs—both the costs that are engineered based on lines
9 and the costs that are engineered based on usage. Thus, if
10 the anticipated usage per line increases, the amount of
11 usage sensitive equipment (i.e., trunks, talk paths through
12 the switch fabric, etc.) provided by the vendor would
13 increase. If the vendor wants to be compensated for the
14 increased traffic-sensitive investment it provides, when
15 the current contract expires the vendor will increase the
16 price per line. The key point is this: If the usage per
17 line increases, the vendor would have to provide more
18 equipment, and in the long run, it would increase its price
19 per line. Thus, any long run cost analysis like TELRIC
20 would need to consider this fact in the development of
21 costs.

22 Thus, even if all vendor charges to Qwest were entirely on
23 a per line basis—which they are not—it would be wrong to

1 assign all switching costs in a TELRIC study to lines. In
2 the long run, usage impacts the costs of a large portion of
3 the switch. It is for this reason that the Qwest SCM uses
4 a partitioning methodology to assign costs to the functions
5 that the switch provides.

6 **Q. PLEASE DESCRIBE THE SCM PARTITIONING METHODOLOGY.**

7 A. As described on page 4 of the SCM User Manual,
8 provided on the CD, the total price for each switch in
9 Idaho is determined based on current vendor switch
10 contracts. The total price for each switch is then
11 partitioned into the various FCATs using forward-looking,
12 long run cost-based ratios. These ratios reflect the
13 percent of the total switch price that is driven, in the
14 long run, by the basic switch functions (e.g., trunk
15 terminations, line usage, conference circuit usage, etc.).
16 That is, increases in the demand for each of these
17 functions leads to increases in the amount of switching
18 investment required. The costs of the switch must
19 therefore be associated with these functions, if the
20 principle of cost-causation is to be properly reflected.
21 Even with a per line contract, the costs of switching are

1 related to these functions in the long run. Thus, in a
2 TELRIC study, switch partitioning is required.

3 Please refer to the SCM User Manual for further discussion
4 of the partitioning methodology. In particular, pages 13-
5 14 of this document provide an example that demonstrates
6 how partitioning ratios are applied in the SCM.

7 **Q. HOW ARE THE PARTITIONING RATIOS DEVELOPED?**

8 A. The ratios are developed based on a model switch.
9 The list price of the equipment components of a model
10 switch are determined based on current vendor list prices.
11 Then, based on the function that each equipment component
12 provides, the total list price of the model switch can be
13 partitioned into the list price associated with the various
14 switch functions. For each function, a partitioning ratio
15 is then developed by dividing the list price associated
16 with each function by the total list price.

17 **Switching Inputs**

18 **Q. WHAT ARE THE KEY INPUTS TO THE SWITCHING MODULE?**

A. The key inputs in the Switch Module of ICM include the prices for switching equipment (e.g., the price per analog line port, the TR303 Integrated Digital Loop Carrier ("IDLC")[16] price per DS1 port, and the end office trunk price per DS1 port) and the line and trunk fills (e.g., analog line fill, TR303 IDLC fill).

Q. PLEASE DESCRIBE THE SWITCHING PRICE INPUTS.

A. The switch price inputs, for each switch vendor, include the following:

- Analog line price per analog port
- TR303 IDLC DS1 price per DS1 port
- End office trunk price per DS0 port
- Tandem trunk price per DS0 port
- Non-IDLC basic rate interface ("BRI") price per BRI port - both for hardware and software
- Primary rate interface ("PRI") price per PRI port - both for hardware and software
- MDF COE price per OE (i.e., office equipment) pair

[16] "TR303" is an industry-standard reference for a type of digital loop equipment.

- MDF COE price per OSP (i.e., outside plant) pair

These are user changeable inputs. The ICM user may override the default values for these vendor price inputs. However, the default values represent the current vendor prices.

Q. PLEASE DESCRIBE THE ICM FILL INPUTS.

A. "Fill" is an industry term for the *assumed* utilization to be placed on a piece of investment (e.g., switching equipment) when determining the unit cost. This is important to consider because capacity that is purchased but not used must be recovered with revenue generated from that capacity that is used. The ICM includes several switching fill inputs (expressed as a percentage of utilization), including inputs for "analog line fill" and "TR303 IDLC fill." These inputs recognize that utilization varies by type of equipment. For example, analog line equipment serving analog loops has a very different fill than IDLC equipment serving integrated digital loops. The Qwest default fill inputs represent an estimate of the forward-looking fill that is likely to be achieved in the long run for each type of equipment.

1 **Q. HOW IS THE QWEST DEFAULT INPUT FOR ANALOG LINE**
2 **FILL DETERMINED?**

3 A. For analog lines, Qwest estimates a forward-
4 looking fill of 80%, or a 20% allowance on average for
5 spare capacity. This spare capacity includes
6 *administrative spare*, which is needed to operate the
7 network efficiently. The administrative spare includes
8 lines for defective ports and lines that are used for
9 testing, repair and maintenance.

10 The spare capacity also includes *idle dedicated lines*. As
11 existing customers move, their previous residences or
12 offices remain vacant for some period of time. Rentals, in
13 particular, experience numerous periods of vacancies.
14 During the times these residences or businesses are vacant,
15 it is frequently less costly to leave the telephone service
16 in place as opposed to disconnecting the service only to
17 reconnect it when the next customer moves in. This
18 practice of leaving lines connected to the switch reduces
19 costs by eliminating the function of disconnecting and
20 reconnecting lines to the switch, and improves service.
21 This is the least cost, most efficient means of running a

1 telephone business, but it will result in some unutilized
2 lines.

3 Spare analog lines also result from CCS limitations. In
4 some instances, the ability to utilize the total line
5 termination capacity of the line units is constrained by
6 customers exceeding the CCS capacity of the line units.
7 When switches are initially purchased line units are
8 selected with a line to CCS ratio that has enough CCS
9 capacity to handle the forecasted CCS load that the lines
10 terminated on a line unit are expected to produce in the
11 busy hour. If this capacity is exceeded, the company
12 cannot simply add more CCS capacity to its line units,
13 since the line to CCS capacity ratio cannot be changed once
14 the switch is installed. In order to prevent blocking, the
15 company must purchase more line units and move lines off of
16 the existing line units to the newly installed line units.
17 This leaves some line ports on the existing line units
18 unutilized.

19 Finally, spare capacity must be installed to *serve*
20 *anticipated line growth.* Capacity is installed in a switch
21 in order to meet the forecasted demand for an engineering
22 period of 18 to 30 months. To initiate, engineer, install

1 and test switch capacity additions more often than this is
2 more costly than purchasing enough capacity to last until
3 the end of the engineering period. As a result, there is
4 enough spare capacity immediately after a job is completed
5 such that the anticipated growth in demand can be met until
6 the end of the engineering period. This spare capacity
7 gradually approaches zero as the end of the engineering
8 period gets closer.

9 The current analog fill for switches in Qwest is 75%. The
10 80% default input represents a conservative estimate of
11 forward-looking fill.

12 **Q. HOW IS THE QWEST DEFAULT INPUT FOR TR303 IDLC**
13 **EQUIPMENT FILL DETERMINED?**

14 A. Qwest estimates that the forward-looking fill for
15 IDLC loops will be 56%. This spare exists on a forward-
16 looking basis due to the nature of IDLC equipment. IDLC
17 loops are carried over systems (i.e., remote terminals
18 ("RTs")) with capacities of 96, 192, 672 or 1344 loops.
19 For technical reasons, when an IDLC RT is initially
20 installed, the switch to which it is connected must be
21 fully equipped to handle the capacity of the RT. For

1 example, if a 672 capacity RT is installed, enough TR303
2 DS1 ports (which connect the IDLC RT to the switch) must be
3 installed in the switch to accommodate the usage load that
4 all 672 lines would put on the switch. That is, the switch
5 must be engineered to accommodate the maximum capacity of
6 the RT even if only part of that capacity is required
7 initially. Thus, when the 672 capacity RT is installed, it
8 will not be fully utilized. However, if the full 672 lines
9 are ever to be used in the future, the capacity between the
10 RT and the switch must be purchased and reserved when the
11 RT is initially installed. For example, assume existing
12 demand over an IDLC system is 350 loops. In this case, the
13 IDLC equipment in the switch must still be engineered to
14 handle 672 loops. In this example, the TR303 IDLC fill
15 would be 350/672 = 52%.

16 The Qwest default TR303 IDLC fill of 56% is developed based
17 on data developed in the Loop Module. The Loop Module
18 presented by Mr. Buckley designs a forward-looking network
19 with IDLC equipment. Based on this forward-looking design,
20 Qwest has developed an IDLC fill that is calculated in a
21 manner similar to the 52% in the above example.

3. Transport Module

1 General Description

2 **Q. PLEASE DESCRIBE THE TRANSPORT MODULE.**

3 A. The Transport Module is used to estimate the
4 investment in transmission and channel termination
5 equipment needed to provide transport between two switching
6 offices. The Transport Module calculates dedicated and
7 switched transport costs.

8 **Q. WHAT IS INCLUDED IN THE TRANSMISSION (MILEAGE**
9 **SENSITIVE) INVESTMENT?**

10 A. The transmission investment includes the cost of
11 fiber facilities and intermediate multiplexing equipment.

12 **Q. WHAT IS INCLUDED IN THE TERMINATION (FIXED)**
13 **INVESTMENT?**

14 A. Channel termination investment includes the
15 electronic equipment located at the switch location (where
16 the route originates and terminates) that converts
17 electronic signals into optical signals, as well as the
18 equipment used to multiplex or de-multiplex a signal.

Q. WHAT DATA IS USED BY THE TRANSPORT MODULE TO ESTIMATE TRANSPORT COSTS?

A. The Transport Module calculates costs using the following files and data:

- Point pair files - These files include all combinations of routes between any two wire centers in Idaho. These data include originating and terminating wire centers and number of circuits connecting them.
- The SONET transport model contains three forward-looking transport configurations: point-to point, linear, and ring.
- Investments - This file contains material costs for equipment used in the network. These data are based on Qwest's current vendor contracts.
- Investment Profiles - This file contains the distribution of transport configurations used in the model. These profiles vary by the size of the wire centers where the point pairs terminate.

These data are described in more detail in the Transport Module of the ICM user manual included on the compact disc.

Q. PLEASE EXPLAIN THE GENERAL METHODOLOGY USED TO CALCULATE TRANSPORT MODEL INVESTMENTS.

A. For every point pair (i.e., any combination of connections between two wire centers) in Idaho, the transport model calculates investment per circuit for

1 channel termination equipment, fiber optic facilities, and
2 intermediate multiplexing equipment. The investments
3 associated with each point pair are sorted into mileage
4 bands. For each mileage band, the model calculates fixed
5 (termination) and distance sensitive (transmission)
6 investments. These investments are converted into costs in
7 the ICM in a worksheet labeled the Output Workbook.

8 **Transport Module Inputs**

9 **Q. WHAT ARE THE KEY INPUTS IN THE TRANSPORT MODULE?**

10 A. The key inputs in the Transport Module are the
11 utilization, or fill factors and the vendor costs for
12 various types of equipment (e.g., the cost per foot for
13 fiber or the cost of a fiber distribution panel).

14 **Q. HOW ARE THE RECOMMENDED DEFAULT UTILIZATION**
15 **FACTORS DEVELOPED?**

16 A. The utilization factors for D4 channel banks,
17 M1/3 multiplexers (multiplexers that change signals from
18 DS1 to DS3 or vice versa), and fiber terminals are
19 developed from data in the TIRKS ("Trunk Integrated Record
20 Keeping System") database. TIRKS is a system Qwest uses

1 for order control and integrated record keeping that allows
2 for highly mechanized provisioning of complex design
3 services. The TIRKS database is a repository for the
4 inventory, capacity and utilization information related to
5 services such as SONET-based interoffice facilities. The
6 utilization factors are calculated based on the demand for,
7 and capacity of, the equipment tracked in TIRKS. The
8 Transport Module allows different utilization inputs
9 depending on whether the traffic is switched or dedicated.
10 The utilization factors for fiber and conduit are developed
11 using information provided by subject matter experts in
12 Qwest's network organization.

13 **Q. HOW ARE THE INVESTMENT DEFAULTS USED IN THE**
14 **TRANSPORT MODULE DEVELOPED?**

15 A. The default material investments used in the
16 Transport Module for the equipment and facilities described
17 above are found in vendor contracts or price lists. The
18 material investments for the standard transport
19 configurations are determined by engineers whose job it is
20 to develop the transport configurations currently in use at
21 Qwest. Thus, the material prices used as defaults in the

1 ICM reflect the current prices that Qwest must pay vendors
2 to purchase equipment used to provide transport.

3 **Q. DO YOU RECOMMEND THE USE OF THE DEFAULT INPUT**
4 **VALUES FOR TRANSPORT?**

5 A. Yes. The default input values in the Transport
6 Module are generated from actual vendor contracts and price
7 lists, using currently deployed transport configurations
8 developed by subject matter experts, and relying on
9 capacity and utilization information from TIRKS. Qwest
10 believes the data obtained from these sources are the most
11 current and forward-looking data available.

4. Capital Cost Module

12 **Q. WHAT ARE THE KEY INPUTS IN THE CAPITAL COST**
13 **MODULE?**

14 A. The key inputs to the Capital Cost Module are
15 cost of money and depreciation lives. The ICM allows the
16 user to select either Qwest's economic or state-prescribed
17 cost of capital, or to enter a specific cost of equity,
18 cost of debt and debt to equity ratio. The ICM also allows
19 the user to select the Qwest economic, state-prescribed or

1 FCC-prescribed depreciation lives and network salvage
2 values, or to change the depreciation lives and net salvage
3 for every plant account. The user can also choose either
4 Equal Life Group or straight-line depreciation. I will
5 discuss depreciation and cost of money later in my
6 testimony.

5. Expense Factors Module

7 **General Description**

8 **Q. DOES THE ICM INCORPORATE AN ENHANCED PROCESS FOR**
9 **THE CALCULATION OF ANNUAL EXPENSE FACTORS?**

10 A. Yes. The Factors Module of ICM includes several
11 enhancements that make it easy to understand the factor
12 application process and to audit the results.

13 In the enhanced Factors Module:

14 • Expenses and investments are pulled directly from
15 standard accounting reports;
16 • User-defined efficiency and inflation inputs can be
17 selected;
18 • The factor calculation process starts with standard
19 accounting report results (i.e., the books of the
20 firm). Directly assigned costs (i.e., costs that
21 are directly assigned to elements) and costs that
22 are not applicable to TELRIC studies are removed.

These reductions are explicitly displayed in the Factors Module. This provides the user with a clear understanding of which costs are included and which costs are not included in the factors;

- All calculations are contained in one set of worksheets.

Q. DO THE ENHANCEMENTS TO THE EXPENSE FACTORS MODULE MAKE IT EASIER TO ENSURE THAT DOUBLE COUNTING OF COSTS DOES NOT OCCUR?

A. Yes. The factors model is designed to help the user ensure that double counting (or omission) of expenses does not occur. The cost factors are based on historical cost relationships,[17] and use the books of account as a starting point. All costs on the books of Qwest are accounted for - costs are explicitly removed if directly assigned in another study or if not applicable to TELRIC studies. The user can clearly see the total costs (booked costs), the removed costs, and the costs that remain in the factors. Thus, for example, the user can see that the business office costs that are separately identified in a nonrecurring cost study are removed from the factors and not double-counted.

[17] As noted above, factors are adjusted to account for inflation/deflation and efficiency gains.

1 **Q. DOES THE ICM EXPENSE FACTOR MODULE ENSURE**
2 **CONSISTENCY OF FACTOR APPLICATION?**

3 A. Yes. Prior to the development of an integrated
4 cost model, cost analysts had to apply cost factors
5 separately in each cost study. While the analysts have
6 always sought to ensure that factors were consistently
7 applied across studies, the ICM makes this process much
8 easier. Since the costs for all UNEs and interconnection
9 services developed in ICM are calculated in the same
10 module, the user can be assured that the cost factors are
11 consistently applied to all UNEs and interconnection
12 services.

13 **Expense Factor Module Inputs**

14 **Q. PLEASE DESCRIBE THE KEY FACTORS MODULE INPUTS.**

15 A. The key inputs to the Factors Module are the
16 efficiency and inflation/deflation factors. In the Factors
17 Module input screen, the user may input a "Cost Savings
18 Value" and an "Inflation Rate." The Cost Savings Value
19 estimates the gains expected in productivity or efficiency,
20 while the Inflation Rate estimates the amount of inflation
21 (or deflation) anticipated. These values can be applied on

1 an account-specific basis, or applied uniformly to all
2 accounts.

3 **Q. PLEASE DESCRIBE HOW THE QWEST DEFAULT FOR THE**
4 **COST SAVINGS VALUE IS DEVELOPED.**

5 A. The "Cost Savings Value" input is designed to
6 reflect efficiency gains. This input is based on the X-
7 Factor productivity estimates on page 55 of CC Docket No.
8 97-159 (the "Price Caps" docket).[18] The base expenses are
9 at a 2001 level, so this input reflects estimated
10 efficiency gains resulting from increased labor
11 productivity and improved technologies for a two-year
12 period (2001 to 2003). The calculation of Qwest's cost
13 savings value is a weighted average of the X-Factor
14 productivity estimates reported by the FCC, AT&T and the
15 United States Telephone Association ("USTA") in the Price
16 Caps docket. It results in a two-year efficiency gain of
17 10.25%. This default percentage was selected as an
18 aggressive estimate of future efficiency, relative to
19 Qwest's historical trends.

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[18] *In the Matter of: Price Cap Performance Review for LECs, CC Docket No. 94-1,* Fourth Report and Order; *and Access Charge Reform, CC Docket No. 96-262,* Second Report and Order, (Released May 21, 1997).

1 **Q. PLEASE DESCRIBE HOW THE QWEST DEFAULT FOR THE**
2 **INFLATION FACTOR IS DEVELOPED.**

3 A. The 10.01% inflation input is based on the Wage &
4 Salary Index prepared by the economic consulting firm, Joel
5 Popkin and Company. The value represents an estimate of
6 inflation between 2001 and 2003, based on Qwest-specific
7 circumstances including Qwest's union labor contract and
8 compensation and benefits practices. Qwest's inflation
9 rate is a reasonable input because it appropriately
10 represents the environment in which Qwest must operate.

11 **Q. DO YOU RECOMMEND USE OF THE DEFAULT INPUTS FOR**
12 **EFFICIENCY AND INFLATION?**

13 A. Yes. I believe that these inputs reasonably
14 reflect anticipated gains in efficiency and an inflation
15 value appropriate for use in forward-looking cost models
16 and studies that take into effect the environment in which
17 Qwest operates.

VI. THE ENHANCED NONRECURRING COST STUDIES (ENRC)

18 **Q. PLEASE BRIEFLY DESCRIBE THE ENRC.**

1 A. The ENRC is a collection of cost studies
2 developed by Qwest designed to estimate the *nonrecurring*
3 TELRIC for all UNEs and interconnection services. (Exhibit
4 No. 3) The ENRC calculates nonrecurring costs for
5 provisioning and installation activities based on the
6 probabilities of occurrence of the tasks performed and the
7 estimated time to accomplish each function. The time
8 estimates and probabilities for each task are presented in
9 detail in the ENRC workpapers.

10 **Q. IS QWEST PROVIDING A MANUAL THAT PROVIDES A**
11 **DETAILED DESCRIPTION OF THE ENRC?**

12 A. Yes. Qwest is filing the ENRC user manual,
13 located on the CD in the "Models" folder with the
14 Nonrecurring model, which instructs the user about how to
15 make changes to inputs.

16 **Q. HOW IS THE ENRC DESIGNED?**

17 A. The ENRC calculates the direct nonrecurring costs
18 for each UNE and interconnection service based on time
19 estimates to perform tasks, probabilities that tasks will
20 be performed, and labor rates associated with each job
21 function. ENRC then applies expense factors to the direct

1 nonrecurring costs to provide the TELRIC for each UNE and
2 interconnection service. Finally, an allocation of common
3 costs is assigned to each nonrecurring cost element
4 resulting in the TELRIC based nonrecurring costs reflected
5 on Exhibit No. 1.

6 **Q. DOES THE ENRC ALLOW THE USER TO MODIFY INPUTS?**

7 A. Yes. ENRC allows the user to view the work
8 times, probabilities, and labor rates and to adjust these
9 values if desired. After all desired changes are made to
10 the inputs, the user can easily recalculate the ENRC to
11 produce cost results based on the new user assumptions.

12 **Q. DOES THE ENRC PROVIDE UNE COST RESULTS THAT**
13 **REFLECT THE PROPER APPLICATION OF TELRIC PRINCIPLES?**

14 A. Yes. The ENRC contains inputs based on Qwest's
15 current experience in processing orders and provisioning
16 network plant. The Qwest nonrecurring TELRIC studies
17 identify the forward-looking, nonrecurring costs that Qwest
18 is likely to incur in provisioning UNEs. These studies
19 consider the actual processing and provisioning activities
20 that are either in place today or are scheduled to be
21 implemented, rather than theoretical provisioning methods

1 based on future hypothetical technologies or networks that
2 are not currently deployed. It includes changes
3 anticipated by subject matter experts in processing and
4 provisioning. It also includes certain assumptions and
5 expectations, although not the costs, for mechanization
6 based on the development of Operations Support Systems
7 ("OSS") interfaces for use by the CLECs. If the studies
8 use these assumptions they produce results, delineated in
9 Exhibit No. 1, that properly reflect the TELRIC principles.
10 These results should be used by the Commission as a
11 barometer for determining the reasonableness of Qwest's
12 nonrecurring prices as agreed upon and reflected in
13 Attachment A to the Motion for Approval.

14 **Q. PLEASE DESCRIBE THE PROCESS QWEST USES TO**
15 **VALIDATE THE ASSUMPTIONS AND INPUTS USED IN ITS MODELS.**

16 A. Qwest utilizes a variety of approaches to ensure
17 the reasonableness of its TELRIC estimates and assumptions.
18 For example, component prices are taken directly from
19 vendor quotes with Idaho specific loadings (e.g., sales
20 tax) applied. Placement costs contained in Qwest's loop
21 costing model are developed from actual network contracts
22 with Idaho vendors. Assumptions are verified through

1 discussions with internal experts about actual construction
2 experiences and vendor bid responses, along with other
3 relevant data. Since TELRIC, by its very nature,
4 represents a rebuild of the total network, it is critical
5 that all relevant available information be used to confirm
6 model assumptions, inputs and logic. Qwest's cost analysts
7 also spend extensive time reviewing cost data for related
8 UNEs and for the same UNEs in other states to ensure that
9 the models' results are within a range of reasonableness.
10 As described by Mr. Buckley, Qwest has compared its TELRIC
11 loop costs with loop cost data from other sources to assure
12 that the results of the TELRIC study for the unbundled loop
13 are reasonable.[19]

VII. OTHER METHODOLOGY ISSUES

14 **Q. WHAT METHODOLOGY ISSUES WILL YOU DISCUSS IN THIS**
15 **SECTION OF YOUR TESTIMONY?**

16 A. In this section of my testimony, I will address
17 three general methodology issues:

18 • Fill factors

[19] However, as noted above, Qwest is not seeking loop rates that are higher than the benchmarked loop rates previously established for Idaho.

1 • Cost of Money

2 • Depreciation

3 These issues are relevant to all equipment-based costs
4 produced by the ICM.

5 **A. Fill Factors**

6 **Q. PLEASE DESCRIBE THE TYPES OF FILL FACTORS THAT**
7 **COULD BE USED TO MODEL COSTS.**

8 A. As I explained earlier in my testimony, "fill" is
9 an industry term for the assumed utilization to be placed
10 on a piece of investment (e.g., loop plant or a switch)
11 when determining the unit cost. There are two types of
12 "fill" that have been widely discussed in arbitration and
13 cost proceedings: objective and actual fill.

14 "Objective fill" has historically been used to refer to the
15 maximum utilization of a facility that can be achieved
16 before reinforcement becomes necessary. The percentage for
17 objective fill is usually something less than 100% because
18 some capacity is set aside for maintenance and
19 administrative purposes.

1 Forward-looking "actual fill" is the utilization that is
2 actually projected to be experienced for the investment and
3 is typically lower than the objective fill because of
4 practical realities of network management and expected
5 usage.

6 **Q. WHY IS THE PROPER USE OF FILL FACTORS AN**
7 **IMPORTANT ISSUE?**

8 A. If fill factors are improperly applied in a
9 TELRIC study, the results may be significantly over or
10 understated. That is, the study results are highly
11 sensitive to the fill factors that are used.

12 **Q. WHAT TYPES OF FILL FACTORS ARE UTILIZED IN**
13 **QWEST'S TELRIC STUDIES?**

14 A. In the Qwest cost studies, loop, switching, and
15 transport investments are calculated using ICM inputs that
16 reflect projected actual fill factors. This same approach
17 is used in Qwest's other cost studies, as well.

18 **Q. COULD THE COMPANY EVER OPERATE AT AN OBJECTIVE**
19 **FILL LEVEL?**

1 A. Not efficiently. As explained previously,
2 objective fill refers to the fill level at relief, i.e.,
3 the point at which demand for access to the network
4 requires the company to reinforce facilities. If Qwest
5 operated at objective fill, it would need to add facilities
6 each time new demand for the facility arose - a scenario
7 that is clearly impractical and unnecessarily expensive.
8 For example, it would be extremely inefficient and
9 expensive to add single or small units of switching
10 capacity on demand. Instead, switching capacity is added
11 in large "lumps." This represents the long-run, least-cost
12 method of provisioning. Thus, the efficient switching
13 network will always function at a level well below
14 objective fill.

15 **Q. WHY DO THE QWEST TELRIC STUDIES UTILIZE PROJECTED**
16 **ACTUAL FILL, RATHER THAN OBJECTIVE FILL, IN COST**
17 **CALCULATIONS?**

18 A. For establishing prices that are based on cost,
19 the use of objective fill would prevent a full recovery of
20 costs. For example, assume a company places a 100 pair
21 cable at a cost per pair of $100. The total cost of the
22 cable would be $10,000. Let's further assume that the

1 projected actual usage of this facility is anticipated to
2 be 65%, or 65 of the 100 lines, and that the objective fill
3 for the facility is 85%. The unit cost calculated using an
4 85% objective fill per customer is $118 ($100/pair divided
5 by 85%) and the unit cost calculated using the 65%
6 projected actual fill per customer is $154 ($100/pair
7 divided by 65%). The shortfall using an 85% objective fill
8 is illustrated below:

		Shortfall
Amount to Be Recovered = $10,000		
Amount Recovered at $118 with 65 Pairs	$ 7,670	$2,330
Amount Recovered at $154 with 65 Pairs	$10,000	$0

9 In this scenario, service is actually provided to 65
14 customers. If service is provided to these customers, the
15 entire $10,000 would be recovered only if the price were
16 set at $154. If the price were set at $118, based on costs
17 derived from an objective fill, the firm would recover only
18 $7670, leaving a $2330 shortfall. This represents roughly
19 23% of the original $10,000 investment.

20 No business could survive if it continued to invest in
21 equipment with no expectation that the costs of the

1 investment would be recovered. That is, no firm could
2 invest $10,000 with the expectation it would only be able
3 to recover $7670. Thus, it is critical that projected
4 actual fill levels be utilized in TELRIC studies.

5 **Q. DOES THE FCC'S FIRST REPORT AND ORDER REQUIRE THE**
6 **USE OF PROJECTED ACTUAL FILL FACTORS?**

7 A. Yes. The FCC's First Report and Order stated
8 that:

9 Per-unit costs shall be derived from total
10 costs using reasonably accurate "fill factors"
11 (estimates of the proportion of a facility that
12 will be "filled" with network usage); that is, the
13 per-unit costs associated with a particular element
14 must be derived by dividing the total cost
15 associated with the element by a *reasonable*
16 *projection of the actual total usage of the*
17 *element*. (emphasis added)[20]

18 The use of projected actual fill factors results in a
19 TELRIC that more nearly reflects the cost of actually
20 providing a UNE or an interconnection service in Qwest's
21 operating environment.

22 **Q. COULD QWEST MAINTAIN ITS NETWORK WITH ACTUAL FILL**
23 **LEVELS APPROACHING OBJECTIVE FILL LEVELS?**

[20] First Report and Order at ¶ 682.

1 A. No. If fill factors are set too high, Qwest's
2 ability to provide service to customers on demand is
3 adversely impacted. For example, if Qwest were to engineer
4 its loop feeder network so that actual fill levels would
5 approach the level of objective fill - there would be a
6 high probability that facilities would not be available
7 upon customer request, resulting in held orders. This
8 would not be in the best interests of Idaho consumers. In
9 view of the FCC's pronouncements relating to fill factors,
10 Qwest believes that in this proceeding the Commission
11 should adopt the realistic projected fill factors that
12 Qwest is utilizing in its studies.

13 Please refer to Mr. Buckley's testimony for a further
14 discussion of the treatment of fill in the TELRIC
15 calculations for the unbundled loop.

16 **B. Cost of Money**

17 **Q. PLEASE BRIEFLY DISCUSS THE FORWARD-LOOKING COST**
18 **OF CAPITAL.**

19 A. The cost of capital (cost of money) represents
20 the weighted average cost of debt and equity and represents
21 a return on the forward-looking, least-cost investment that

1 is included in a TELRIC analysis. To be correct, this cost
2 of capital must be calculated by factoring in an
3 appropriate measure of risk. As competition enters the
4 market, Qwest's risk increases. This will be reflected in
5 Qwest's cost of capital, which will increase with increased
6 risk.

7 **Q. ABOVE YOU DISCUSSED THE FCC'S GUIDANCE IN THE**
8 **TRIENNIAL REVIEW ORDER REGARDING COST OF MONEY. HAS THE**
9 **FCC DETERMINED A FORWARD-LOOKING COST OF MONEY UNDER THIS**
10 **STANDARD?**

11 A. Yes. The FCC recently concluded an
12 interconnection arbitration[21] in the state of Virginia in
13 which it determined that the appropriate forward-looking
14 cost of money for Verizon would be 13.068 percent. This
15 determination was based on a 7.86 percent cost of debt, a
16 14.37 percent cost of equity and a capital structure that
17 is 20 percent debt and 80 percent equity. Because the FCC

[21] *In the Matter of Petition of WorldCom, Inc. Pursuant to Section 252(e)(5) of the Communications Act for Preemption of the Jurisdiction of the Virginia State Corporation Commission Regarding Interconnection Disputes with Verizon Virginia Inc., and for Expedited Arbitration* and *In the Matter of Petition of AT&T Communications of Virginia Inc., Pursuant to Section 252(e)(5) of the Communications Act for Preemption of the jurisdiction of the Virginia Corporation Commission Regarding Interconnection Disputes With Verizon Virginia Inc.*, CC Docket Nos. 00-218 and 00-251, Memorandum Opinion and Order at ¶ 104 (Rel. August 29, 2003) ("Virginia Arbitration Order").

1 was conducting what it described as a "baseball
2 arbitration" between Verizon and AT&T/WorldCom, it adopted
3 the 12.95 percent overall cost of capital proposed by
4 Verizon as the rate closest to its 13.068 percent
5 calculation.

6 **Q. HAS QWEST USED A FORWARD-LOOKING COST OF MONEY IN**
7 **ITS TELRIC CALCULATIONS?**

8 A. No. Because of the FCC's discussion of this
9 issue in both the TRO and the Virginia Arbitration Order,
10 Qwest believes that a forward-looking cost of money that
11 takes into account the risks faced in a competitive market
12 is appropriate for use in TELRIC studies. Conservatively,
13 this would mean a cost of money of at least 12.95 percent.
14 However, in this proceeding to avoid a protracted debate
15 over the appropriate cost of money Qwest provides a cost
16 that is highly conservative based on Qwest's current
17 projections: 11.18 percent. Qwest believes this is the
18 minimum acceptable rate based on Qwest's level of risk
19 going forward and the FCC's current guidance on the
20 subject.

1 C. Depreciation Lives

2 **Q. PLEASE BRIEFLY DISCUSS FORWARD-LOOKING**
3 **DEPRECIATION.**

4 A. Forward-looking TELRIC studies must consider the
5 real economic depreciation lives of plant and equipment.
6 These lives must reflect how long the plant and equipment
7 is actually expected to be used on a going-forward basis,
8 based on the competitive telecommunications environment.
9 If prices are to be based on a forward-looking cost, these
10 costs should not reflect historical depreciation rates.
11 Proper forward-looking depreciation lives should be based
12 on useful lives that are often shorter than historical
13 lives. The use of artificially long equipment lives
14 understates depreciation expense, and effectively impairs
15 the recovery of costs. As discussed above, this approach
16 to depreciation was confirmed by the FCC in its Triennial
17 Review Order. In addition, although the FCC adopted FCC
18 lives in the Virginia Arbitration Order, it again discussed
19 the appropriateness of using economic depreciation lives.[22]

[22] *Id.* at 121.

1 **Q. WHAT DEPRECIATION LIVES HAS QWEST USED IN ITS**
2 **TELRIC STUDIES?**

3 A. Qwest has used forward-looking economic
4 depreciation lives in its TELRIC studies based on the lives
5 reflected in its current financial reporting. These lives
6 are similar to the economic lives contained in the March
7 1997 Second Settlement and Stipulation.[23] In the case of
8 the investment accounts used to develop direct costs, most
9 of Qwest's current economic lives are the same as those
10 prescribed by the Commission and in some cases the
11 Commission-prescribed lives are actually shorter than those
12 utilized by Qwest in its studies. In the case of the
13 investment accounts that reflect support assets, Qwest's
14 current economic lives for financial reporting purposes are
15 generally shorter than those prescribed by the Idaho
16 Commission in 1997.

VIII. THE TELRIC STUDIES

17 **Q. PLEASE BRIEFLY DESCRIBE THE TELRIC STUDIES THAT**
18 **QWEST IS SPONSORING IN THIS DOCKET.**

1 A. Qwest is presenting recurring and nonrecurring
2 costs for UNEs and interconnection services, collocation,
3 line sharing and ancillary services. In this filing, I
4 address the recurring costs for most UNEs and
5 interconnection services, including the unbundled loop,
6 switching and transport. I also address the nonrecurring
7 costs for all of the UNEs and interconnection services
8 filed, plus line sharing, collocation, and the permanent
9 deaveraging of the UNE loop.

10 **Q. HOW WILL YOU STRUCTURE YOUR DISCUSSION OF THE**
11 **SEPARATE TELRIC STUDIES?**

12 A. I will address each of the enumerated elements
13 individually and, where applicable, discuss the TELRIC
14 studies associated with each issue.

15 **A. The ICM Elements**

16 **Q. PLEASE BRIEFLY DESCRIBE THE ICM UNE ELEMENTS.**

17 A. As described earlier, the ICM produces recurring
18 TELRIC data for the following elements:

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[23] *In the Matter of the Applications of U S WEST Communications, Inc.*

- Unbundled Loop (including extension technology)
- Switching
  - Local Switching (port and usage)
  - Tandem Switching
- Transport
  - Tandem Switched Transport
  - Direct Trunked Transport
  - Shared Transport
  - Entrance Facilities
  - Multiplexing
  - Unbundled Dedicated Interoffice Transport ("UDIT")
  - Extended - UDIT ("EUDIT")
- Database Services (8XX Database and LIDB)
- Signaling
- Daily Usage Record File
- Category 11 Records

The results produced in ICM for these UNEs are displayed in Exhibit No. 2.

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for Authority to Increase Its Rates and Charges for Regulated Title 61 Services, Case No. USW-S-96-5, Second Settlement and Stipulation (March 7, 1997).

1. UNE Loop Deaveraging

1 **Q. WHAT IS QWEST PROPOSING FOR UNE LOOP DEAVERAGING**
2 **IN THIS DOCKET?**

3 A. Qwest is proposing a three-zone, cost-based, wire
4 center deaveraging approach using the cost results from the
5 Loop Module of the ICM. (Exhibit No. 2) This approach is
6 the same as that used in Idaho today for the benchmarked
7 loop rates.

8 **Q. HOW WERE THE COSTS FOR THE THREE ZONES**
9 **DETERMINED?**

10 A. Qwest used the Loop Module to determine loop
11 investment by wire center. The investments were then
12 converted to cost by wire center in ICM. The wire centers
13 were then ranked, by cost, and zones were established based
14 on the recommendations of Commission Staff. A weighted
15 average cost was then calculated for each zone using
16 Qwest's current line counts for each wire center. The
17 weighted average costs were then grouped by zone to produce
18 an average cost for each zone.

1 The statewide average loop cost using the ICM is $28.81.
2 The statewide average loop rate based on the benchmark is
3 $20.21.

4 **Q. WHAT ARE THE DEAVERAGED ZONE RATES DETERMINED BY**
5 **THIS INFORMATION?**

6 A. The deaveraged unbundled loop costs/rates
7 produced in ICM are:

8 Zone 1	$21.80
9 Zone 2	$34.67
10 Zone 3	$59.04
11 Statewide Average	$28.81

12 The deaveraged unbundled loop rates that result from the
13 benchmark loop rate are:

14 Zone 1	$15.65
15 Zone 2	$23.76
16 Zone 3	$40.50
17 Statewide Average	$20.21

2. Switching

1 **Q. DOES QWEST'S ICM PRODUCE TELRIC RESULTS FOR**
2 **SWITCHING?**

3 A. Yes. ICM produces recurring costs for line and
4 trunk ports and for local and tandem switching usage.
5 Described in more detail in the "Summary of Results" tab in
6 ICM (Exhibit No. 2), the various types of unbundled ports
7 provide access to the basic functionality of the switch as
8 well as access to interoffice services. Local and tandem
9 switching costs are determined on a minute of use (MOU)
10 basis for terminating traffic to an end office switch and
11 for switching a call through a local tandem switch,
12 respectively.

3. Transport

13 **Q. DOES QWEST'S ICM PRODUCE A TELRIC FOR SHARED**
14 **TRANSPORT?**

15 A. Yes. ICM produces a recurring cost for shared
16 transport. Shared transport, as defined by the FCC,
17 represents access to an ILEC's shared *interoffice*
18 *facilities* (i.e., facilities that carry traffic between

1 ILEC central offices) at costs that reflect the
2 efficiencies of the ILEC. Shared transport is available
3 only in conjunction with unbundled switching, due to the
4 fact that switches perform the important gatekeeper
5 function for access to the shared transport network.[24]

6 The recurring costs for shared transport are included in
7 the results summary of the ICM in Exhibit No. 2.

8 **Q. IS QWEST FILING A NONRECURRING COST STUDY FOR**
9 **SHARED TRANSPORT AT THIS TIME?**

10 A. No. When a CLEC purchases shared transport, it
11 must also purchase an unbundled switch port and switch
12 usage. Qwest has not identified any additional
13 nonrecurring costs for shared transport beyond the
14 nonrecurring costs associated with unbundled switching. In
15 the future, if any unique shared transport nonrecurring
16 costs are identified, Qwest may file a nonrecurring cost
17 study.

[24] Switches include the routing tables that route traffic over the shared transmission network. Without this switch function, shared transport could not be provided.

1 **Q. PLEASE BRIEFLY DESCRIBE HOW SHARED INTEROFFICE**
2 **FACILITIES ARE DIFFERENT FROM DEDICATED INTEROFFICE**
3 **FACILITIES.**

4 A. Interoffice transport includes the facilities
5 that provide links between all of the central offices on
6 the Qwest network (i.e., both tandem and end office
7 switches). *Dedicated* interoffice facilities are set aside
8 specifically for the full use of one customer or set of
9 customers and cannot be shared by traffic from multiple
10 customers. *Shared* interoffice facilities are not dedicated
11 to a specific customer, but are designed and engineered to
12 handle switched traffic from all customers. Shared
13 interoffice facilities, when used in connection with
14 standard routing tables and central office switches,
15 provide shared access to all of Qwest's switches.

16 **Q. PLEASE COMPARE THE SHARED TRANSPORT TELRIC WITH**
17 **THE DIRECT TRUNKED TRANSPORT ("DTT") AND TANDEM SWITCHED**
18 **TRANSPORT ("TST") TELRIC STUDIES THAT QWEST IS FILING IN**
19 **THIS PROCEEDING.**

20 A. The shared transport, TST and DTT TELRIC studies
21 all develop transport investment utilizing the Qwest

1 Transport Model. Thus, investments of all three are
2 developed using the same basic TELRIC costing approach.
3 However, the shared transport study is different from the
4 DTT and TST studies because shared transport is a distinct
5 offering that is *defined differently* than TST and DTT. The
6 cost results reflect these differences.

7 Direct trunked transport represents a dedicated path
8 between two switching offices. A DTT link is not shared by
9 multiple customers and does not carry POTS switched
10 traffic. Tandem switched transport represents a shared
11 interoffice path *between a tandem switch and an end office*—
12 TST does not carry switched traffic directly between two
13 end offices.

14 The shared transport cost study identifies the weighted per
15 minute of use cost for three types of interoffice calls
16 that utilize the common switched network:

17 1. *Direct end office to end office-* These calls are
18 directly routed between the originating and
19 terminating local end offices, and are not routed
20 through a tandem switch.

21 2. *End office to end office via a local tandem-* These
22 calls are routed from the originating end office to
23 a tandem switch, and from the tandem switch to the
24 terminating local end office.

1 3. *End office to access tandem*- These calls are routed
2 from the originating local end office to the access
3 tandem.

4 The shared transport TELRIC study separately calculates the
5 "per minute of use" costs for each of the three types of
6 calls. The minute of use costs for each call type are
7 weighted together based on Qwest trunk data, resulting in a
8 single shared transport minute of use cost.[25]

9 Please refer to the Transport Module documentation for a
10 complete description of the cost methodology used to
11 produce the TELRIC for each type of transport.

4. Other UNEs Calculated in ICM

12 **Q. PLEASE BRIEFLY DESCRIBE THE DAILY USAGE RECORD**
13 **FILE.**

14 A. The Daily Usage Record File offering is defined
15 as a cost per record and includes the cost for assembly and
16 editing of the usage records, along with end office usage
17 measurement. In addition, the cost per record includes the

[25] The shared transport study weights the three types of calls based on the number of trunks in the Qwest network that are: (1) local end office to local office, (2) local end office to local tandem and (3) local end office to access tandem.

1 costs associated with the development of the service,
2 amortized over five years.

3 **Q. PLEASE EXPLAIN WHAT A CATEGORY 11 RECORD IS.**

4 A. "Category 11 Records" are messages that provide
5 mechanized record formats that can be used to exchange
6 access usage information between Qwest and a CLEC. The
7 Category 11 cost study identifies the data transmission
8 costs, assembly and editing, and labor costs associated
9 with producing each record.

10 **B. The Separate Cost Studies**

11 **Q. WHAT OTHER RECURRING AND/OR NONRECURRING COST**
12 **STUDIES DO YOU PRESENT?**

13 A. My testimony presents separate cost studies for
14 additional recurring elements not yet integrated into the
15 ICM. In addition, as discussed above in Section VI, the
16 ENRC studies calculate the nonrecurring costs for all UNEs
17 and interconnection services. The ENRC does not calculate
18 costs for collocation or line sharing. However, the ENRC
19 does calculate the cost for line sharing installation. The
20 following elements will be presented in this section:

1 • UNE Platform POTS (new and existing service)

2 • Digital-capable Loop (DS1 and DS3)

3 • Distribution Subloop

4 • DS1 Capable Feeder Loop

5 • Building Cable

6 • Unbundled Dark Fiber (loop and interoffice)

7 **Q. ARE ANY OF THE ELEMENTS MENTIONED ABOVE ELEMENTS**

8 **THAT RESULTED FROM THE FCC'S UNE REMAND ORDER?**

9 A. Yes. A number of the elements that are presented

10 in this filing are listed as UNEs as a result of the FCC's

11 UNE Remand Order.[26] For example, the FCC concluded that the

12 list of loop-related UNEs includes digital capable loops

13 (also referred to as high capacity loops), subloops,

14 building cable (inside wire), and dark fiber. However, as

15 discussed above, as a result of the recently released TRO

16 the FCC removed from the list of UNEs high capacity

17 elements such as OCn capable loops. In addition, the UNE

18 Platform, or UNE-P, is the result of the FCC's discussion

19 relating to UNE combinations in the UNE Remand Order. The

1 future of the UNE-P elements and Qwest's obligation to
2 provide them at TELRIC rates is the subject of additional
3 proceedings under the TRO.

1. The UNE Remand Studies

4 **Q. WILL QWEST PRESENT A RECURRING TELRIC STUDY FOR**
5 **THE UNE PLATFORM ("UNE-P")?**

6 A. No. The UNE platform consists of either 1) UNEs
7 already existing in combination to serve existing
8 customers, or 2) combinations of UNEs not previously
9 combined to serve new customers, to the extent facilities
10 are available. Individual recurring UNE rates exist for
11 the elements that make up the UNE-P and will apply for UNE
12 combinations; therefore, there is no need to file
13 additional recurring cost studies in support of UNE-P.

14 **Q. DOES QWEST SEPARATELY STATE THE COST OF**
15 **UNBUNDLED LOOP GROOMING FROM THE COST OF THE UNE LOOP?**

16 A. Yes. Qwest recognizes that unbundled loop
17 grooming is not relevant in the case of UNE-P, thus, when

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[26] Third Report and Order and Fourth Further Notice of Proposed Rulemaking, CC Docket No. 96-98, *In the Matter of Implementation of the*

1 the individual, recurring UNE rates are summed to reflect
2 UNE-P, the grooming charge is not included in the UNE-P
3 rate. However, the loop grooming charge is added to the
4 unbundled loop rate that applies when the loop is provided
5 but Qwest's switch is not used.

6 **Q. WILL QWEST SUBMIT NONRECURRING COST STUDIES FOR**
7 **THE UNE PLATFORM?**

8 A. Yes. While individual nonrecurring UNE rates
9 also exist for the elements that make up the UNE platform,
10 the one-time activities associated with the conversion or
11 connection of the UNE platform differ from the activities
12 associated with connection of each individual element.
13 Therefore, Qwest has developed nonrecurring cost studies to
14 reflect the specific activities and times related to
15 conversion and connection of UNE platforms. (Exhibit No.
16 3)

17 **Q. PLEASE DESCRIBE THE UNE-P POTS NONRECURRING COSTS**
18 **FOR EXISTING SERVICES.**

Local Competition Provisions of the Telecommunications Act of 1996, Rel. November 5, 1999.

1 A. The UNE-P POTS nonrecurring cost study identifies
2 the nonrecurring costs that Qwest incurs to convert an
3 *existing* POTS service customer to UNE-P POTS. The costs
4 are identified separately for mechanized and manual orders,
5 and include the order-related costs incurred by the
6 Interconnect Service Center ("ISC") as detailed in the
7 ENRC. (Exhibit No. 4) These are the same costs Qwest
8 incurs to transfer existing customers to the CLEC in the
9 case of resold services.

10 **Q. PLEASE DESCRIBE THE UNE-P POTS NONRECURRING COSTS**
11 **FOR NEW SERVICE.**

12 A. The UNE-P POTS nonrecurring cost study also
13 identifies the nonrecurring costs that Qwest incurs to
14 provide *new* service via UNE-P to a CLEC. In this
15 situation, the customer location does not have existing
16 service. The costs are identified separately for
17 mechanized and manual orders. These costs include the
18 order-related costs for activities performed by the ISC and
19 the Loop Provisioning Center ("LPC"). These costs also
20 include placing jumpers in the central office and if
21 necessary, dispatching field technicians.

1 **Q. IS QWEST PRESENTING TELRIC STUDIES FOR HIGH**
2 **CAPACITY OR DIGITAL CAPABLE LOOPS?**

3 A. Yes. Qwest is presenting recurring and
4 nonrecurring costs for high capacity loops. High capacity
5 loops include DS1 and DS3 capable loops. A DS1 capable
6 loop provides a digital transmission path from a network
7 interface in a Qwest serving wire center ("SWC") to the
8 network interface at the end user's designated premises
9 within the serving area of the SWC. A DS3 capable loop
10 provides a similar digital transmission path at a higher
11 transmission rate than the DS1. The DS3 capable loop is
12 configured as a channel on a fiber-based system. The
13 recurring costs associated with DS1 and DS3 capable loops
14 are attached as part of Exhibit No. 4. The cost studies
15 used to develop these costs develop statewide average rates
16 for DS1 and DS3 capable loops. The studies also develop
17 deaveraged rates for DS1 and DS3 capable loops based on the
18 same zones Qwest is proposing for the unbundled loop.

19 The nonrecurring costs for DS1 and DS3 capable loops are
20 included in the results summary of ENRC in Exhibit No. 3.

1 **Q. ARE OCN CAPABLE LOOPS CONSIDERED HIGH CAPACITY**
2 **LOOPS?**

3 A. Yes. However, as discussed above, the FCC has
4 removed OCn capable loops from the list of UNEs that an
5 ILEC is obligated to provide. Nevertheless, Qwest and
6 Commission Staff have reached agreement on statewide
7 average rates for OCn capable loops as included in
8 Attachment A to the Motion for Approval. Those rates will
9 be made available until such time as the rates change under
10 agreements that are being renegotiated with the CLECs.

11 **Q. IS QWEST SUBMITTING RECURRING AND NONRECURRING**
12 **COSTS FOR SUBLOOP UNBUNDLING?**

13 A. Yes. Qwest is submitting recurring and
14 nonrecurring costs for the distribution subloop. The
15 recurring costs for subloop are calculated in Exhibit No.
16 5. Qwest proposes that subloop unbundling be
17 geographically deaveraged on the same basis as the zones
18 that will be established by the Commission for UNE loops.
19 The prices reflected in my Exhibit No. 1 for deaveraged
20 subloops are based on a calculation of the distribution
21 portion of the loop investment. The loop investment is

1 developed in ICM (Exhibit No. 2) on a "per zone" basis.
2 The feeder subloop is calculated in Exhibit No. 5 as the
3 difference between total loop investment and the
4 distribution portion of the investment. The nonrecurring
5 costs for subloops are submitted as part of Exhibit No. 3.

6 In addition, because it seems likely that a CLEC would want
7 to purchase larger increments of feeder capacity, Qwest has
8 also developed a cost for DS1 capable feeder. The DS1
9 capable feeder provides a digital transmission path from a
10 network interface in a Qwest serving wire center to the
11 Field Connection Point ("FCP"). The cost for DS1 capable
12 feeder will be deaveraged, as well. (Exhibit No. 4)

13 **Q. IS QWEST PRESENTING A TELRIC STUDY FOR BUILDING**
14 **CABLE?**

15 A. Yes. Qwest believes that the building cable
16 subloop is the element CLECs appear most interested in.
17 Thus, Qwest has extracted the cost of building cable as a
18 sub-element of the distribution subloop and has developed
19 the cost for building cable as a separate element. The
20 building cable product will be provided on a "per pair"
21 basis at established Field Connection Point arrangements

1 when the CLEC places outside plant to a building and wants
2 access to building cable through a building terminal. The
3 building cable study assumes that the CLEC or building
4 owner will place, at its expense, a common terminal or
5 cross-connect facility that Qwest will jumper to the Qwest
6 terminal and building cable. The building cable cost study
7 is included as part of the subloop cost study in Exhibit
8 No. 5.

9 The rate for building cable will be an averaged per month,
10 "per pair" rate rather than a deaveraged subloop rate. In
11 other words, Qwest proposes a single rate for building
12 cable that will apply across all of Idaho's three zones.
13 This is because the nature of building cable is such that
14 its cost does not vary geographically. The building cable
15 rate does not include the cost of placing jumpers between
16 the CLEC-provided terminal and Qwest's terminal. That cost
17 is a part of the cost of an FCP. As discussed above, Qwest
18 will also offer other types of subloop and inside wire on a
19 deaveraged basis according to the geographically deaveraged
20 zones.

21 **Q. IS QWEST SUBMITTING TELRIC STUDIES FOR DARK**
22 **FIBER?**

1 A. Yes. Unbundled dark fiber ("UDF") consists of
2 two types, UDF - Loop and UDF - Interoffice. Qwest has
3 developed separate cost structures for each of these two
4 types of dark fiber. (Exhibit No. 6) In addition, the
5 dark fiber study calculated costs, which are the same as
6 the costs for UDF - Loop, for elements related to extended
7 unbundled dark fiber or E-UDF.

8 Costs for interoffice dark fiber are on a per-mile basis
9 consistent with the way that dedicated interoffice
10 transport is calculated. Costs for loop dark fiber are
11 calculated on a per-loop basis consistent with the way that
12 the loop cost is determined. UDF Loop provides a pair of
13 optical fibers (i.e., two fibers) between a wire center and
14 a customer location on which no electronic terminating
15 equipment is provided by Qwest. The fibers are connected
16 to a fiber distribution panel ("FDP") or functional
17 equivalent in the wire centers or customer locations. The
18 average fiber investment per loop is derived from the Loop
19 Model Version 2.1, which is included in my cost study
20 workpapers. The study develops the recurring cost for
21 three elements: the loop facility, termination at the wire
22 center and termination at the customer premise. The

1 termination cost includes the cost to terminate the fibers
2 on an FDP.

3 The nonrecurring costs for dark fiber are included as part
4 of Exhibit No. 3.

2. Other Stand Alone Cost Studies

5 **Q. ARE YOU PRESENTING TELRIC STUDIES FOR VERTICAL**
6 **FEATURES?**

7 A. No. The recurring costs for vertical features
8 are included in the costs developed in ICM (Exhibit No. 2)
9 for switch ports.

10 **Q. WHAT IS THE FCC'S POSITION ON VERTICAL FEATURES**
11 **AS SEPARATE UNES?**

12 A. In its First Report and Order,[27] the FCC stated
13 that it declined at that time to unbundle vertical features
14 from local switching costs. Although the FCC specifically
15 permitted the state to investigate whether vertical
16 features should be made separate UNEs, Qwest has not

[27] First Report and Order at ¶ 414.

1 calculated recurring costs for vertical features separate
2 from the costs it calculates for local switch ports.

3 **Q. HAS THE FCC TAKEN A DIFFERENT VIEW OF VERTICAL**
4 **FEATURES SINCE ITS FIRST REPORT AND ORDER?**

5 A. It is not entirely clear. In its decision
6 denying Bell South's application for interLATA relief in
7 Louisiana,[28] the FCC stated that a Bell Operating Company
8 ("BOC") could not limit the vertical features that a CLEC
9 could order. Instead, a BOC "must activate any vertical
10 feature or combination of vertical features requested by a
11 competing carrier unless the BOC can demonstrate to the
12 state commission, through clear and convincing evidence,
13 that activation of that particular combination of vertical
14 features is not technically feasible." This statement
15 implies that the FCC requires the BOCs to treat vertical
16 features individually as separate elements, at least for
17 purposes of provisioning.

18 On the other hand, in the UNE Remand Order the FCC
19 confirmed its definition of local switching in the First

[28] *In the Matter of Application of BellSouth Corporation, BellSouth Telecommunications, Inc., and BellSouth Long Distance, Inc., for Provision of In-Region, InterLATA Services in Louisiana*, CC Docket No. 98-121, Memorandum Opinion and Order at ¶ 219 (Rel. October 13, 1998).

1 Report and Order, noting that the "local switching element
2 includes all vertical features that the switch is capable
3 of providing, including customized routing functions, CLASS
4 features, Centrex and any technically feasible customized
5 routing functions…."[29] This statement implies that the FCC
6 is adhering to the view that vertical features should not
7 be unbundled from switching. However, it would be
8 inconsistent for the FCC to take the position that vertical
9 features must be treated as individual elements for
10 provisioning purposes, and at the same time require ILECs
11 to treat the nonrecurring costs of provisioning them on a
12 bundled basis with switching costs.

13 **Q. WHAT LOGICAL CONCLUSION CAN BE DRAWN FROM THE**
14 **FCC'S POSITION?**

15 A. The FCC's First Report and Order considered
16 vertical features as separate UNEs but decided not to
17 require that they be unbundled at that time. However, the
18 FCC allowed the states to unbundle vertical features into
19 separate UNEs if they chose to do so. The Idaho Commission
20 did not unbundled vertical features in the AT&T
21 arbitration. The FCC now appears to require the treatment

[29] UNE Remand Order at ¶ 244.

1 of vertical features on an individual basis for purposes of
2 provisioning. It is, therefore, logical to conclude that
3 while bundling may be appropriate for vertical features
4 with respect to recurring costs, for purposes of
5 provisioning (nonrecurring costs) they must be unbundled
6 from the switching element so that CLECs can purchase them
7 on an individual basis. It would be illogical to conclude
8 that CLECs could activate vertical features on an
9 individual basis while not allowing Qwest to charge the
10 CLEC the cost to provision them individually. Therefore,
11 Qwest includes the recurring costs for vertical features in
12 the cost calculated in ICM (Exhibit No. 2) for the
13 recurring cost of local switch ports, while the individual
14 nonrecurring costs to provision certain vertical features
15 are calculated separately in the ENRC (Exhibit No. 3).

16 **Q. ARE THERE OTHER COST DATA THAT YOU ARE FILING?**

17 A. Yes. My testimony presents incremental cost
18 data for the following additional elements:

19 • Access to Poles, Conduits and Rights of Way
20 • Direct CLEC to CLEC Connections
21 • Low Side Channelization
22 • ICNAM

- CLASS Call Trace
- Unbundled Packet Switching
- OSS Development & Enhancement
- OSS Ongoing Operations

Q. HAS QWEST PREPARED A COST STUDY FOR THE USE OF QWEST POLES AND CONDUIT BY CLECS?

A. Yes. The Pole and Conduit Attachment rental study results are summarized in Exhibit No. 7. This study identifies the recurring annual charges for the use of poles and conduit by CLECs.

Q. DO THESE STUDIES FOLLOW A TELRIC METHODOLOGY?

A. No. The Pole and Conduit Attachment costs reflected in Exhibit No. 1 are developed using a formula that was defined by the FCC.[30] The FCC's required methodology for poles and conduit is not based on a forward-looking TELRIC costing approach; rather it is based on historical book costs.

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[30] *In the Matter of Amendment of Rules and Policies Governing Pole Attachments*, CC Docket No. 97-98 (Rel. April 3, 2000).

1 **Q. IS THE FCC METHODOLOGY THE BASIS FOR THE**
2 **RECURRING POLE AND CONDUIT ATTACHMENT RATES CONTAINED IN**
3 **ATTACHMENT A TO THE MOTION FOR APPROVAL?**

4 A. No. Idaho is one of a handful of states that has
5 determined to retain jurisdiction over the rates for pole
6 and conduit attachments. Thus, the rates reflected in
7 Attachment A to the Motion for Approval for pole and
8 conduit attachments are rates that were agreed upon by
9 Qwest and Commission Staff as part of the negotiations
10 conducted earlier in this docket.

11 **Q. HAS QWEST PREPARED COST STUDIES TO IDENTIFY THE**
12 **NONRECURRING COSTS ASSOCIATED WITH CLEC POLE AND CONDUIT**
13 **INQUIRIES?**

14 A. Yes. The nonrecurring costs associated with
15 poles and conduits represent Qwest's costs to determine the
16 availability of specific pole or conduit routes that a CLEC
17 might want to access. For example, inquiry fees include
18 engineering time to search Qwest's routing databases.
19 Other fees include field inspections of the necessary
20 facilities, as well as time to make drawings of particular
21 facilities. Details of the tasks and task times included

1 in each of the nonrecurring charges associated with poles
2 and conduits are included in the ENRC. (Exhibit No. 3)

3 **Q. PLEASE DESCRIBE DIRECT CLEC TO CLEC**
4 **INTERCONNECTION.**

5 A. Direct CLEC to CLEC interconnection allows one
6 CLEC to directly interconnect with another CLEC within the
7 same Qwest central office.[31] CLEC to CLEC connections are
8 also available when a CLEC with multiple collocations
9 within the same office wishes to connect those
10 collocations. CLEC to CLEC interconnection may involve
11 physical to physical, physical to virtual, or virtual to
12 virtual collocation.

13 **Q. HAS QWEST PREPARED A COST STUDY FOR DIRECT CLEC**
14 **TO CLEC INTERCONNECTION?**

15 A. Yes. Direct CLEC to CLEC interconnections will
16 include both recurring and nonrecurring costs. The cost
17 study that I am sponsoring develops costs for the following
18 elements:

---

[31] A CLEC can also order CLEC to CLEC cross connections, using an intermediate distribution frame. This arrangement utilizes Interconnection Tie Pairs (ITPs), the costs of which are part of the Collocation study.

- Quote Preparation Fee (nonrecurring)
- Design Engineering and Installation (nonrecurring)
- Cable Racking (recurring)
- Virtual Connections (nonrecurring, if applicable)
- Cable Hole - (nonrecurring, if applicable)

The results of the direct CLEC to CLEC interconnection study are included in Exhibit No. 8.

Q. HAS QWEST SUBMITTED A RECURRING STUDY FOR LOW SIDE CHANNELIZATION CHANNEL PERFORMANCE?

A. Yes. "Low Side Channelization" provides transmission facilities between the customer-designated premises and the serving wire center, the wire center where the CLEC is collocated, or multiplexing equipment. These facilities are available for Channel Performance. (Exhibit No. 9)

Q. HAS QWEST PREPARED A COST STUDY FOR UNBUNDLED INTERCONNECTION CALLING NAME (ICNAM) SERVICE?

A. Yes. ICNAM is a per-query switched access service. ICNAM allows a CLEC to query Qwest's Line Information database and secure the listed name information

1 for the requested telephone number for its end users.
2 (Exhibit No. 10)

3 **Q. HAS QWEST SUBMITTED A COST STUDY FOR THE CLASS**
4 **CALL TRACE FEATURE?**

5 A. Yes. "CLASS Call Trace" is submitted as a
6 separate cost study. CLASS Call Trace allows end use
7 customers to automatically trace the last incoming call.
8 The central office switching feature investments for this
9 feature, including processor time, memory and hardware are
10 obtained from the Switching Cost Model. The CLASS Call
11 Trace cost study presents costs on a per-call-traced basis.
12 (Exhibit No. 11)

13 **Q. PLEASE DESCRIBE QWEST'S COSTS FOR UNBUNDLED**
14 **PACKET SWITCHING.**

15 A. In its UNE Remand Order, at paragraph 313, the
16 FCC required packet switching to be unbundled in certain
17 circumstances when Qwest does not provide CLECs access to
18 remote terminal collocation.

19 In the situations where Qwest is required to offer packet
20 switching, Qwest provides unbundled packet switch interface

1 ports at either a DS1 or DS3 level in the central office.
2 The ports are the physical entry points into the
3 Asynchronous Transfer Mode ("ATM") Cell Relay Service
4 Network and include the electronic equipment used in
5 connecting the channel to the ATM Cell Relay Service
6 Network. In addition, the service includes an unbundled
7 packet switch Customer Channel that provides the path from
8 the remote Digital Subscriber Line Access Multiplexer
9 ("DSLAM") to the interface port, including all
10 functionality of the DSLAM. If the CLEC chooses to provide
11 its own facility from the DSLAM to the central office,
12 Qwest offers an alternative to the Customer Channel that
13 only provides the DSLAM functionality. The recurring costs
14 for these elements are calculated in Exhibit No. 12.

15 **Q. ARE THERE NONRECURRING COSTS ASSOCIATED WITH**
16 **UNBUNDLED PACKET SWITCHING?**

17 A. Yes. Nonrecurring costs for the work activities
18 involved in provisioning the DS1/DS3 ATM switch interface
19 ports necessary to connect the unbundled packet switch
20 customer channel are calculated in the ENRC. (Exhibit No.
21 3) Nonrecurring costs are also calculated in the ENRC for
22 work activities necessary to connect the unbundled packet

1 switch customer channel shared distribution subloop at an
2 established field connection point ("FCP") arrangement.

3 **Q. DOES QWEST CONTINUE TO BE OBLIGATED TO PROVIDE**
4 **CLEC'S ACCESS TO UNBUNDLED PACKET SWITCHING?**

5 A. No. As discussed above, on August 21, 2003, the
6 FCC eliminated the obligation for ILECs to provide
7 unbundled packet switching at TELRIC rates with the
8 issuance of the TRO. Nevertheless, Qwest has calculated
9 rates for unbundled packet switching, as reflected in my
10 Exhibit No. 1, which will be available to CLECs until such
11 time as their interconnection agreements are amended to
12 eliminate these elements as UNEs.

13 **Q. HAS QWEST SUBMITTED A COST STUDY FOR OSS**
14 **DEVELOPMENT AND ENHANCEMENTS?**

15 A. Yes. The OSS Development and Enhancements cost
16 is a startup cost caused by the requirement for Qwest to
17 develop electronic interfaces and modify existing
18 downstream OSS to provide CLECs with access to Qwest's OSS.
19 These costs include the cost to establish the systems and

1 interfaces that will be used for CLEC ordering processes.[32]
2 Since these start-up costs are incurred in order to
3 facilitate CLEC orders, it makes sense to recover the costs
4 on a per CLEC order basis. Qwest has conservatively spread
5 these costs over 10 years of estimated order volumes.

6 **Q. IS QWEST ENTITLED TO RECOVER START-UP**
7 **(DEVELOPMENT AND ENHANCEMENT) OSS COSTS?**

8 A. Yes. First, the FCC confirmed in its UNE Remand
9 Order[33] that OSS is considered a UNE under Section 251 of
10 the 1996 Act. In their comments, parties "argue[d] that
11 OSS qualifies as an independent unbundled network
12 element…"[34] Therefore, Qwest is entitled to seek recovery
13 for its OSS UNE costs as permitted under the Act.

14 Second, system modifications are required to provide access
15 to OSS. In discussing OSS as a UNE, the FCC confirmed that
16 it "also *required* incumbent LECs to make *modifications* to
17 their OSS as necessary in order to offer nondiscriminatory
18 access to these functions, including access to interface

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[32] It is important to understand that these start-up costs do not include the cost to process orders, once the systems are established.

[33] UNE Remand Order at ¶ 424.

[34] *Id.* ¶ 423.

1 design systems."[35] The FCC described interface design
2 systems as "an electronic gateway used to electronically
3 access OSS information such as telephone number, address
4 validation, order receipt notice, etc."[36] By identifying
5 OSS as a UNE, then obligating ILECs to provide electronic
6 interfaces and modify their OSS to accommodate the CLECs,
7 the FCC placed start-up costs for OSS development and
8 enhancement into the category of an ILEC's recoverable UNE
9 costs. In addition, the FCC in its recently released Line
10 Sharing Order supports this position.[37] Qwest is also
11 seeking to recover the costs it will incur to modify its
12 OSS in support of line sharing in this proceeding.

13 Third, OSS costs relate solely to UNEs. In addition to
14 modifying and enhancing its existing OSS, Qwest has
15 provided electronic interfaces for preordering, ordering,
16 provisioning, maintenance and repair, and billing for the
17 sole purpose of enabling CLECs to enter the local market.
18 If not for the provisioning of the OSS UNE, the start-up

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[35] *Id.* ¶ 421 (Emphasis added).

[36] *Id.* ¶ 421, see footnote 823.

[37] The FCC states "We find that incumbent LECs should recover in their line sharing charges those reasonable incremental costs of OSS modification that are caused by the obligation to provide line sharing as an unbundled network element." (Emphasis added). (Line Sharing Order ¶ 144).

1 costs that Qwest seeks to recover would not have been
2 incurred. Therefore, Qwest is entitled to seek recovery of
3 the start-up costs related to the OSS UNE.

4 **Q. HAS QWEST PREPARED A COST STUDY FOR OSS**
5 **DEVELOPMENT AND ENHANCEMENT COSTS?**

6 A. Yes. The OSS Development and Enhancement
7 nonrecurring cost of $11.38 per order is developed in
8 Exhibit No. 13.

9 **Q. DOES QWEST PROPOSE TO CHARGE THE CLECS $11.38 PER**
10 **ORDER TO RECOVER ITS OSS START-UP COSTS?**

11 A. No. As agreed upon in its negotiations with
12 Commission Staff, Qwest proposes to charge the CLECs only
13 $5.00 per order for recovery of its OSS start-up costs.
14 Although, Qwest has already incurred the costs that it
15 seeks to recover in this proceeding and the cost evidence
16 supports the higher charge, Qwest recognizes that CLECs
17 entering the market in Idaho might have difficulty with the
18 higher rate. Of course, the lower rate would extend
19 Qwest's recovery period of the start-up costs to more than
20 ten years. Nevertheless, in order to ensure that the rate
21 for recovery of Qwest's costs to develop OSS for use by the

1 CLECs is perceived as reasonable, Qwest has proposed to
2 limit the rate to $5.00 per order as reflected in
3 Attachment A to the Motion for Approval and in Exhibit No.
4 1.

5 **Q. PLEASE DESCRIBE OSS ONGOING OPERATIONS.**

6 A. OSS ongoing maintenance costs include the costs
7 of running the electronic interfaces that have been
8 developed for the CLECs, and updating or making minor
9 changes to those electronic interfaces' software programs.
10 Costs for maintaining and operating the electronic
11 interfaces include the forward-looking costs of salaries
12 and expenses for people involved in making table updates,
13 resolving error conditions, initializing application
14 software, and other related tasks.

15 **Q. IS QWEST ENTITLED TO RECOVER OSS ONGOING**
16 **MAINTENANCE COSTS FROM CLECS?**

17 A. Yes. As noted above, OSS is a UNE, and Qwest is
18 entitled to seek recovery for its OSS UNE costs as
19 permitted under the Act. In addition, OSS ongoing
20 maintenance costs relate solely to UNEs, and should be

1 recovered from CLECs—the cost causers. If the OSS UNE were
2 not provided, these costs would not be incurred.

3 **Q. HAS QWEST PREPARED A COST STUDY FOR OSS ONGOING**
4 **OPERATIONS COSTS?**

5 A. Yes. The OSS Ongoing Operations nonrecurring
6 cost of $1.40 per order is developed in Exhibit No. 14.
7 This rate has been agreed upon by Qwest and Commission
8 Staff and is reflected in Attachment A to the Motion for
9 Approval and in Exhibit No. 1.

10 **Q. HAS QWEST PREPARED ANY OTHER TELRIC STUDIES FOR**
11 **RECURRING AND NONRECURRING UNE RATES?**

12 A. Yes. Qwest has prepared TELRIC studies for the
13 customer transfer charge, line sharing and collocation as
14 described in more detail below.

15 **C. Customer Transfer Charge**

16 **Q. HAS QWEST CONDUCTED A NONRECURRING TELRIC STUDY**
17 **FOR THE CUSTOMER TRANSFER CHARGE?**

18 A. Yes. Qwest has submitted its nonrecurring costs
19 underlying the Customer Transfer Charge ("CTC"). The CTC

1 study is cost-based and reflects the tasks Qwest must
2 perform in the Interconnection Service Center ("ISC") when
3 an end-user customer switches from one local carrier to
4 another, including when the customer switches from Qwest to
5 another local carrier. Tasks performed include changing
6 customer records to reflect the change in service provider.
7 As discussed above, the tasks performed for CTC, thus the
8 nonrecurring rates, are the same as those for UNE-P POTS
9 for existing customers.

10 The nonrecurring costs for CTC are included as part of
11 Exhibit No. 3.

IX. LINE SHARING

12 **Q. WHAT IS LINE SHARING?**

13 A. Line sharing, which the FCC has defined as a UNE,
14 involves the separate provisioning of the high frequency
15 portion of the unbundled loop. In its "Line Sharing
16 Order"[38] the FCC adopted "a requirement that incumbent LECs

[38] *In the Matters of Deployment of Wireline Services Offering Advanced Telecommunications Capability and Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, CC Docket Nos. 98-147 and 98-98, Third Report and Order in CC Docket No. 98-147 and Fourth Report and Order in CC Docket No. 98-98 (Rel. Dec. 9, 1999) ("Line Sharing Order").

1 unbundle the high frequency portion of the loop to permit
2 competitive LECs to provide xDSL-based services by sharing
3 lines with the incumbent's voiceband services."[39]

4 Although the FCC in the TRO removed line sharing from the
5 list of UNEs that ILECs are obligated to provide under the
6 Act, there is a transition period that applies to the line
7 sharing element.[40] For CLECs already serving customers via
8 line sharing the TRO provides grandfathering of line-shared
9 lines at the rate charged by the ILEC prior to the
10 effective date of the order, until the next biennial
11 review, which commences in 2004. CLECs who wish to serve
12 new line sharing customers, effective October 2, 2003, will
13 be subject to a three-year transition period. During this
14 period the CLECs will be required to pay for line sharing
15 at a rate of 25 percent of the recurring loop rate in the
16 first year, 50 percent in the second year, and 75 percent
17 in the third year.[41] After the transition period the CLEC
18 may serve customers through a line splitting arrangement
19 with another CLEC, or by purchasing an entire loop from the

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[39] *Id.* at ¶ 136.

[40] Triennial Review Order at ¶ 264.

[41] *Id.* at ¶ 265.

1 ILEC, or through another negotiated arrangement with the
2 ILEC.

3 Qwest's calculated recurring line sharing rates for the
4 three-year transition period are reflected in Exhibit No.
5 1.

6 **Q. WHAT TYPES OF COSTS ARE ASSOCIATED WITH LINE**
7 **SHARING?**

8 A. In its Line Sharing Order, the FCC identified "5
9 types of direct costs that an incumbent LEC potentially
10 could incur to provide access to line sharing: 1) loops; 2)
11 OSS; 3) cross connects; 4) splitters; and 5) line
12 conditioning."[42]

13 **Q. HAS QWEST ESTIMATED THE COST TO INSTALL A SHARED**
14 **LOOP?**

15 A. Yes. The nonrecurring costs associated with the
16 installation of a shared loop are calculated in the ENRC,
17 the results of which are summarized in Exhibit No. 3. The
18 costs for installing a shared loop include order-processing

[42] Line Sharing Order at ¶ 136.

1 costs at the ISC, along with the cost to connect jumpers in
2 the central office.

3 **Q. HAS QWEST PREPARED A COST STUDY THAT IDENTIFIES**
4 **THE COLLOCATION COSTS ASSOCIATED WITH LINE SHARING?**

5 A. Yes. The Qwest Line Sharing Collocation cost
6 study results are summarized in Exhibit No 15. This study
7 identifies the costs associated with three basic line
8 sharing collocation options.[43] These options relate to the
9 configuration of the splitter and associated cabling (cross
10 connects). The costs for these options are the same costs
11 that would apply in the case of line splitting arrangements
12 between two CLECs where Qwest is the facilitator. Briefly,
13 these configurations are:

14 • Splitter in a common area relay rack or bay;

15 • Splitter mounted on an intermediate distribution
16 frame;

17 • Splitter mounted on a main distribution frame.

18 In the Qwest Line Sharing Collocation study, the costs for
19 each configuration include the cost of engineering, plus

1 the applicable block and cabling costs. In each case, the
2 costs do *not* include the costs for the splitter itself.
3 Costs for the block and cabling are presented as a cost per
4 100 lines, while the engineering costs are presented on a
5 per order basis.

6 I will briefly describe the collocation cost study below.

7 **Q. PLEASE BRIEFLY DESCRIBE THE ENGINEERING COSTS.**

8 A. The engineering costs include the cost to
9 engineer a collocation job. These costs are based on 20
10 hours of engineering time and are the same regardless of
11 the line sharing option chosen. That is, each CLEC
12 ordering collocation for line sharing would be charged for
13 the recovery of this cost, regardless of which of the three
14 options are chosen.

15 **Q. PLEASE BRIEFLY DESCRIBE THE FIRST COLLOCATION**
16 **OPTION.**

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[43] A fourth alternative exists where the CLEC locates the splitter in its collocation area. With this alternative the CLEC would utilize ITPs to and from its collocation area and Qwest would not incur additional collocation costs.

A. The first option assumes that the splitter is located in a common area on a splitter bay. This option requires costs with three principal cost components:

1. Splitter bay shelf - This includes the network bay, aerial support and cable racking at the common splitter location.

2. Cable from splitter to CLEC - There are two sub-options, based on the CLEC's cabling (cross-connect) needs. The splitter can be connected via a data cable directly to the CLEC's collocation area (Option 1A), or it may be connected to the 410 block on the intermediate distribution frame ("IDF") (Option 1B). Either of these options may be chosen if the CLEC has existing but unutilized tie cabling (terminations) between the intermediate frame and the collocation area. In those cases, those connections can be used for the line sharing connections without the ordering of additional connections from Qwest. If the splitter is connected to the 410 block, the costs include the costs associated with tying the cable to the block, etc. These arrangements are depicted in the

diagrams included in the line sharing collocation study on the "Configurations" tab. (Exhibit No. 15)

3. Cable from splitter to IDF - Both options (Options 1A and 1B) include the cost of the two cables (voice and voice/data) connecting the splitter with the IDF. They also include cable and block expenses, as depicted in the diagrams on the "Configurations" tab, in Exhibit No. 15.

With any of the versions of this option, the CLEC would also need to purchase Interconnection Tie Pairs ("ITPs") to connect the IDF to the Main Distribution Frame ("MDF"), as depicted in the third diagram on the "Configurations" tab in Exhibit No. 15.

Q. PLEASE BRIEFLY DESCRIBE THE SECOND COLLOCATION OPTION.

A. With the second option, the splitter is located on the IDF. The CLEC may either connect via a data cable directly between the splitter and the CLEC collocation area (Option 2A) or it may connect via a data cable to the 410 block (Option 2B) on the IDF. The connection direct to the collocation area includes costs to mount the splitter block

1 and the cost of the cable between the splitter and the CLEC
2 collocation area. The connection from the IDF to the 410
3 block includes costs to mount the splitter block, the cost
4 of the cable between the splitter and the 410 block, and
5 the cost to tie the cable to the 410 block. These options
6 (Options 2A and 2B) are depicted on the "Configurations"
7 tab, in Exhibit No. 15.

8 With both of these options, the CLEC would also need to
9 purchase ITPs to connect the IDF to the MDF, as depicted in
10 the two Option 2 diagrams on the "Configurations" tab in
11 Exhibit No 15.

12 **Q. PLEASE BRIEFLY DESCRIBE THE THIRD COLLOCATION**
13 **OPTION.**

14 A. With the third option, the splitter is located on
15 the MDF. The CLEC may either connect via a data cable
16 directly between the splitter and the CLEC collocation area
17 (Option 3A) or it may connect via a data cable to the 410
18 block (Options 3B) on the MDF. The connection direct to
19 the collocation area includes costs to mount the splitter
20 block and the cost of the cable between the splitter and
21 the CLEC collocation area. The alternative includes costs

1 to mount the splitter block, the cost of the cable between
2 the splitter and the 410 block, and the cost to tie the
3 cable to the 410 block. These options (Options 3A and 3B)
4 are depicted on the "Configurations" tab in Exhibit No. 15.

5 With either of these options, the CLEC would not need to
6 purchase ITPs, since there is no connection between the MDF
7 and the IDF.

8 **Q. DOES THE FCC DISCUSS THE TYPES OF SPLITTER**
9 **CONNECTIONS DESCRIBED ABOVE IN ITS LINE SHARING ORDER?**

10 A. Yes. The FCC discusses the architecture for the
11 connections to and from the splitters. The FCC described
12 two common approaches:

13 The first approach is to cable the high
14 frequency band directly to the DSLAM, and the
15 second is to cable it to another MDF location
16 (or to an intermediate distribution frame (IDF)
17 location), and then on to the DSLAM. The
18 second approach facilitates easy customer moves
19 and changes as well as changes in the
20 customer's service providers and services. In
21 this situation, the splitter has three
22 connections to the MDF - one to terminate the
23 loop, a second to terminate the voiceband
24 signal and a third to terminate the high
25 frequency loop spectrum....[44]

[44] *Id.* at ¶¶ 104 and 105.

1 **Q. PLEASE DESCRIBE THE FCC'S GUIDELINES FOR COSTS**
2 **RELATED TO THE VOICE/DSL SPLITTERS.**

3 A. The FCC determined that LECs must either provide
4 splitters on behalf of the CLECs or allow CLECs to purchase
5 comparable splitters. Thus, when Qwest constructs the
6 splitter bay for the CLEC, the FCC allows Qwest to acquire
7 the splitter on behalf of the CLEC and pass-through a
8 charge to the CLEC equal to the cost of the splitter, plus
9 the cost to construct the bay and supporting structure.
10 The costs displayed in Exhibit No. 15, for the three
11 options discussed above, do not include the cost of the
12 splitter. The charge for the splitter is determined
13 separately, if and only if, Qwest acquires the splitter on
14 behalf of the CLEC. If it desires, the CLEC can choose to
15 purchase the splitter itself, and provide it to Qwest for
16 installation. Where the splitter is in the CLEC's
17 collocation space (the fourth alternative), the CLEC would
18 purchase and install the splitter itself.

19 **Q. ARE THE DESIGNS PROPOSED BY QWEST CONSISTENT WITH**
20 **THESE FCC REQUIREMENTS?**

1 A. Yes. The Qwest proposal provides CLECs with
2 several options, and is consistent with the FCC's
3 description of how splitter connections should be treated
4 in a line sharing environment.

5 **Q. WHAT LINE SHARING OPERATIONAL SUPPORT SYSTEMS**
6 **COSTS DOES QWEST SEEK TO RECOVER IN THIS PROCEEDING?**

7 A. As a component of the monthly charge for the line
8 sharing UNE, Qwest seeks to recover the OSS costs related
9 to implementing line sharing, as authorized by the FCC in
10 its Line Sharing Order.[45] The OSS costs Qwest seeks to
11 recover have two components. The first component is the
12 cost for modifications to internal systems maintained by
13 Qwest and is estimated to be $870,720. The second
14 component is the direct expense that Qwest has incurred
15 with its outside vendors to modify the many legacy systems
16 impacted by the requirement to provide line sharing. These
17 costs include a bid of $11.9 million from Telcordia for
18 systems modification and $56,000 for project management
19 provided by another company. Because Qwest's OSS function

[45] At ¶ 144 of the Line Sharing Order, the FCC stated, "We find that incumbent LECs should recover in their line sharing charges those reasonable incremental costs of OSS modification that are caused by the obligation to provide line sharing as an unbundled network element."

1 on a company-wide basis and support the entire 14-state
2 region, these costs are incurred at a corporate level
3 rather than a state level. Therefore, the OSS study for
4 line sharing and the resulting OSS rate is determined on a
5 total company basis using total company demand for shared
6 lines. CLECs competing in Idaho will pay their share of
7 these costs on the basis of the number of lines actually
8 shared in the state.

9 Please see the Line Sharing OSS cost study (Exhibit No. 16)
10 to review documentation of the calculation of the proposed
11 OSS rate associated with line sharing.

12 **Q. IS QWEST ENTITLED TO RECOVER OSS COSTS RELATED**
13 **TO THE LINE SHARING UNE?**

14 A. Yes. The FCC has stated that ILECs must modify
15 their operating support systems that are required for
16 reordering, ordering, provisioning, repair and maintenance,
17 and billing. The FCC also stated:[46]

18 There is no dispute either that incumbent LECs will
19 need to modify their OSS systems somewhat in order to
20 implement line sharing, or that they will incur costs
21 in doing so. The question here is what the incumbent

[46] *Id.* at ¶ 142.

1 LECs should be permitted to charge competitive LECs
2 for those required modifications.

3 It is clear, therefore, the FCC intended that ILECs be
4 allowed to recover the additional costs for OSS related to
5 the line sharing UNE.

6 **Q. ISN'T IT TRUE THAT THE COST TO MODIFY OSS SHOULD**
7 **BE RELATIVELY MODEST BECAUSE ILECS HAVE "ALREADY MODIFIED**
8 **THEIR OSS SYSTEMS TO ACCOMMODATE THEIR OWN XDSL**
9 **PRODUCTS…"?**[47]

10 A. No. The FCC was incorrect when it concluded that
11 an ILEC's systems modifications for its own xDSL products
12 would lessen the costs to modify its OSS for line sharing.
13 Line sharing creates very different requirements than those
14 Qwest has for provisioning xDSL service on its own loops.
15 When Qwest provides xDSL to its customer, there are two
16 services being provided, but there is still only one
17 service provider and one end-user customer. In the case of
18 line sharing, there are two unrelated service providers
19 (i.e., Qwest and the CLEC) and two customers (i.e., the
20 end-user customer and the CLEC). Qwest's systems were not
21 originally designed for multiple local service providers

[47] Line Sharing Order at ¶ 127.

1 and multiple customers for a single loop. Thus, the OSS
2 modifications necessary for Qwest to be able to accommodate
3 line sharing for the CLECs are independent of modifications
4 it has made to meet its own needs as a single provider of
5 multiple services.

6 Even when the xDSL services are provided by a Qwest
7 affiliate, as part of the corporate family, common systems
8 are used to track the network and provision service for the
9 customer. Qwest then bills the affiliate pursuant to the
10 FCC's Affiliate Transactions rules under Part 32 for the
11 services (including systems) that it provides to the
12 affiliate. If the affiliate requires any modifications to
13 Qwest systems to meet its own needs it pays for those
14 modifications separately, up front.

15 **Q. WHAT RATE DOES QWEST PROPOSE TO USE FOR RECOVERY**
16 **OF ITS LINE SHARING OSS COSTS?**

17 A. Qwest has calculated that the monthly recurring
18 costs for line sharing OSS result in a rate of $3.23 per
19 line for each line that is shared with a CLEC. This
20 approach to recovery of the OSS costs is based on guidance
21 from the FCC at paragraph 144 of the Line Sharing Order:

1 We find that incumbent LECs should recover in
2 their line sharing charges those reasonable
3 incremental costs of OSS modification that are
4 caused by the obligation to provide line sharing
5 as an unbundled network element. We believe that
6 this guideline is consistent with the principle
7 set forth in the *Local Competition First Report*
8 *and Order* and incumbent LECs cannot recover
9 nonrecurring costs twice. We also reaffirm the
10 conclusions in the *Local Competition First Report*
11 *and Order*, that the states may require incumbent
12 LECs in an arbitrated agreement to recover such
13 nonrecurring costs such as these incremental OSS
14 modification costs through recurring charges over
15 a reasonable period of time, and that
16 nonrecurring charges must be imposed in an
17 equitable manner among entrants. [Footnotes
18 omitted].

19 **Q. WHY DID THE FCC SUGGEST RECURRING RATES TO**
20 **RECOVER UP-FRONT COSTS FOR THE LINE SHARING OSS?**

21 A. The FCC cited estimates from the ILECs that
22 ranged from three million to hundreds of millions of
23 dollars as the costs to modify OSS for line sharing. It is
24 likely that the FCC believed that because of the large
25 amount of cost required for such modifications, up-front
26 recovery of these costs could discourage line sharing. To
27 remedy the problem, the FCC suggestion allows recurring
28 rates to distribute the cost over "a reasonable period of
29 time." Unfortunately, with the discontinuance of line
30 sharing as a UNE, pursuant to the TRO, Qwest is likely to
31 recover only a fraction of the $12.8 million it spent to

1 modify its systems to accommodate CLEC access to the high
2 frequency portion of a loop.

X. COLLOCATION

3 **Q. WHAT COST DATA ARE PROVIDED IN THE COLLOCATION**
4 **MODEL?**

5 A. The Collocation Model provides cost data for
6 caged, cageless and virtual collocation, and includes
7 TELRIC data for the following collocation elements:

8 Standard Collocation:

9 • Terminations
10 • Collocation Entrance Facility
11 • Cable Splicing
12 • Power Usage
13 • Security
14 • Interconnection Tie Pairs (ITPs)

15 Cageless Collocation:

16 • Space Construction
17 • DC Power Cable
18 • Space Rent
19 • Quote Preparation Fee (QPF)

1 Caged Collocation:

2 • Space Construction
3 • DC Power Cable
4 • Grounding
5 • Space Rent
6 • Quote Preparation Fee (QPF)

7 Virtual Collocation:

8 • Equipment Bay
9 • Labor
10 • Bay Space
11 • Rent
12 • Quote Preparation Fee (QPF)

13 The Collocation Model summary of results is included as
14 Exhibit No. 17 of my testimony.

15 **Q. DOES THE COLLOCATION MODEL CALCULATE RECURRING**
16 **AND NONRECURRING COSTS?**

17 A. Yes. The Collocation Model calculates the
18 forward-looking recurring and nonrecurring incremental
19 costs for the collocation elements listed above. The
20 nonrecurring costs include the cost of installing equipment
21 on the CLEC side of the demarcation point. This equipment
22 is dedicated to CLECs and is not shared with Qwest. The

1 nonrecurring cost elements include: terminations, the
2 entrance facility, fiber cable splicing, backup AC power
3 cable, space construction (including DC power cables),
4 construction of additional bays (cageless) and grounding
5 (caged).

6 Recurring elements include the small ongoing costs
7 associated with maintaining the collocation equipment that
8 is dedicated to CLECs (e.g., terminations, power cables,
9 space construction), along with the investment-related
10 costs associated with equipment that is shared between
11 CLECs and Qwest. Recurring elements also include: DC power
12 plant, AC power feed usage, security cards, central office
13 synchronization, interconnection tie pair (ITP), space
14 rent, grounding (caged), and equipment bay (virtual).

15 **Q. IS THE TREATMENT OF RECURRING AND NONRECURRING**
16 **COSTS IN THE COLLOCATION MODEL CONSISTENT WITH THE FCC'S**
17 **COLLOCATION PRINCIPLES?**

18 A. Yes. In its Second Report and Order in CC Docket
19 No. 93-162, regarding pricing for collocation, the FCC set
20 out principles for determining whether a cost should be

1 recovered through a nonrecurring charge. In Paragraph 32

2 of that order the FCC states:

> 3 While carriers typically recover investment costs
> 4 through recurring charges, we find that it is not
> 5 unreasonable for LECs to assess nonrecurring charges
> 6 to recover the cost of equipment. Inasmuch as
> 7 physical collocation is a new service, LECs may have
> 8 difficulty projecting either the length of time that
> 9 equipment will be used by an interconnector or the
> 10 useful life of that equipment for depreciation
> 11 purposes. When a LEC imposes a recurring charge to
> 12 recover the depreciation of an asset over time,
> 13 overestimating the life of the equipment or the
> 14 length of time that an interconnector would use the
> 15 equipment could prevent the LEC from recovering the
> 16 total cost of its investment. We will not, however,
> 17 permit LECs to recover initially an amount greater
> 18 than the total installed cost of the equipment, plus
> 19 a reasonable overhead loading.

20 The FCC went on to say in paragraph 33:

> 21 We do not agree with ALTS' position that
> 22 nonrecurring charges developed in conformance with
> 23 these requirements constitute a barrier to entry.
> 24 To the extent that the equipment needed for expanded
> 25 interconnection service is dedicated to a particular
> 26 interconnector, we believe that requiring that
> 27 interconnector to pay the full cost of the equipment
> 28 up front is reasonable because LECs should not be
> 29 forced to underwrite the risk of investing in
> 30 equipment dedicated to the interconnectors use,
> 31 regardless of whether the equipment is reusable….

32 It is clear from these ordering paragraphs that the FCC

33 recognizes that LECs should not be held accountable for

34 underwriting all the risk of building an interconnector's

35 network. The FCC established the costing principle that

1 the cost of facilities constructed solely for the
2 provisioning of collocation (i.e. dedicated to collocation)
3 can be recovered through nonrecurring, up-front charges.
4 In fact, the order goes so far as to imply anything else
5 would result in an unreasonable transfer of the risk of
6 constructing a CLEC network to the ILEC that is providing
7 collocation. The Act was designed to give competitors
8 access to critical network elements that were currently
9 owned by the ILECs. This access to elements was considered
10 critical to meeting the competitive objectives of the Act.
11 Nowhere in the Act did Congress decide that it was also the
12 ILEC responsibility to finance a co-provider's entry into
13 the market. Such a requirement would be unreasonable and
14 discriminatory.

15 **Q. PLEASE EXPLAIN HOW THE DIRECT COLLOCATION COSTS**
16 **ARE DEVELOPED IN THE COLLOCATION MODEL.**

17 A. The direct costs for the bulk of the collocation
18 cost elements are calculated based on inputs derived from
19 an analysis of the cost of *actual collocation jobs* in Qwest
20 central offices. In this analysis, Qwest analyzed every
21 item that was purchased and installed for a sample of 41

collocation jobs. The invoices were analyzed through a multi-step process as follows:

1. Each item of material that was billed to each job was entered into a database;

2. Each item of material was classified into cost categories that represent the various components of collocation (i.e. cable racking, power cable, support structure, etc.);

3. The costs for placing each component of a collocation job were calculated using standard contract labor costs along with the number of units being placed on each job, as determined from the invoices;

4. The calculated labor costs were compared to the actual invoiced labor charges to determine that they were reasonable;

5. The labor costs were added to the material costs to determine the total cost for each component of the job;

6. The cost for each component was assigned to each of the appropriate collocation rate elements;

7. The collocation rate element were designated as being recoverable through a one-time nonrecurring charge or a monthly recurring charge, based on the criteria discussed above;

8. Nonrecurring cost elements that are shared among collocators were prorated based on the anticipated number of CLECs that would participate in the use of those facilities;

9. The results of the analysis were used as inputs to the Collocation Model to develop the direct costs associated with each collocation element.

Q. WHAT TYPES OF COLLOCATION JOBS WERE INCLUDED IN THE SAMPLE?

A. The sample included only cageless collocation jobs. Once the analysis of cageless costs was completed, the assumptions were revised and the missing elements were added to derive a standard cost for a *caged* collocation job. Wherever possible, actual caged collocation data were

1 used in revising the assumptions or estimating the cost for
2 those components of a caged collocation job (e.g., the cost
3 of the cage) that are not found in cageless collocation
4 jobs.

5 **Q. HOW DID QWEST TAKE INTO ACCOUNT THE COST**
6 **DIFFERENCES BETWEEN CAGELESS AND CAGED COLLOCATION?**

7 A. A team of experts with experience in the
8 development, construction and cost analysis of collocation
9 activities reviewed the assumptions used in the cageless
10 cost study and agreed upon revisions to distances and other
11 inputs that would more appropriately reflect a standard
12 caged collocation environment. In addition, items such as
13 the cost of the cage and grounding were included in the
14 caged collocation cost study.

15 **Q. HOW DO THE COLLOCATION CALCULATIONS ALLOW FOR**
16 **DIFFERENCES BETWEEN THE COSTS FOR VARIOUS COLLOCATION**
17 **DESIGNS?**

18 A. Qwest gives collocators many options. For
19 example, a collocator may order several types of
20 terminations, and may order several different sizes of DC
21 power cable based on its specific power needs. To account

1 for these variations in the requested facilities, Qwest
2 developed standard costs for terminations and power feeds.
3 These standard costs were modeled based on the
4 characteristics (i.e. material and labor costs and unit
5 quantities and standard distances and designs) found in the
6 41 jobs that were studied. These standard designs were
7 then adjusted to account for any incremental cost or
8 savings that would be incurred if the design were altered.

9 **Q. DOES QWEST'S COLLOCATION COST STUDY COMPLY WITH**
10 **FCC ORDERS REGARDING COLLOCATION?**

11 A. Yes. Qwest's collocation study complies with FCC
12 Order CC Docket No. 98-147, which is sometimes referred to
13 as the Advanced Services Order and sometimes as the "706
14 rules." This order primarily approaches collocation from a
15 perspective of determining what collocation elements need
16 to be offered and under what terms and conditions they
17 should be offered, rather than from a cost perspective.
18 However, the FCC does provide some direction regarding cost
19 methodology for site preparation. The FCC states:

20 "For example, if an incumbent LEC implements
21 cageless collocation arrangements in a particular
22 central office that requires air conditioning and
23 power upgrades, the incumbent may not require the

first collocating party to pay the entire cost of site preparation."[48]

Qwest's cost studies assume an average of 3 caged collocators and 3 cageless collocators in each central office. This assumption means that those costs related to construction are divided by 3 in cases where a facility (e.g., a cable rack) is used only by caged collocating CLECs. Where facilities are assumed to be shared by CLECs and Qwest, the costs are assumed to be limited to only recurring charges, and are determined on a shared basis with all users. This cost methodology is consistent with the FCC's direction in its 706 rules.

Q. DOES QWEST PRESENT ANY OTHER TELRIC STUDIES RELATED TO THE PROVISION OF COLLOCATION IN IDAHO?

A. Yes. Qwest is presenting costs for a number of additional collocation elements.

Q. WOULD YOU DESCRIBE THE BASIS OF THE COSTS FOR THE SPACE AVAILABILITY REPORT?

A. Yes. The charge for the space availability report applies on a "per office" basis each time a CLEC

[48] Advanced Services Order at ¶ 51.

1 requests space for collocation. Costs for the space
2 availability report are based on costs Qwest incurs to
3 determine if space is available and result from work
4 performed in the Common Systems Planning Engineering Center
5 ("CSPEC") and the Infrastructure Availability Center
6 ("IAC"). The tasks that are involved in developing and
7 preparing these reports include verifying existing
8 conditions in the central office, identifying available
9 space and processing the report. The cost study entitled
10 Collocation: Space Inquiry (Exhibit No. 18) presents the
11 costs for the activities associated with producing the
12 space availability report.

13 **Q. PLEASE DESCRIBE SPACE OPTIONING.**

14 A. "Space Optioning" is an administrative fee for
15 the activities Qwest performs related to allowing CLECs to
16 hold options on collocation space for future needs. These
17 activities include processing of applications, determining
18 feasibility, common space engineering, records management,
19 and administration of the "first right of refusal" process.
20 The costs are presented in Exhibit No. 19.

1 **Q. HAS QWEST PRESENTED A COST STUDY FOR OCN**
2 **TERMINATIONS?**

3 A. Yes. OCn Terminations provide an uninterrupted
4 path from the Collocation space to an existing fiber frame.
5 The connection will be designed from the collocation space
6 to the same fiber frame that Qwest uses. The CLEC and
7 Qwest will share the same fiber distributing frames for
8 similar types and speeds of equipment, where technically
9 feasible and space permitting. There are four cost
10 elements with a combination of recurring and nonrecurring
11 rates that are calculated within this cost study (Exhibit
12 No. 20):

13 **OCn Terminations** - Includes the costs for the bay,
14 panel, connector and cables required to provide an
15 uninterrupted path from the collocation space to an
16 existing fiber termination frame.

17 **OCn Additional Connector** - Includes the costs for
18 an additional connector, if requested.

19 **OCn Cable Racking Shared** - Includes the recurring
20 costs per 12 fibers for existing cable racking.

1 **OCn Cable Racking Dedicated** - Includes the flat rate
2 dedicated cable racking costs for fiber terminations.

3 **Q. PLEASE DESCRIBE THE COSTS ASSOCIATED WITH THE**
4 **CABLE AUGMENT QPF.**

5 A. This product is only applicable for augments to
6 existing termination cables which are part of the
7 transmission facilities purchased by the CLEC for the
8 purpose of accessing UNEs within the central office where
9 the CLEC is collocated. The Cable Augment QPF is a
10 nonrecurring element that recovers the labor associated
11 with preparing an engineering quote when a CLEC requests a
12 collocation cable augment for existing terminations.
13 (Exhibit No. 21)

14 In order for the Cable Augment QPF to be applicable, the
15 following criteria must be satisfied:

16 • Augment terminations must originate and terminate
17 within the same central office.

18 • Augment terminations must originate from the same
19 location as existing terminations.

20 • Augment terminations must terminate on the same
21 frame as existing terminations.

- Augment terminations must be of the same transmission facility type (i.e., copper or fiber) as existing terminations.

- Augment terminations must be of the same signal level (i.e., DS0, DS1, etc.) as existing terminations.

The Cable Augment QPF does not include costs for the cable itself, travel time, outside plant ("OSP"), real estate, cable installation, cable procurement, database record keeping (i.e., TIRKS and/or SWITCH), or any other CLEC issues related to placing additional cable into an existing termination.

Q. HAS QWEST SUBMITTED A COST STUDY FOR REMOTE TERMINAL COLLOCATION?

A. Yes. Remote Terminal Collocation offers space in available remote cabinets eliminating the distance constraints on DSL providers. The rate element for this space element is unitized on a Standard Mounting Unit ("SMU") basis and includes access to AC/DC power, heat dissipation and terminations to the Feeder Distribution Interface ("FDI"). The FDI termination rate element is per 25-pairs and includes the termination blocks and cables.

1 Elements calculated in the cost study (Exhibit No. 22)

2 include:

3 • **Space** (per standard mounting unit) measured as 1.75
4 vertical inches. This nonrecurring rate is associated
5 with the cabinet space and recovers the cost of the
6 cabinet and all of the work and materials associated
7 with placement of the cabinet. The recurring rate
8 associated with the space recovers the maintenance of
9 the materials and equipment associated the cabinet
10 along with a portion of the costs required for the
11 power pedestal.

12 • **FDI Terminations** (per 25 pair). This nonrecurring
13 rate includes all costs associated with initial FDI
14 upgrade work required to provide the terminations
15 requested at the FDI. The recurring rate associated
16 with the FDI recovers the maintenance of the cable
17 between the FDI and the Remote Collocation cabinet, as
18 well as the maintenance of the terminations at the
19 FDI. These charges will apply for both DS0 and DS1.

20 • **Quote Preparation Fee** (per request). This nonrecurring
21 rate recovers all costs associated with preparation of
22 the job quote.

23 • **Virtual Flat Charge** (per service call). This
24 nonrecurring rate element includes costs associated
25 with the service order and follow-up time necessary
26 for each CLEC request for installation, maintenance,
27 etc.

28 • **Virtual Engineering Labor Rate** (per half hour). This
29 nonrecurring rate element includes costs for the
30 planning and engineering of a CLEC's virtually
31 collocated equipment at the time of installation,
32 change or removal.

33 • **Virtual Maintenance Labor Rate** (per half hour). This
34 nonrecurring rate element includes costs for the labor
35 necessary for repair of out of service and/or service-

affecting conditions and preventive maintenance of virtually collocated equipment.

- **Virtual Installation Labor Rate** (per half hour). This nonrecurring rate element includes costs for the installation, change or removal of a CLEC's virtually collocated equipment.

- **Virtual Training Labor Rate** (per half hour). This nonrecurring rate element recovers costs associated with the training of Qwest personnel on a metropolitan service area basis provided by the vendor of the CLEC's virtually collocated equipment, when that equipment is different from Qwest-provided equipment.

Q. PLEASE DESCRIBE THE COSTS ASSOCIATED WITH THE POWER REDUCTION CHARGES.

A. The Power Reduction/Power Off rate elements permit CLECs to reduce their power load requirements, to completely power off power feed sets, or to restore power in cases where power cables exist because power was provided to the location previously. Costs are calculated in the power reduction study (Exhibit No. 23) for the following elements:

- **Quote Preparation Fee** - a nonrecurring, per-request rate for all power reduction or power off requests. This rate element recovers the engineering, project management and administrative labor costs incurred when performing the powering down or powering off process.

- **Power Reduction/Restoration < 60 Amps** - a nonrecurring, per-feed set rate for all power reduction or restoration requests for power loads of less than 60 Amps. This rate element includes the costs associated with the technical labor incurred in performing the powering-down process. The power restoration charge is only applicable when the CLEC's power cables exist.

- **Power Reduction/Restoration = 60 Amps** - a nonrecurring rate, per-feed set for all power reduction or restoration requests for power loads equal to 60 Amps. This rate includes costs associated with the technical labor incurred in performing the powering-down process. The power restoration charge is only applicable when the CLEC's power cables exist.

- **Power Reduction/Restoration > 60 Amps** - a nonrecurring, per-feed set rate for all Power Reduction/Restoration requests for power loads greater than 60 Amps. This rate includes costs associated with the technical labor incurred in performing the powering-down process. The power restoration charge is only applicable when the CLEC's power cables exist.

- **Power Off** - a nonrecurring, per-feed set rate for all Power Off requests. This rate recovers costs associated with the technical labor incurred in performing the powering-off process.

- **BDFB/PBD Rent** - a recurring, per-fuse set rate to reserve fuse space on the battery distribution fuse board ("BDFB").

Q. HAS QWEST PRESENTED A COST STUDY FOR TRANSFER OF RESPONSIBILITY?

A. Yes. Collocation Transfer of Responsibility refers to the transfer of a collocation site to an assuming

1 CLEC from a vacating CLEC. Transfer of responsibility is
2 offered for caged physical collocations, cageless physical
3 collocations, and virtual collocations. All other types of
4 transfer of responsibility requests are handled on an
5 individual case basis ("ICB").

6 Calculation of the transfer of responsibility costs are
7 contained in Exhibit No. 24 and include a nonrecurring
8 assessment fee that represents the labor costs associated
9 with the transfer of the collocation site payable
10 regardless if the quote is accepted. In addition, there is
11 a nonrecurring network systems administration fee for the
12 labor costs associated with processing the interconnection
13 circuits.

14 **Q. HAS QWEST REACHED AGREEMENT WITH COMMISSION STAFF**
15 **REGARDING THE RATES FOR COLLOCATION?**

16 A. Yes. As part of the negotiation between the
17 parties, Qwest and Commission Staff have reached agreement
18 on the appropriate rates for all of the collocation
19 elements. These rates are set forth in Attachment A to the
20 Motion for Approval.

XI. CONCLUSION

1 **Q. PLEASE SUMMARIZE YOUR TESTIMONY.**

2 A. Qwest has a right under the Act to seek recovery
3 of the costs for the UNEs that it is required to provide to
4 the CLECs. Qwest's TELRIC studies properly apply the FCC's
5 TELRIC principles. For the UNEs and interconnection
6 services included in this docket, I have submitted
7 recurring and nonrecurring TELRIC cost studies. The
8 Commission should use the TELRIC data summarized in Exhibit
9 No. 1 and detailed in the cost study workpapers (Exhibit
10 Nos. 2-24) as its basis for determining UNE prices in this
11 proceeding. This would allow the Commission to accept the
12 prices that have been agreed upon by Qwest and Commission
13 Staff in negotiations conducted during the course of this
14 cost docket, as discussed in the Motion for Approval, as
15 reflected in Attachment A.

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

17 A. Yes, it does.