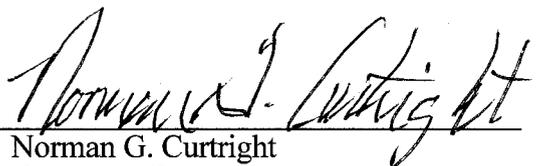


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RESPECTFULLY SUBMITTED this 22nd day of June, 2006.

QWEST CORPORATION

By: 
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1 ORIGINAL and 13 copies hand-delivered
2 for filing this 22nd day of June, 2006, to:

3 Docket Control
4 ARIZONA CORPORATION COMMISSION
5 1200 West Washington Street
6 Phoenix, AZ 85007

7 Copy of the foregoing hand-delivered/mailed/emailed
8 this 22nd day of June, 2006 to:

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TESTIMONY INDEX

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EXECUTIVE SUMMARY

My testimony rebuts Mr. Michael Starkey's supplemental direct testimony on behalf of McLeodUSA (McLeod) regarding Qwest's collocation cost study and its development of Power Plant rates. I explain why the analysis conducted by Mr. Starkey regarding the impact of the Power Plant rates vis-a-vis the *Power Measuring Amendment* is both illogical and meaningless. In the end Mr. Starkey admits that he is not challenging the power plant rate as established by this Commission, nor whether the rate is TELRIC compliant. Mr. Starkey's testimony does nothing to advance the Commission's understanding of the issue in this complaint, i.e., whose interpretation of the *Power Measuring Amendment* (McLeod's or Qwest's) is correct under the current contract.

My testimony will show 1) that Mr. Starkey's conclusion that Qwest's cost study is based on power usage is wrong, 2) that Mr. Starkey's formulas and Table 1 are illogical and inappropriately applied, and 3) that Qwest's application of the power plant rate is appropriate under the FCC's TELRIC rules.

1

I. IDENTIFICATION OF WITNESS

2 **Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS AND CURRENT**
3 **POSITION.**

4 A. My name is Teresa Million. I am employed by Qwest Services Corporation as a
5 Staff Director, Public Policy. My business address is 1801 California St., Denver,
6 CO 80202. I am providing this testimony on behalf of Qwest Corporation
7 ("Qwest"), the public service corporation providing telecommunications service in
8 Arizona.

9 **Q. WHAT ARE YOUR CURRENT RESPONSIBILITIES?**

10 A. I am responsible for directing the preparation of cost studies and representing
11 Qwest's costs in a variety of regulatory proceedings.

12 **Q. PLEASE REVIEW YOUR EDUCATIONAL AND EMPLOYMENT**
13 **BACKGROUND.**

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

18 I have more than 22 years experience in the telecommunications industry with an
19 emphasis in tax and regulatory compliance. I began my career with Qwest
20 (formerly Northwestern Bell Telephone Company and then U S WEST, Inc.) in

1 1983. Between 1983 and 1986, I administered Shared Network Facilities
2 Agreements between Northwestern Bell and AT&T that emanated from the
3 divestiture of the Bell System in 1984. I held a variety of positions within the U S
4 WEST, Inc. tax department over the next ten years, including tax accounting,
5 audit, and state and federal tax research and planning. In 1997, I assumed a
6 position that had responsibility for affiliate transactions compliance, specifically
7 compliance with section 272 of the Telecommunications Act of 1996 (the "Act").
8 47 U.S.C. § 272. In September 1999, I began my current assignment as a cost
9 witness. In this position, I am responsible for managing cost issues, developing
10 cost methods and representing Qwest in proceedings before regulatory
11 commissions.

12 **Q. HAVE YOU PREVIOUSLY APPEARED BEFORE THE ARIZONA**
13 **CORPORATION COMMISSION OR OTHER PUBLIC UTILITY COMMISSIONS**
14 **AS A WITNESS IN REGULATORY PROCEEDINGS?**

15 **A.** I have testified before the Arizona Corporation Commission (the "Commission")
16 in Qwest's Wholesale Cost Docket (Docket No. T-00000A-00-0194).

17 **II. PURPOSE OF TESTIMONY**

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

19 **A.** The purpose of my testimony is to rebut Mr. Michael Starkey's supplemental
20 direct testimony on behalf of McLeodUSA (McLeod) regarding Qwest's
21 collocation cost study and its development of Power Plant rates. In addition I

1 explain why the analysis conducted by Mr. Starkey regarding the impact of the
2 Power Plant rates vis-a-vis the *Power Measuring Amendment* is both illogical and
3 meaningless.

4 **Q. MR. STARKEY BEGINS HIS TESTIMONY BY COMPLAINING THAT QWEST**
5 **REFUSED TO PROVIDE HIM WITH A COPY OF THE COST STUDY**
6 **SUPPORTING ITS COLLOCATION RATES. IS HIS COMPLAINT RELEVANT?**

7 A. No. While it is true that Qwest refused to provide McLeod with a copy of its
8 collocation cost study, it did so for two good reasons. First, Qwest believes that
9 the costs determined by this Commission in a fully litigated cost proceeding are
10 irrelevant to the case at hand which arises from the interpretation of a contract
11 amendment to McLeod's interconnection agreement, i.e., the *Power Measuring*
12 *Amendment*. Second, the cost study requested by McLeod was filed by Qwest
13 as part of Docket No. T-00000A-00-0194, Phase II (the cost docket) and, as
14 such, is a publicly available document that McLeod could have obtained directly
15 from the Commission if it so desired. Thus, Mr. Starkey's point in his introduction
16 about Qwest's refusal to provide the collocation cost study, like much of the
17 remainder of his testimony, is merely a poorly disguised attempt to make
18 something out of nothing.

19 **Q. WHY DO YOU SAY THAT MR. STARKEY'S TESTIMONY ATTEMPTS TO**
20 **MAKE SOMETHING OUT OF NOTHING?**

1 A. Mr. Starkey devotes much of his testimony trying to convince this Commission
2 that Qwest's collocation cost study supports McLeod's interpretation of the *Power*
3 *Measuring Amendment*. He provides meaningless mathematical formulas and
4 an illogical table to support this argument. In the end Mr. Starkey admits that he
5 is not challenging the power plant rate as established by this Commission, nor
6 whether the rate is TELRIC compliant. Rather, Mr. Starkey is challenging
7 whether Qwest's application of the power plant rate is appropriate, not only under
8 the *Power Measuring Amendment*, but in general. Clearly this complaint is not
9 about the way Qwest has charged the power plant rate in the past. This
10 complaint is about whose interpretation of the *Power Measuring Amendment*
11 (McLeod's or Qwest's) is correct under the current contract. Mr. Starkey's
12 testimony does nothing to advance the Commission's understanding of that
13 issue.

14 My testimony will show 1) that Mr. Starkey's conclusion that Qwest's cost study is
15 based on power usage is wrong, 2) that Mr. Starkey's formulas and Table 1 are
16 illogical and inappropriately applied, and 3) that Qwest's application of the power
17 plant rate is appropriate under the FCC's TELRIC rules.

18 **III. QWEST'S POWER PLANT COSTS**

19 **Q. DOES QWEST'S COLLOCATION COST STUDY SHOW THAT QWEST'S**
20 **APPLICATION OF THE POWER PLANT RATE ON AN "AS ORDERED"**

1 **BASIS IS FLAWED AS MR. STARKEY STATES ON PAGE 2 OF HIS**
2 **TESTIMONY?**

3 A. No. There is no question that the Power Plant rate has been applied to CLECs'
4 power needs on an "as ordered" basis since it was first implemented in Arizona.
5 Indeed, Qwest's cost study clearly indicates on both the Rate Summary tab and
6 the Detailed Summary of Results tab that Qwest requested, and the Commission
7 approved, that the Power Plant rate would be charged according to the number
8 of amps specified in CLECs' power orders. Attached, as Exhibit TKM-1, is a
9 printout of the Detailed Summary of Results for the Arizona Cost Study, including
10 the comments to each rate element. The comments to the Detailed Summary of
11 Results are direct and clear. Qwest stated that its cost study supported a rate for
12 power plant based on the number of amps in a CLEC's power order, and
13 explained that the rate would be assessed on an "as ordered" basis.

14 Further, the power plant rate and method of charging as determined in the cost
15 docket (Docket No. T-00000A-00-0194, Phase II) were confirmed on June 12,
16 2002, when this Commission approved Qwest's power costs.¹ In order to
17 approve the requested rate and rate design, and Qwest's compliance filing
18 regarding those rates, the Commission necessarily had to conclude that Qwest's
19 power plant rate was TELRIC-compliant. That is, the Commission had to
20 conclude that Qwest's requested rate was just, reasonable, and non-
21 discriminatory.

¹ Phase II Opinion and Order, Decision No. 64922, Docket No. T-00000A-00-0194, June 12, 2002.

1 The bulk of Mr. Starkey's testimony is aimed at challenging the Commission's
2 conclusions about Qwest's cost study, not Qwest's interpretation of the DC
3 Power Measuring Amendment at issue in this case. In that cost docket, McLeod
4 had the opportunity to make those arguments and convince the Commission that
5 charging for DC Power Plant according to the amount of amps specified in its
6 power feed orders was not just, reasonable, and non-discriminatory, but did not
7 do so. Now, Mr. Starkey attempts to sidestep the Commission's conclusions by
8 misleadingly arguing that the Commission approved a power plant based on the
9 number of amps used, not the number of amps ordered. Qwest's cost study
10 directly, plainly, and obviously states otherwise. The Commission's decision in
11 the cost docket states otherwise.² The Exhibit A that is incorporated into
12 McLeod's interconnection agreement states otherwise. And Qwest billed
13 McLeod for power plant at the ordered amount of amps for more than three years
14 before the DC Power Measuring Amendment was ever discussed. Qwest was
15 and remains entitled to bill McLeod for DC power plant according to its power
16 feed orders, consistent with the Commission's conclusion in the cost docket that
17 such rates were TELRIC-compliant.

18 Moreover, Qwest has applied the power plant rate on an "as ordered" basis not
19 only in Arizona, but also in Qwest's other states based on the same Qwest
20 collocation cost study, and up until the time McLeod filed this complaint regarding
21 its *Power Measuring Amendment* no CLEC, not even McLeod, challenged the

² *Id.* at pg. 43.

1 application of the power plant rate on an "as ordered" basis. Therefore, for Mr.
2 Starkey to suggest that Qwest's collocation cost study indicates that "Qwest
3 should be assessing its DC Power Plant charges based upon DC power usage
4 levels" is not supported by the cost studies nor by past practice.

5 **Q. DOES QWEST USE DC POWER "USAGE" TO DETERMINE THE COST PER**
6 **AMP FOR POWER PLANT?**

7 A. No. Once again, Mr. Starkey's testimony attempts to make something out of
8 nothing. While I do not deny that the label for the divisor (1000) on tab E.1.4
9 Power Equipment used to calculate the cost per Amp of power plant says "DC
10 Power Usage," I strongly disagree that it means that the calculation itself results
11 in a power plant cost based on usage. Nor am I suggesting that the cost per
12 Amp for power plant is based on "some measure of power feeder cable size or
13 an assumption related to List 2 drain for CLEC equipment and List 1 drain for
14 Qwest equipment." The fact is that none of these *measures* of power has
15 anything to do with the way in which Qwest calculated the cost per Amp for
16 power plant. Mr. Starkey has focused his discussion on a label in the cost study
17 that was admittedly applied imprecisely and has ignored completely the actual
18 logic and the calculation of cost that results in a per Amp rate for power plant
19 based on the amount of power plant required to produce a hypothetical 1000
20 Amps of power capacity. That calculation has nothing to do with usage and it
21 has nothing to do with Qwest's embedded costs associated with its power plant
22 equipment.

1 **Q. HOW WOULD YOU CHARACTERIZE THE RESULT PRODUCED BY**
2 **QWEST'S COLLOCATION COST STUDY FOR POWER PLANT?**

3 A. Qwest's collocation cost study uses a TELRIC methodology and determines the
4 average cost per Amp for the types and amounts of power equipment that would
5 be necessary to produce a hypothetical 1000 Amps of power plant *capacity* in
6 any given location. In other words, the cost analyst develops the cost study to
7 answer the question "How much would the power plant cost on a per Amp basis
8 if I were to model enough power equipment to produce 1000 Amps of power
9 capacity?" He or she does this by finding out from a Qwest power engineer how
10 many and what types and sizes of rectifiers, battery strings, BDFBs, power
11 boards, engine/alternators, diesel fuel tanks, etc. are required to model plant
12 capable of producing 1000 Amps of power. The cost analyst then determines the
13 material cost for each of those pieces of equipment, the cost to engineer and
14 install them, the cost for miscellaneous parts and fuel and develops the total
15 investment for a hypothetical 1000 Amp power plant. The total investment is
16 then divided by 1000 to determine the cost per Amp of power plant capacity for
17 that configuration of power plant. The cost analyst could just as easily have
18 modeled the cost per Amp for 500 Amps of capacity or 2000 Amps of capacity.
19 Of course, the amount, types and sizes as well as the total equipment investment
20 would vary based on the capacity of power plant assumed, and that total
21 investment would be divided by the different number of amps corresponding to
22 the modeled power plant capacity in order to yield the per-amp rate.

1 The point of this discussion is that none of these assumptions has anything to do
2 with the actual electrical current that any telecommunications equipment in a
3 central office might consume. The only "chargeable unit" being developed in
4 Qwest's cost study is the cost of an Amp of power plant capacity, whether it is
5 based on a hypothetical power plant configuration with 1000, 500 , or 2000
6 Amps of capacity.

7 **Q. DOES MR. STARKEY'S POSTULATE REGARDING QWEST'S POWER**
8 **PLANT RATE PROVE THAT QWEST'S RATE IS BASED ON USAGE?**

9 A. No. Mr. Starkey postulates that if you divide the power plant investment by *DC*
10 *Power Usage* to arrive at a cost per Amp, then you must also multiply the
11 resulting rate by the number of Amps actually used in order to recover your
12 intended investment. Mr. Starkey says that Power Plant Investment divided by
13 DC Power Usage times DC Power Usage equals Power Plant Investment.
14 However, in order for his equation to work the DC Power Usage assumption
15 used in the cost study to calculate the investment per Amp must equal the
16 amount of power actually used (in Amps). The following simple mathematical
17 example will make obvious the fallacy of Mr. Starkey's analysis. If the investment
18 in power equipment necessary to make available 1000 Amps of power plant
19 capacity is \$448,000 and that amount is divided by 1000 Amps of hypothetical
20 capacity, then the investment per Amp is \$448. Further, if, as Mr. Starkey states
21 in his testimony, actual usage is "only about 18.3% of the capacity," then actual
22 usage would be 183 Amps. It is easy to see that 183 Amps used times \$448 per

1 Amp equals \$81,984, an amount that is far short of the original power plant
2 investment of \$448,000.

3 There are two obvious problems with Mr. Starkey's analysis. First it assumes
4 that Qwest knew when it calculated it's per Amp costs for power plant how much
5 *actual* usage there would be on a given amount of power plant. The fact is that
6 *power usage* is something that can fluctuate month over month due to a variety
7 of factors. Presumably, if McLeod had a good estimate of how much power it
8 was going to use in a given collocation it would not ask Qwest to make 5.5 times
9 that amount of power available to it when it placed its order for power. It would
10 be impossible for Qwest to estimate an average cost per Amp for power plant on
11 the basis of fluctuating amounts of power usage that the CLECs aren't able to
12 predict. Second, Mr. Starkey's analysis assumes that 1000 Amp power plant will
13 provide for a consistent, steady 1000 Amps of actual power usage month over
14 month. However, as Mr. Ashton explains in his testimony, because of
15 fluctuations in actual power usage because of peak usage periods and more
16 unusual worst-case scenarios such as power failures resulting in the exhaustion
17 of battery capacity, together with the need to preplan power plant capacity,
18 Qwest does not have situations where power plant designed to produce a
19 maximum of 1000 Amps of power capacity runs at that 1000 Amp maximum load
20 month over month, consistently. That is why I say that the 1000 Amps of DC
21 Power Usage assumed in Qwest's cost study is really an assumption about the
22 total capacity available from a given amount of power equipment and has no

1 correlation to the actual amount of electrical current consumed by
2 telecommunications equipment as Mr. Starkey claims.

3 **Q. DOES MR. STARKEY'S TABLE 1 SHOW THAT MCLEOD PAYS POWER**
4 **PLANT CHARGES THAT ARE 5.5 TIMES THE AMOUNT IT USES AS MR.**
5 **STARKEY SAYS ON PAGE 5 OF HIS TESTIMONY?**

6 A. No. There are a number of flaws in Mr. Starkey's example (Table 1) that render
7 his analysis meaningless. First, Mr. Starkey shows a hypothetical DC Power
8 Plant with a capacity of 1200 Amps. As I have explained above, Qwest's cost
9 study develops the cost per Amp based on the power equipment necessary,
10 according to engineering standards, to produce 1000 Amps of capacity, not 1200
11 Amps as Mr. Starkey suggests. Second, Mr. Starkey makes the erroneous leap
12 that since the cost study models a hypothetical power plant which produces 1000
13 Amps of power, this is a fixed amount. In reality, if CLECs were to order the
14 amounts claimed by Mr. Starkey, additional power plant capacity would be
15 provided by Qwest.

16 As Mr. Morrison acknowledged in hearings in Iowa, in the case of a catastrophic
17 outage, CLECs would have the full amount of power ordered available to them.
18 Nevertheless, Mr. Starkey tries to demonstrate with his table that Qwest could
19 make available 1639.35 Amps of power to CLECs using a fixed amount of 1000
20 Amps of power capacity. Clearly, given the CLEC ordered amounts, this could
21 not be done with the 1000 Amps of power plant capacity that Mr. Starkey

1 assumes. It would be impossible for Qwest to make more than 1639 Amps of
2 power available to the CLECs based on the "ordered" amount in Mr. Starkey's
3 table, not to mention the 700 Amps supposedly consumed by Qwest, with only
4 1000 Amps of power plant capacity. Therefore, Mr. Starkey's table would have
5 to be revised to reflect a power plant capable of providing for Qwest's needs and
6 the 1639 Amps of power ordered by the CLECs. Restating Mr. Starkey's
7 numbers to reflect the additional power plant that would be necessary in order to
8 make even 1639 Amps of power available to the CLEC results in a far different
9 picture than that depicted by Table 1.

10 Finally, Mr. Starkey concludes that CLECs are forced to pay for approximately
11 70% of power load but "use" only 30%. The correct numbers, if Mr. Starkey were
12 to populate his table properly, would be far different, unless Mr. Starkey assumes
13 that although the CLECs are only 18.3% efficient in their use of power, Qwest is
14 100% efficient in its use. In other words, what Mr. Starkey has done is assume
15 that Qwest has 700 Amps of power plant capacity available to it and uses 100%
16 of its available power. (In my experience testifying in cost dockets, it would be
17 highly unusual for a CLEC to accuse Qwest of being that much more efficient
18 than the CLECs at anything.) Mr. Starkey then adds Qwest's 700 Amps of power
19 usage (apples) to the CLECs' 1639 Amps of power ordered (oranges) to
20 calculate his 70% (1639/2339) to 30% (700/2339) relationship between the
21 CLECs and Qwest. This calculation is illogical. Assuming that Qwest is no more
22 efficient in its use of power than the most efficient CLEC, at 700 Amps of usage

1 and an 'apples to apples' comparison, Qwest would be making 3825 Amps of
2 power available to itself under the "Order" Size column according to Mr. Starkey's
3 calculations. Of course, in a scenario where Qwest is 18.3% efficient, just as the
4 CLECs are, the CLECs would have 30% ($1639/5464 = .2999$) of the available
5 power while Qwest would have 70% ($3825/5464 = .7000$) of the available power.

6 It is a misleading and meaningless calculation for Mr. Starkey to use power plant
7 designed to produce 1000 Amps of capacity in a hypothetical that assumes 5464
8 Amps of available capacity. Mr. Starkey's Table 1 demonstrates nothing more
9 than the fact that combining 'apples and oranges' assumptions in an analysis
10 leads to misleading and illogical conclusions.

11 **Q. DOES TABLE 1 DEMONSTRATE THAT IN SOME CIRCUMSTANCES QWEST**
12 **WILL RECOVER MORE FROM THE CLECS THAN IT HAS "ACTUALLY**
13 **INCURRED"?**

14 **A.** No. Nor is the amount of cost actually incurred by Qwest in its provision of
15 network elements relevant under the FCC's TELRIC rules. The FCC's TELRIC
16 rules require Qwest to develop costs on the basis of a hypothetical, forward-
17 looking network. This means that regardless of the existing network that Qwest
18 has in place, or the costs that it will or has incurred for that embedded network,
19 Qwest is entitled to charge CLECs for access to its network (including DC power)
20 so long as it does so using TELRIC compliant rates. Therefore, for Mr. Starkey
21 to imply that Qwest should be charging CLECs on the basis of costs it actually

1 incurred for deploying power equipment in the network is just plain wrong. If
2 actual costs based on the embedded network were the appropriate standard
3 under the FCC's rules Qwest would be charging CLECs much higher rates for
4 many unbundled network elements that it is required to provide at forward-
5 looking TELRIC rates which are well below the costs Qwest actually incurs.

6 Nor is Mr. Starkey correct when he says at page 8 of his supplemental direct
7 testimony that TELRIC is "intended to ensure that both collocators and Qwest
8 pay the same amount...." Again, if that were the case, the FCC would have
9 established a methodology based on Qwest's actual cost for its embedded
10 network. It did not. Instead the FCC established a methodology (TELRIC) that
11 requires Qwest to determine the average cost of various network elements based
12 on a hypothetical, forward-looking network. Qwest's collocation cost study does
13 exactly that, nothing more and nothing less, when it calculates the cost per Amp
14 for power plant.

15 **IV. CONCLUSION**

16 **Q. PLEASE SUMMARIZE YOUR TESTIMONY.**

17 A. Mr. Starkey's testimony attempts to prove that Qwest's collocation cost study
18 supports McLeod's interpretation of the *Power Measuring Amendment*. He does
19 this by presenting an analysis based on a table and formulas that I have shown
20 are illogical and meaningless. Mr. Starkey also argues that the cost study
21 indicates that Qwest's power plant rate should have been charged on a usage

1 basis all along -- ignoring the rate and the rate design Qwest requested in its cost
2 study indicating that power plant was to be charged according to the amount of
3 power specified in CLEC power feed orders, ignoring the Commission's orders
4 approving the rates Qwest requested as TELRIC-compliant, and ignoring the
5 compliance filings and the Exhibit A language indicating power plant was to be
6 charged on an "as ordered" basis. I have explained that Qwest's Commission-
7 approved power plant rate represents the average cost per Amp for power
8 equipment designed to produce a hypothetical 1000 Amps of power plant
9 capacity. It is not developed, nor is it based on any concept of actual power
10 usage despite the misapplied label in the cost study. Clearly there is no
11 correlation between the cost per Amp of power plant generated by Qwest's study
12 and McLeod's contention that it should be charge on a per-Amp-used basis.
13 Therefore, the Commission should disregard Mr. Starkey's testimony concerning
14 the power plant rate and focus instead on the matter at issue in this complaint,
15 i.e., whose interpretation of the *Power Measuring Amendment* (McLeod's or
16 Qwest's) is correct under the current contract.

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

18 **A. Yes.**

BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISSIONERS

JEFF HATCH-MILLER, Chairman
WILLIAM A. MUNDELL
MARC SPITZER
MIKE GLEASON
KRISTIN MAYES

**IN THE MATTER OF McLEODUSA
TELECOMMUNICATIONS SERVICES, INC.,**

Complainant,

vs

QWEST CORPORATION

Respondent

**DOCKET NO. T-03267A-06-0105
DOCKET NO. T-01051B-06-0105**

EXHIBITS

OF

TERESA K. MILLION

ON BEHALF OF

QWEST CORPORATION

JUNE 22, 2006

A. Detailed Summary of Results

Arizona
Interconnection Services
Collocation

Cost Element	Investment	TELRIC	Common	TELRIC +
	sB r1	sB r28	sB r38	Common
Version 1.0 Created 6/21/01, 3:26:59 PM				
1 Standard Collocation				
1.1 Terminations				
1.1.1 Terminations - 45 Day Installation				
1.1.2 Terminations - 90 Day Installation				
DS0 - 90 Day Installation				
DS0 Cable Placement per 100 Pair Block - 90 Day		\$233.84	\$10.57	\$244.42
DS0 Cable Placement per Termination - 90 Day		\$4.39	\$0.20	\$4.59
DS0 Cable per 100 Pair Block - 90 Day		\$300.80	\$13.60	\$314.40
DS0 Cable per Termination - 90 Day		\$4.12	\$0.19	\$4.31
DS0 Blocks per 100 Pair Block - 90 Day		\$524.47	\$23.71	\$548.18
DS0 Blocks per Termination - 90 Day		\$7.18	\$0.32	\$7.51
DS0 Block Placement per 100 Pair Block - 90 Day		\$242.53	\$10.96	\$253.50
DS0 Block Placement per Termination - 90 Day		\$3.32	\$0.15	\$3.47
DS1 - 90 Day Installation				
DS1 Cable Placement per 28 DS1s - 90 Day		\$388.94	\$17.58	\$406.52
DS1 Cable Placement per Termination - 90 Day		\$41.82	\$1.89	\$43.71
DS1 Cable per 28 DS1s - 90 Day		\$347.27	\$15.70	\$362.96
DS1 Cable per per Termination - 90 Day		\$37.34	\$1.69	\$39.03
DS1 Panel per 28 DS1s - 90 Day		\$396.25	\$17.91	\$414.16
DS1 Panel per Termination - 90 Day		\$47.84	\$2.16	\$50.00
DS1 Panel Placement per 28 DS1s - 90 Day		\$82.99	\$3.75	\$86.74
DS1 Panel Placement per Termination - 90 Day		\$8.92	\$0.40	\$9.33
DS3 - 90 Day Installation				
DS3 Cable Placement per Termination - 90 Day		\$158.35	\$7.16	\$165.51
DS3 Cable per Termination - 90 Day		\$224.25	\$10.14	\$234.38
DS3 Connector per Termination - 90 Day		\$231.05	\$10.45	\$241.50
DS3 Connector Placement per Termination - 90 Day		\$23.84	\$1.08	\$24.92
1.1.3 Terminations - Monthly Charge				
DS0 - Monthly Charge				
DS0 Cable Placement per 100 pair per month		\$0.4628	\$0.0209	\$0.4837
DS0 Cable Placement per Termination per month		\$0.0087	\$0.0004	\$0.0091
DS0 Cable per 100 pair per month		\$0.5953	\$0.0269	\$0.6222
DS0 Cable per Termination per month		\$0.0082	\$0.0004	\$0.0085
DS0 Blocks per 100 pair per month		\$1.0380	\$0.0469	\$1.0849
DS0 Blocks per Termination per month		\$0.0142	\$0.0006	\$0.0149
DS0 Block Placement per 100 pair per month		\$0.4800	\$0.0217	\$0.5017
DS0 Block Placement per Termination per month		\$0.0066	\$0.0003	\$0.0069
DS1 - Monthly Charge				
DS1 Cable Placement per 28 DS1s per month		\$0.5683	\$0.0257	\$0.5940
DS1 Cable Placement per Termination per month		\$0.0611	\$0.0028	\$0.0639
DS1 Cable per 28 DS1s per month		\$0.5074	\$0.0229	\$0.5304
DS1 Cable per per Termination per month		\$0.0546	\$0.0025	\$0.0570
DS1 Panel per 28 DS1s per month		\$0.5790	\$0.0262	\$0.6052
DS1 Panel per Termination per month		\$0.0699	\$0.0032	\$0.0731
DS1 Panel Placement per 28 DS1s per month		\$0.1213	\$0.0055	\$0.1268
DS1 Panel Placement per Termination per month		\$0.0130	\$0.0006	\$0.0136
DS3 - Monthly Charge				
DS3 Cable Placement per Termination per month		\$0.2314	\$0.0105	\$0.2419
DS3 Cable per Termination per month		\$0.3277	\$0.0148	\$0.3425
DS3 Connector per Termination per month		\$0.3376	\$0.0153	\$0.3529
DS3 Connector Placement per Termination per month		\$0.0348	\$0.0016	\$0.0364
1.2 Entrance Facility				
1.2.1 Entrance Facility - 90 Day Installation				
Standard Shared Per Fiber		\$600.83	\$27.16	\$627.99
Cross Connect per Fiber		\$703.59	\$31.81	\$735.39
Express per Cable		\$8,800.85	\$397.86	\$9,198.71
1.2.2 Entrance Facility - Monthly Charge				
Standard Shared Per Fiber per month	\$803.12	\$15.32	\$0.69	\$16.01
Cross Connect per Fiber per month	\$803.12	\$15.47	\$0.70	\$16.17
Express per Cable per month	\$14,276.41	\$264.87	\$11.97	\$276.84
1.3 Cable Splicing - 90 Day Installation				
Setup		\$456.20	\$20.62	\$476.82

A. Detailed Summary of Results

Arizona Interconnection Services Collocation				
Cost Element	Investment	TELRIC	Common	TELRIC + Common
	sB r1	sB r28	sB r38	
Per fiber Spliced		\$36.47	\$1.65	\$38.12
1.4 Power Usage				
1.4.1 Power Plant per Amp Ordered				
Power Plant per Amp Ordered	\$467.71	\$10.4669	\$0.4732	\$10.9400
Power Usage-Less than 60 AMPS per Amp Ordered		\$3.54	\$0.16	\$3.70
Power Usage-More than 60 AMPS per Amp Ordered		\$7.08	\$0.32	\$7.41
1.4.2 Backup AC Power Feed Usage - Monthly Charges				
120 V per Amp per Month	\$313.60	\$18.21	\$0.82	\$19.03
208 V, Single Phase per Amp per Month	\$543.58	\$31.56	\$1.43	\$32.98
208 V, Three Phase per Amp per Month	\$940.39	\$54.59	\$2.47	\$57.06
240 V, Single Phase per Amp per Month	\$627.21	\$36.41	\$1.65	\$38.06
240 V, Three Phase per Amp per Month	\$1,085.07	\$62.99	\$2.85	\$65.84
480 V, Three Phase per Amp per Month	\$2,170.14	\$125.98	\$5.70	\$131.68
1.4.3 Backup AC Power Cable - 90 Day Installation				
20 Amp, Single Phase - Initial Charge per Foot		\$7.67	\$0.35	\$8.02
20 Amp, Three Phase - Initial Charge per Foot		\$9.51	\$0.43	\$9.94
30 Amp, Single Phase - Initial Charge per Foot		\$8.27	\$0.37	\$8.64
30 Amp, Three Phase - Initial Charge per Foot		\$11.36	\$0.51	\$11.87
40 Amp, Single Phase - Initial Charge per Foot		\$9.72	\$0.44	\$10.16
40 Amp, Three Phase - Initial Charge per Foot		\$13.38	\$0.61	\$13.99
50 Amp, Single Phase - Initial Charge per Foot		\$11.54	\$0.52	\$12.06
50 Amp, Three Phase - Initial Charge per Foot		\$16.11	\$0.73	\$16.84
60 Amp, Single Phase - Initial Charge per Foot		\$13.04	\$0.59	\$13.63
60 Amp, Three Phase - Initial Charge per Foot		\$18.54	\$0.84	\$19.38
100 Amp, Single Phase - Initial Charge per Foot		\$16.15	\$0.73	\$16.88
100 Amp, Three Phase - Initial Charge per Foot		\$25.22	\$1.14	\$26.36
1.4.4 Backup AC Power Cable - Monthly Charges				
20 Amp, Single Phase per Foot per Month		\$0.0112	\$0.0005	\$0.0117
20 Amp, Three Phase per Foot per Month		\$0.0139	\$0.0006	\$0.0145
30 Amp, Single Phase per Foot per Month		\$0.0121	\$0.0005	\$0.0126
30 Amp, Three Phase per Foot per Month		\$0.0166	\$0.0008	\$0.0173
40 Amp, Single Phase per Foot per Month		\$0.0142	\$0.0006	\$0.0149
40 Amp, Three Phase per Foot per Month		\$0.0196	\$0.0009	\$0.0204
50 Amp, Single Phase per Foot per Month		\$0.0169	\$0.0008	\$0.0176
50 Amp, Three Phase per Foot per Month		\$0.0235	\$0.0011	\$0.0246
60 Amp, Single Phase per Foot per Month		\$0.0191	\$0.0009	\$0.0199
60 Amp, Three Phase per Foot per Month		\$0.0271	\$0.0012	\$0.0283
100 Amp, Single Phase per Foot per Month		\$0.0236	\$0.0011	\$0.0247
100 Amp, Three Phase per Foot per Month		\$0.0369	\$0.0017	\$0.0385
1.5 Security				
Access Card per Employee	\$9.09	\$0.82	\$0.04	\$0.86
Card Access Per Person per Office per Month	\$250.00	\$7.55	\$0.34	\$7.90
1.6 Central office Clock Synchronization				
C O Clock Synchronization per Port	\$317.14	\$7.10	\$0.32	\$7.42
1.7 Interconnection Tie Pair				
DS0 Per Connection	\$20.41	\$0.46	\$0.02	\$0.48
DS1 Per Connection	\$64.98	\$1.45	\$0.07	\$1.52
DS3 Per Connection	\$655.24	\$14.66	\$0.66	\$15.33
Space Construction - General				
2 Cageless Collocation				
2.1 Space Construction				
2.1.1 Space Construction - 45 Day Installation				
2.1.2 Space Construction - 90 Day Installation				
Space Construction for 2 Bays and 1 - 40A Power Feed - 90 Day		\$28,658.00	\$1,295.55	\$29,953.55
Space Construction Adjustment for 20A Initial Power Feed - 90 Day		-\$2,092.55	-\$94.60	-\$2,187.15
Space Construction Adjustment for 30A Initial Power Feed - 90 Day		-\$1,335.46	-\$60.37	-\$1,395.83
Space Construction Adjustment for 60A Initial Power Feed - 90 Day		\$1,833.29	\$82.88	\$1,916.17
Space Construction Adjustment for Each Additional Bay - 90 Day		\$2,906.66	\$131.40	\$3,038.06
Space Construction Adjustment for Each Additional 20A Power Feed - 90 Day		\$6,312.49	\$240.16	\$6,552.65
Space Construction Adjustment for Each Additional 30A Power Feed - 90 Day		\$6,069.58	\$274.39	\$6,343.97

A. Detailed Summary of Results

Arizona Interconnection Services Collocation				
Cost Element	Investment	TELRIC	Common	TELRIC +
	sB r1	sB r28	sB r38	Common
Space Construction Adjustment for Each Additional 40A Power Feed - 90 Day		\$7,405.04	\$334.76	\$7,739.80
Space Construction Adjustment for Each Additional 60A Power Feed - 90 Day		\$9,238.33	\$417.64	\$9,655.97
2.1.3 Space Monthly Charge				
Space Monthly Charge for 2 Bays and 1 - 40A Power Feed per Month		\$41.88	\$1.89	\$43.77
Space Monthly Charge Adjustment for 20A Initial Power Feed per Month		-\$3.06	-\$0.14	-\$3.20
Space Monthly Charge Adjustment for 30A Initial Power Feed per Month		-\$1.95	-\$0.09	-\$2.04
Space Monthly Charge Adjustment for 60A Initial Power Feed per Month		\$2.68	\$0.12	\$2.80
Space Monthly Charge Adjustment for Each Additional Bay per Month		\$4.25	\$0.19	\$4.44
Space Monthly Charge Adjustment for Each Additional 20A Power Feed per Month		\$7.76	\$0.35	\$8.11
Space Monthly Charge Adjustment for Each Additional 30A Power Feed per Month		\$8.87	\$0.40	\$9.27
Space Monthly Charge Adjustment for Each Additional 40A Power Feed per Month		\$10.82	\$0.49	\$11.31
Space Monthly Charge Adjustment for Each Additional 60A Power Feed per Month		\$13.50	\$0.61	\$14.11
2.2 Rent				
Rent per Square Foot	\$170.44	\$3.5278	\$0.1595	\$3.6873
2.3 Quote Preparation Fee - Cageless Construction				
Quotation Preparation Fee		\$4,209.54	\$190.30	\$4,399.84
3 Caged Collocation				
3.1 Space Construction				
3.1.1 Space Construction - 90 Day Installation				
Cage-Up to 100 Sq Ft - 90 Day		\$49,656.33	\$2,244.83	\$51,901.16
Cage-101 Sq Ft to 200 Sq Ft - 90 Day		\$51,528.86	\$2,329.48	\$53,858.34
Cage-201 Sq Ft to 300 Sq Ft - 90 Day		\$52,984.98	\$2,395.31	\$55,380.28
Cage-301 Sq Ft to 400 Sq Ft - 90 Day		\$54,809.76	\$2,477.80	\$57,287.56
3.1.2 Initial Power Feed Adjustments - 90 Day				
Space Construction Adjustment for 20A Initial Power Feed - 90 Day		-\$8,114.59	-\$366.84	-\$8,481.43
Space Construction Adjustment for 30A Initial Power Feed - 90 Day		-\$7,387.63	-\$333.97	-\$7,721.61
Space Construction Adjustment for 40A Initial Power Feed - 90 Day		-\$5,867.83	-\$265.27	-\$6,133.10
Space Construction Adjustment for 100A Initial Power Feed - 90 Day		\$8,982.99	\$406.10	\$9,389.08
Space Construction Adjustment for 200A Initial Power Feed - 90 Day		\$28,678.05	\$1,296.46	\$29,974.50
Space Construction Adjustment for 300A Initial Power Feed - 90 Day		\$52,617.21	\$2,378.68	\$54,995.90
Space Construction Adjustment for 400A Initial Power Feed - 90 Day		\$80,929.33	\$3,658.60	\$84,587.92
3.1.3 Each Additional Power Feed Adjustments - 90 Day				
Space Construction Adjustment for Each Additional 20A Power Feed - 90 Day		\$6,701.41	\$302.95	\$7,004.36
Space Construction Adjustment for Each Additional 30A Power Feed - 90 Day		\$7,428.36	\$335.82	\$7,764.18
Space Construction Adjustment for Each Additional 40A Power Feed - 90 Day		\$8,948.16	\$404.52	\$9,352.68
Space Construction Adjustment for Each Additional 60A Power Feed - 90 Day		\$14,815.99	\$669.79	\$15,485.78
Space Construction Adjustment for Each Additional 100A Power Feed - 90 Day		\$23,798.98	\$1,075.89	\$24,874.87
Space Construction Adjustment for Each Additional 200A Power Feed - 90 Day		\$43,494.04	\$1,966.25	\$45,460.29
Space Construction Adjustment for Each Additional 300A Power Feed - 90 Day		\$67,433.21	\$3,048.47	\$70,481.68
Space Construction Adjustment for Each Additional 400A Power Feed - 90 Day		\$95,745.32	\$4,328.39	\$100,073.71
3.1.4 Space Monthly Charge				
Cage-Up to 100 Sq Ft Monthly Charge		\$72.56	\$3.28	\$75.84
Cage-101 Sq Ft to 200 Sq Ft Monthly Charge		\$75.30	\$3.40	\$78.70
Cage-201 Sq Ft to 300 Sq Ft Monthly Charge		\$77.42	\$3.50	\$80.92
Cage-301 Sq Ft to 400 Sq Ft Monthly Charge		\$80.09	\$3.62	\$83.71
3.1.5 Initial Power Feed Monthly Charge Adjustments				
Space Monthly Charge Adjustment for 20A Initial Power Feed		-\$11.86	-\$0.54	-\$12.39
Space Monthly Charge Adjustment for 30A Initial Power Feed		-\$10.80	-\$0.49	-\$11.28
Space Monthly Charge Adjustment for 40A Initial Power Feed		-\$8.57	-\$0.39	-\$8.96
Space Monthly Charge Adjustment for 100A Initial Power Feed		\$13.13	\$0.59	\$13.72
Space Monthly Charge Adjustment for 200A Initial Power Feed		\$41.91	\$1.89	\$43.80
Space Monthly Charge Adjustment for 300A Initial Power Feed		\$76.89	\$3.48	\$80.36
Space Monthly Charge Adjustment for 400A Initial Power Feed		\$118.26	\$5.35	\$123.60
3.1.6 Each Additional Power Feed Monthly Charge Adjustments				
Space Monthly Charge Adjustment for Each Additional 20A Power Feed		\$9.79	\$0.44	\$10.24
Space Monthly Charge Adjustment for Each Additional 30A Power Feed		\$10.85	\$0.49	\$11.35
Space Monthly Charge Adjustment for Each Additional 40A Power Feed		\$13.08	\$0.59	\$13.67
Space Monthly Charge Adjustment for Each Additional 60A Power Feed		\$21.65	\$0.98	\$22.63
Space Monthly Charge Adjustment for Each Additional 100A Power Feed		\$34.78	\$1.57	\$36.35
Space Monthly Charge Adjustment for Each Additional 200A Power Feed		\$63.56	\$2.87	\$66.43
Space Monthly Charge Adjustment for Each Additional 300A Power Feed		\$98.54	\$4.45	\$102.99
Space Monthly Charge Adjustment for Each Additional 400A Power Feed		\$139.91	\$6.32	\$146.23

A. Detailed Summary of Results

**Arizona
Interconnection Services
Collocation**

Cost Element	Investment	TELRIC	Common	TELRIC +
	sB r1	sB r28	sB r38	Common
3.2 Grounding				
Grounding - 90 Day Installation				
#2 AWG per Foot - 90 Day		\$12.10	\$0.55	\$12.65
1/0 AWG per Foot - 90 Day		\$20.14	\$0.91	\$21.05
4/0 AWG per Foot - 90 Day		\$22.88	\$1.03	\$23.92
350 KCMIL per Foot - 90 Day		\$31.74	\$1.44	\$33.18
500 KCMIL per Foot - 90 Day		\$35.37	\$1.60	\$36.97
750 KCMIL per Foot - 90 Day		\$54.20	\$2.45	\$56.65
Grounding - Monthly Charge				
#2 AWG per Foot Monthly Charge		\$0.0177	\$0.0008	\$0.0185
1/0 AWG per Foot Monthly Charge		\$0.0294	\$0.0013	\$0.0308
4/0 AWG per Foot Monthly Charge		\$0.0334	\$0.0015	\$0.0349
350 KCMIL per Foot Monthly Charge		\$0.0464	\$0.0021	\$0.0485
500 KCMIL per Foot Monthly Charge		\$0.0517	\$0.0023	\$0.0540
750 KCMIL per Foot Monthly Charge		\$0.0792	\$0.0036	\$0.0828
3.3 Rent				
Rent per Square Foot	\$170.44	\$3.53	\$0.16	\$3.69
3.4 Quote Preparation Fee - Caged Construction				
Quotation Preparation Fee - Caged Construction		\$4,576.99	\$206.91	\$4,783.90
4 Virtual Collocation				
4.1 Equipment Bay				
Equipment Bay per Shelf	\$154.39	\$3.46	\$0.16	\$3.61
4.2 Labor				
Maintenance - Regular Business Hours Per 1/2 Hour		\$26.88	\$1.22	\$28.10
Maintenance - Outside Regular Business Hours Per 1/2 Hour		\$35.97	\$1.63	\$37.60
Training - Regular Business Hours Per 1/2 Hour		\$26.88	\$1.22	\$28.10
Inspector - Regular Business Hours Per 1/2 Hour		\$30.65	\$1.39	\$32.03
Inspector - Outside Regular Business Hours Per 1/2 Hour		\$39.47	\$1.78	\$41.25
Installation - Regular Business Hours Per 1/2 Hour		\$30.65	\$1.39	\$32.03
Installation - Outside Regular Business Hours Per 1/2 Hour		\$39.47	\$1.78	\$41.25
Engineering - Regular Business Hours Per 1/2 Hour		\$29.00	\$1.31	\$30.31
Engineering - Outside Regular Business Hours Per 1/2 Hour		\$37.44	\$1.69	\$39.13
4.3 Quote Preparation Fee - Virtual				
Quotation Preparation Fee - Virtual		\$4,209.54	\$190.30	\$4,399.84

A. Detailed Summary of Results

Cell: A2

Comment: This spreadsheet is a summary of the costs calculated in Section B.

Cell: A9

Comment: 1.1 Terminations

Nonrecurring One Time Charge

Terminations are the network connections between the CLEC equipment and the Qwest network. These connections can be at a DS0, DS1 or DS3 level. The CLEC requires these elements to connect their equipment to the unbundled elements they are purchasing from Qwest. For example, an unbundled loop purchased by a CLEC will terminate on Qwest's network. The CLEC needs to have facilities to connect this unbundled loop to the equipment in their collocation space. Terminations are the cables and blocks that are used to make this connection. The termination costs are broken into four components:

1. The cables which are used to make the connection;
2. The blocks and panels needed to terminate the cables on the Qwest network;
3. The cost of placing the cable in the cable racks; and
4. The cost of placing the panels and blocks on the intermediate distribution frame.

Each of these components is broken out separately to allow the CLEC the opportunity to self-provision portions of these connections. If a CLEC prefers to supply its own cable or blocks, the rate for cable or blocks would not be assessed. However, the placement rates would still apply if Qwest places the blocks and the cable. Terminations end at a CLEC's equipment and are therefore dedicated to providing that CLEC service. All these costs are incurred solely for the collocater and will be recovered through a one-time charge based on the number of terminations, which are ordered. Terminations can be ordered on an individual basis or in quantities of 100 pairs for DS0's and 28 pairs for DS1's. The cost for bundles of cables represents the economies of 100 percent utilization of the placed facilities.

The nonrecurring cost does not include the cost of a dedicated frame (SPOT Frame), the cost of regenerating the signal to provide a higher grade of service, a direct connection to the COSMIC frame or other special configurations that may be requested by the carrier. Carriers requesting unique configurations for terminating their services to their collocation space will be charged on a case by case basis based on the actual cost of building the unique configuration.

Recurring Monthly Charge

There is also a small monthly recurring charge for maintaining these connections.

Cell: A10

Comment: 45-day installation is available only as required under contract provisions or in states where required by law.

Cell: A83

Comment: 1.2 Entrance Facility

Nonrecurring One Time Charge

Entrance facility is the connection between the CLEC cable outside the office and the CLEC facilities within the office. The costs include the manhole where the CLEC cable enters Qwest's facilities, the conduit between the manhole and the Central Office, the cable running from the manhole to the CLEC space and the structure, such as cable racking, used to support the cables. The placement costs for all the cable and equipment is also included. The cost is on a per fiber basis and must be ordered in quantities of 12 (the number of fibers in the standard cable). To place these cables the company has, in some instances, had to place new cable racking and new manholes to accommodate the CLEC's cable. The nonrecurring costs reflect the fact that a certain percentage of the time new facilities are required. These costs, when they are incurred, are spread over the number of CLEC's that are anticipated to use the facilities. The cable is also included in the nonrecurring charge since it is dedicated solely to the use of the requesting CLEC.

Recurring Monthly Charge

There is also a small recurring monthly charge for the cost using existing cable racking and other cable support facilities and the cost of maintaining all of the facilities used to provide this service to the CLEC.

Cell: A93

Comment: 1.3 Fiber Cable Splicing

The Fiber Cable Splicing elements represent the labor and equipment to perform a splice.

- The "Per Setup" element includes the labor required for an outside plant technician to perform all necessary tasks prior to the actual splicing and to install the splice case.
- The "Per Splice" element covers the labor to splice and test each fiber to each side of the splice case.

Cell: A97

Comment: 1.4 Power Usage

Recurring Monthly Charge

There are recurring monthly charges for power usage. Power usage includes the cost of purchasing power from the electric company and the cost of the power plant. Power usage is broken down into three rates:

1. A rate for the use of the power plant that is charged based on the size of the power feed of feeds that the CLEC orders;
2. A flat monthly power usage rate for each type of power feed that is smaller than 100 AMPs; and
3. A per AMP rate for power usage that is delivered on power feeds that are larger than 60 AMPs.

The power plant consists of the backup power generator, rectifiers, power boards, battery distribution frame boards (BDFB's), batteries and the cable and support structure that connects all these components. The power plant generates and stores power for use during potential outages converts standard AC power to the DC power used by telecommunications equipment and distributes the power to those areas of the central office

A. Detailed Summary of Results

where the power is to be used. The monthly charge reflects the capital and maintenance costs associated with maintaining this system. The monthly charge is based on the size of the power feed requested by the CLEC.

The usage charge for power consists of the cost of purchasing AC power from an external company. This charge will vary by actual amount of power used by a CLEC during a given period. Unfortunately for power feeds of less than 100 AMPs Qwest does not have the equipment at the BDFB to measure actual power usage. The cost of placing such measurement equipment would far exceed any benefits that could be obtained and would need to be recovered through an additional charge to the CLECs. For this reason, Qwest adopted an assumption that power usage on CLEC power feeds of less than 100 AMPs should be assumed to be 50 % of the actual capacity of the feed. For power cable of 100 AMPs or more the measurement capabilities currently exists so the charge for power will be based on actual usage.

Cell: A136**Comment:** 1.5 Security

Provides for the security systems (e.g., card readers, identification cards, etc.) at Qwest wire centers so carriers can have access to their collocation space.

Cell: A140**Comment:** 1.6 Composite Clock/CO Synchronization

This element provides Composite Clock and/or DS1 Synchronization signals traceable to a Stratum 1 source. The interconnector must determine the IDE synchronization requirements and notify Qwest of these requirements when ordering the clock signals. The Composite Clock signal is a 64 kHz, nominal 5/8 duty cycle, bipolar return-to-zero signal with a bipolar violation every eighth pulse. The DS1 Clock signal is a framed, all-ones, 1.544 Mb/s (DS1) signal using the superframe frame format and the Alternate Mark Inversion line code. CO Synchronization is required for VEIC Service involving digital services or connections. Synchronization may be required for analog services, depending on the IDE involved. CO Synchronization is available where Qwest wire centers are equipped with Building Integrated Timing Supply (BITS).

Cell: A143**Comment:** 1.7 Interconnection Tie Pairs (ITP)

Recurring Monthly Charge

Interconnection Tie Pairs are the connection between the shared frame, where the terminations are tied, and the COSMIC frame. The cost of the ITP includes blocks on the shared frame, the shared frame, connections to the COSMIC frame and the cable and cable racking running between the shared frame and the COSMIC frame. The cost of placing all these facilities is also included in the overall costs. ITP's are part of the existing integrated Qwest network. Since these facilities will in most instances already exist and can be shared amongst various CLEC's and Qwest, the costs will be recovered through a monthly recurring charge based on the number of connections being used by any one CLEC during the period.

Cell: A148**Comment:** Space Construction - General

Nonrecurring One Time Charge

At the request of CLECs, Qwest is offering a standard price for space construction. There are separate prices for standard caged and cageless collocation configurations. The standard costs for both cageless and caged collocation includes:

1. The costs for a single power feed;
2. The cost of new overhead structure to support cable racking and CLEC collocated equipment;
3. The cost of new cable racking required to carry the CLEC's power cable and terminations to the existing cable racking network;
4. The average cost of any new lighting that may be required to illuminate the CLEC's space;
5. The cost of engineering the collocation job; and
6. Additions to the cooling system (i.e. HVAC) and electromechanical system to extend the network to get incidental power and cooling to the CLECs collocation area.

The above costs although not identical for each type of collocation, are common to both caged and cageless collocation. The cost for common structure, such as cable racking, lighting and Aerial support structure, is prorated between anticipated number of carriers that will be sharing the use of the structure. Facilities that are dedicated for the sole use of an individual CLEC, such as power cable, are assigned directly to that CLEC's job. The standard costs reflect the most opted for configurations. Adjustment factors for costs for requested variations to the standard configurations are also identified for those companies seeking a different space design.

The engineering component of the standard configuration for both caged and cageless collocation includes all preliminary engineering costs that were incurred as a result of preparing the original quote. In some contracts there is a separate charge for this preliminary engineering that is assessed to the CLEC at the time that the quote is initiated. To the extent that the CLEC has paid a quote preparation fee that is nonrefundable and therefore retained by Qwest, the amount of that fee that is retained should be deducted from the standard space construction charge in determining the additional amount that that CLEC still owes to the company.

Cell: A150**Comment:** 2.1 Space Construction-Cageless collocation

Standard Space Construction Charge

In addition to the facilities listed under Space Construction - General, the standard cageless collocation space construction charge includes the ground cable for the CLEC's equipment. It also includes one standard 40 AMP power feed and a space adequate to insert two standard bays. The standard cost does not include the cost of the actual bays in which the CLEC places its equipment. These bays are self-provisioned by the CLEC. The standard space construction charge for cageless collocation varies between states based on whether they are located in an earthquake prone zone. Additional structural support is required in stated with a high risk of damage from earthquakes (i.e. Washington, Oregon, Utah, Arizona, Idaho, Wyoming and Montana). Two standard rates are calculated for cageless collocation to reflect these differences.

A. Detailed Summary of Results

Some contracts contain provisions for constructing cageless collocation spaces within a 45-day time frame. This time frame is significantly less than the standard 90-day timeframe generally offered by the company. A forty-five day time frame eliminates many of the options the company has to reasonably forecast and plan for the additional workload. This results in an increase in the cost of the cost of constructing the facilities. To reflect this difference in cost in meeting these expedited timeframes a separate cageless collocation cost has been developed for these 45-day jobs. The CLEC also has the option of requesting a standard 90 day construction interval at a lower standard cost.

Cell: A151

Comment: 45-day installation is available only as required under contract provisions or in states where required by law.

Cell: A163

Comment: Power Feed-Variations to the Standard 40 AMP Feed Design

The standard cageless collocation rate includes the provisioning of one 40 AMP power feed. A CLEC can request a power feed to their cageless collocation space at 20, 30, 40 or 60 AMPS. USWEST has calculated cost based adjustments to the standard design price to facilitate pricing for power feed orders that vary from the standard 40 AMP design. For CLECs that order a 20 or 30 AMP cable the standard price is reduced to reflect the lower cost of these power feeds. The ordering of a 60 AMP cable would increase the standard space construction charge. These cost based adjustments to the standard design are included in the price list.

Cell: A166

Comment: Additional Bays

A CLEC also has the option of requesting space for additional bays. A cost for additional bays is included in the price list. This cost is based on a proration of the portion of the support structure; cable racking, lighting and grounding facilities needed to support the collocation area.

Cell: A167

Comment: Power Feed-Additional

Nonrecurring One Time Charge

This charge is for the DC power cable feeds from the CLEC equipment to the Battery Distribution Frame Board (i.e. BDFB) or Power Board, where the cable terminates. The power cable element included costs for the cables and the lugs, fuses and Htaps required to connect the cables to the power network. All costs of installing the cables are also included in the costs. These cables are attached directly to the CLEC's equipment and are dedicated exclusively for the use of the CLEC. One feed element consists of an A and B or original and backup feed. Each feed consists of two cables, four for the combined A & B feed. Power feeds can be purchased in the following sizes for the various types of collocation:

Size of Power Feed Type of Collocation

20 AMP Available for all types of Collocation
 30 AMP Available for all types of Collocation
 40 AMP Available for all types of Collocation
 60 AMP Available for all types of Collocation
 100 AMP Available for cage collocation only
 200 AMP Available for cage collocation only
 300 AMP Available for cage collocation only
 400 AMP Available for cage collocation only

The costs for power feeds varies between the types of collocation (i. e. caged and cageless) due to the differences in the average distance between the CLEC space and the BDFB or power board. Power cables of 100 AMPs or greater are only available with caged collocation.

It should be noted that the initial power feed to a CLEC space is included in the initial space construction charge. The flat cageless collocation charge includes the cost of one 40 AMP cable. The flat Caged collocation costs includes the cost of one 60 AMP cable. There are also adjustments to the standard flat collocation space construction charge for CLECs that desire a power feed that varies from the standards identified above. The separate power feed charges only apply to the second and subsequent power feeds to the CLEC collocation space.

Recurring Monthly Charge

There is also a small recurring charge for the maintenance of the power feeds.

Cell: A182

Comment: 1.7.9 Space Rent

The monthly rent for the leased physical space, without -48 Volt DC Power. The base rent rate element includes one 110 AC, 15 AMP electrical outlet provided in accordance with local codes and may not be used to power transmission equipment or -48 Volt D

Cell: A186

Comment: 1.7.1 Quotation Preparation Fee

The non-recurring cost for preparing a price quotation to a collocator for collocation

Cell: A189

Comment: Space Construction-Caged collocation

3.1 Standard Space Construction Charge

In addition to the facilities listed under Space Construction - General, the standard cageless collocation space construction charge includes the cost of constructing the cage. Cages are offered in standard 100, 200, 300 and 400 square feet increments. Nonstandard cage designs will be charged at the next highest increment. The standard caged collocation rate also includes the provisioning of one standard 60 AMP power feed. In

A. Detailed Summary of Results

caged collocation the grounding cable is offered as a separate element so the cost of the ground cable is not included in the standard price. As discussed below, a CLEC has the option of ordering large power feeds for their caged collocation area. The larger power feeds the greater the size of the facilities required to ground the equipment. To accommodate these variances in the size of the ground wire that is required, a separate grounding element has been developed for caged collocation builds.

Cell: A195**Comment: Power Feed-Variations to the Standard 60 AMP Feed Design**

The standard caged collocation rate includes the provisioning of one 60 AMP power feed. A CLEC can request a power feed to their caged collocation space at 20, 30, 40, 60, 100, 200, 300 and 400 AMPS. USWEST has calculated cost based adjustments to the standard design price to facilitate pricing for power feed orders that vary from the standard 60 AMP design. For CLECs that order a 20, 30 or 40 AMP power feeds the standard price is reduced to reflect the lower cost of these power feeds. The ordering of 100, 200, 300, and 400 AMP power feeds would increase the standard space construction charge. These cost based adjustments to the standard design are included in the price list.

Cell: A235**Comment: 3.2 Grounding**

Extends the building DC ground from the grounding plane of the central office to the CLEC's space.

Cell: A258**Comment: 4.1 Equipment Bay/Shelf**

The Equipment Bay provides mounting space for the interconnector-designated shelves and fuse panel. Each Bay includes the 7 foot bay, its installation and all necessary environmental supports (e.g., floor space, heat and lighting). Mounting space on the bay, including space for the fuse panel and air gaps necessary for heat dissipation, is limited to 78 inches. Physical dimensions of the equipment bay are 84 inches high by 26 inches wide by 12 inches deep. Each bay is capable of providing space for six shelves. This element is for space for one shelf on the equipment bay.

Cell: A261**Comment: 4.2 Labor**

- Equipment (Installation, Change, or Removal) - Labor - Equipment Labor is a charge associated with the installation, change or removal (i.e., discontinuance) of equipment. The Equipment Labor is a nonrecurring element based on the one half hour (1/2) during normal business hours or one half hour (1/2) outside normal business hours, as applicable.

- Equipment Maintenance - Labor - The Equipment Maintenance Labor rate element provides for the labor necessary to repair out-of-service and/or service-affecting conditions and preventative maintenance of the equipment as specified by the interconnector. The interconnector is responsible for ordering maintenance spares. Qwest will perform maintenance and/or repair work upon receipt of the replacement maintenance spare and/or equipment from the applicable interconnector. The equipment maintenance labor charge is a nonrecurring charge assessed per one half hour (1/2) or fraction thereof, per technician, during normal business hours or per one half hour (1/2) or fraction thereof, per technician, outside normal business hours, as applicable. A call-out of a maintenance technician outside normal business hours is subject to a minimum charge of four (4) hours. If the technician is required beyond the four hour minimum, the remaining time will be billed at the half-hour increment charge.

- Training -The Training element provides for the billing of vendor-provided training for Qwest personnel, on a metropolitan service area basis, necessary for interconnector-designated equipment (IDE) which is different from the Qwest-provided equipment. Qwest will require that three people be trained per metropolitan service area affected by the particular IDE. Within five business days of receiving the interconnector's request for service, Qwest will inform the interconnector of the number of employees requiring training. If, by an act of Qwest, the employees that have been trained are relocated, retired or are no longer available, Qwest will not require an interconnector to provide training for any new employees for the same IDE.

The Training element will only apply as required and will be determined utilizing two elements: the first will be the actual number of hours that the employee(s) is in training and the second is the actual training charges direct billed to Qwest (a copy of the invoice for the training course will be provided to the interconnector with the bill). The number of hours that the employee(s) is in training will be multiplied by the Labor rate element. The direct-billed training expenses will be billed to the interconnector in one half hour increments. The total direct-billed training expenses will be divided by the training element. The result of the division will be rounded to the nearest one-half hour increment.

BEFORE THE ARIZONA CORPORATION COMMISSION

IN THE MATTER OF McLEODUSA
TELECOMMUNICATIONS SERVICES,
INC.,

Complainant,

vs

QWEST CORPORATION

Respondent

STATE OF COLORADO
COUNTY OF DENVER

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) DOCKET NO. T-03267A-06-0105
) DOCKET NO. T-01051B-06-0105
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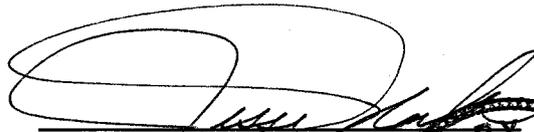
Teresa K. Million, of lawful age being first duly sworn, deposes and states:

1. My name is Teresa K. Million. I am a Staff Director, Public Policy – for Qwest Services Corporation in Denver, Colorado. I have caused to be filed written direct testimony in Docket Nos. T-03267A-06-0105 and T-01051B-06-0105.
2. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded are true and correct to the best of my knowledge and belief.

Further affiant sayeth not.


Teresa K. Million

SUBSCRIBED AND SWORN to before me this 20th day of June, 2006.


Notary Public

My Commission Expires: 09/24/09

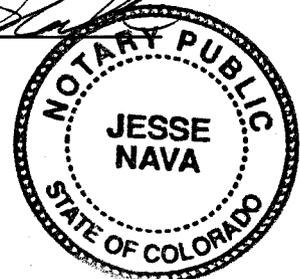


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1

I. IDENTIFICATION OF WITNESS

2 **Q. PLEASE STATE YOUR NAME, OCCUPATION AND BUSINESS ADDRESS.**

3 A. My name is William R. Easton. My business address is 1600 7th Avenue, Seattle
4 Washington. I am employed as Director – Wholesale Advocacy. I am testifying on
5 behalf of Qwest Corporation (“Qwest”).

6

7 **Q. PLEASE GIVE A BRIEF SUMMARY OF YOUR EDUCATIONAL BACKGROUND**
8 **AND TELEPHONE COMPANY EXPERIENCE.**

9 A. I graduated from Stanford University in 1975, earning a Bachelor of Arts degree.
10 In 1980, I received a Masters of Business Administration from the University of
11 Washington. In addition, I am a Certified Management Accountant.

12

13 I began working for Pacific Northwest Bell in 1980, and have held a series of jobs
14 in financial management with U S WEST, and now with Qwest, including staff
15 positions in the Treasury and Network organizations. From 1996 through 1998, I
16 was Director – Capital Recovery. In this role I negotiated depreciation rates with
17 state commission and FCC staffs and testified in various regulatory proceedings.
18 From 1998 until 2001 I was a Director of Wholesale Finance, responsible for the
19 management of Wholesale revenue streams from a financial perspective. In this
20 capacity I worked closely with the Product Management organization on their
21 product offerings and projections of revenue. In October of 2001 I moved from

1 Wholesale Finance to the Wholesale Advocacy group, where I am currently
2 responsible for advocacy related to Wholesale products and services. In this role I
3 work extensively with the Product Management, Network and Costing
4 organizations.

5
6 **Q. HAVE YOU TESTIFIED PREVIOUSLY IN ARIZONA?**

7 A. Yes I have. I testified in docket numbers T-01051B-97-0689, U-3021-96-448, T-
8 02428A-03-0553, T01051B-02-0871, T-01051B-04-0152 and T-0105B-05-0350..

9
10
11 **II. PURPOSE OF TESTIMONY**

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

13 A. The purpose of my testimony is to discuss the Power Measuring Amendment
14 which lies at the heart of this complaint. I will explain why this language supports
15 Qwest's position that the Amendment applies only to the usage component of the
16 power charges, not to the power plant rate element. I will demonstrate that this
17 interpretation is consistent with the language of the Amendment itself and with
18 information that was provided to all CLECs, including McLeod. I will also provide
19 information regarding parties' intent at the time they entered into the Amendment.
20 Further, through a discussion of Qwest's power offerings, I will show that McLeod's
21 interpretation of the Amendment is totally at odds with the other power options

1 Qwest offers. Finally, I will address specific claims made by Mr. Starkey and Mr.
2 Morrison in their direct testimony.

3
4 **III. OVERVIEW OF THE CASE**

5 **Q. PLEASE PROVIDE A BRIEF OVERVIEW OF THE ISSUES IN DISPUTE IN THIS**
6 **CASE.**

7 A. It is important for the Commission to keep in mind that this case involves the
8 interpretation of a contract – specifically, the interconnection agreement and the
9 subsequent DC Power Measuring Amendment between McLeod and Qwest. Most
10 of the positions taken by McLeod and its witnesses in this case reflect either
11 McLeod's dissatisfaction with the rate for the DC Power Plant charge, or McLeod's
12 desire for usage-based billing for the DC Power Plant charge, irrespective of what
13 the parties actually agreed to in the DC Power Measuring Amendment at issue in
14 this case.

15 I am not a lawyer, but it seems to me the interpretation of the DC Power Measuring
16 Amendment is a relatively straightforward exercise. It is important to note at the
17 outset that, prior to the parties' execution of the DC Power Measuring Amendment,
18 Qwest and McLeod had agreed that McLeod would pay the DC Power Usage
19 charge and the DC Power Plant charge based on the quantity of -48 volt capacity
20 McLeod specified in its original orders for power distribution. The Amendment
21 changed one of these charges, but did not mention the other. The Amendment

1 identifies the "DC Power Usage Charge" multiple times – but never mentions the
2 "Power Plant" charge, which is a separate charge reflected in the Exhibit A to the
3 parties' interconnection agreement. Only a strained interpretation of this plain
4 language could yield the result McLeod seeks in this case, and that is exactly what
5 the dozens of pages of testimony filed by McLeod in this case provide.

6 McLeod now claims that the DC Power Measuring Amendment changes the Power
7 Plant charge, notwithstanding the absence of any language supporting such a
8 claim. McLeod also now claims that McLeod believed that the DC Power
9 Measuring Amendment changed the Power Plant charge before it executed the
10 DC Power Measuring Amendment. The only support for such a belief is provided,
11 strangely enough, by McLeod's retained expert witnesses, who are not employees
12 of McLeod and who did not participate in the negotiations for or execution of the
13 DC Power Measuring Amendment. As will be discussed later in this testimony, it is
14 unlikely that actual employees of McLeod could credibly testify that they held this
15 belief prior to entering the Amendment, because internal McLeod documentation
16 establishes to the contrary and because Qwest made it abundantly clear through
17 the Change Management Process (CMP) and the Qwest Product Catalog (PCAT)
18 exactly what charge would be impacted by the DC Power Measuring Amendment.
19 Indeed, a McLeod employee actually participated in some of the CMP meetings
20 relating to the DC Power Measuring Amendment.

21 In connection with those meetings, more than a year before McLeod accepted the
22 Amendment, Qwest made McLeod aware of documents addressing Qwest's

1 position on the precise question of whether the DC Power Measuring Amendment
2 affects the DC Power Plant charge. The language of the Amendment seems clear,
3 and Qwest made its position clear well in advance of the execution of the
4 Amendment.

5 Mr. Ashton's testimony provides further insight into the technical and engineering
6 reasons why Qwest's interpretation is reasonable. I will avoid examining those
7 issues in detail, but based on my review of the contract and the processes that led
8 to its creation and execution, McLeod's position is an after the fact challenge to the
9 DC Power Plant rate and not an interpretation of the Amendment itself.

10
11 **IV. THE POWER MEASURING AMENDMENT**

12
13 **Q. WHAT IS THE LANGUAGE IN THE DC POWER MEASURING AMENDMENT**
14 **THAT ADDRESSES HOW CHARGES WILL CHANGE AS A RESULT OF**
15 **ACTUAL POWER USAGE?**

16 **A.** The DC Power Measuring Amendment was executed with identical language in all
17 fourteen states where Qwest provides local exchange service as an incumbent,
18 including Arizona. Two provisions are key to its interpretation on this issue. First,
19 section 1.2 of the Amendment describes the process for taking power usage
20 readings. In that section, the Amendment provides that "Based on these readings,
21 if CLEC is utilizing less than the ordered amount of power, Qwest will reduce *the*

1 **monthly usage rate** to CLECs actual use.” (emphasis added). Second, Section 2
2 reads as follows:

3
4 **2.0 Rate Elements – All Collocation**

5
6 2.1 -48 Volt DC Power Usage and AC Usage Charges. Provide -48
7 volt DC power to CLEC collocated equipment and is fused at one hundred
8 twenty-five percent (125%) of request. The DC Power Usage Charge is
9 for capacity of the power plant available for CLEC’s use. The AC Usage
10 Charge is for the power used by CLEC. Both the DC Power Usage
11 Charge and the AC Usage Charge are applied on a per ampere basis.

12
13
14 2.2 The -48 Volt DC Power *Usage* Charge is specified in Exhibit A of
15 the Agreement and applies to the quantity of -48 Volt Capacity specified
16 by CLEC in its order.

17
18 2.2.1 -48 Volt DC Power *Usage* Charge – Applies on a per amp basis to
19 all orders greater than sixty (60) amps. Qwest will initially apply the -48
20 Volt DC Power Usage Charge from Exhibit A of the Agreement to the
21 quantity of power ordered by CLEC. Qwest will then determine the actual
22 usage at the power board as described in Section 1.2. There is a one (1)
23 amp minimum charge for -48 Volt DC Power *Usage*. [Italics Added].
24

25
26 **Q. PLEASE EXPLAIN HOW THIS LANGUAGE SUPPORTS QWEST’S CLAIM**
27 **THAT THE USE OF MEASURED POWER LEVELS APPLIES ONLY TO THE**
28 **POWER USAGE RATE ELEMENT AND NOT TO THE POWER PLANT RATE**
29 **ELEMENT.**

30 **A.** There are two different types of charges for DC Power: power plant and power
31 usage. The DC Power Measuring Amendment clearly mentions only the “power
32 usage rate” in section 1.2 and the “DC Power Usage Charge” in section 2, and
33 never mentions the separate “Power Plant” charge. Indeed, the term “DC Power
34 Usage Charge” appears five times in the DC Power Measuring Amendment, with

1 an additional two references to the "power usage rate" in section 1.2. Because
2 only one rate element has been explicitly identified in the Amendment, it would be
3 inconsistent with the language of the Amendment to conclude that it applies to
4 more than one element, especially a rate element that is never specifically
5 mentioned in the Amendment.

6
7 **Q. IS THE LANGUAGE OF THE AMENDMENT AND QWEST'S INTERPRETATION**
8 **OF IT CONSISTENT WITH THE WAY THE DC POWER IS DESCRIBED IN THE**
9 **PARTIES' INTERCONNECTION AGREEMENT?**

10 A. Yes. Section (D)6.6 of the interconnection agreement reads as follows:

11 -48 Volt DC Power Charge. Provides -48 volt DC power to McLeod
12 collocated equipment. Charged on a per ampere basis.
13

14 This is a general reference to the DC Power heading in Exhibit A to the
15 interconnection agreement. The Exhibit A lays out the DC Power rate elements
16 and charges as follows:

17
18 -48 Volt DC Power Usage, per Ampere, per Month
19 Power Plant, per amp

20 <60 amps	\$10.75
21 >60 amps	\$10.75
22 =60 amps	\$10.75
23 Power Usage Less Than 60 Amps, per amp	\$ 3.64
24 Power Usage More than 60 Amps	\$ 7.27

25
26

27 Section 2.2.1 of the Amendment describes how this charge will be reduced to
28 reflect actual usage "as described in section 1.2." The first sentence of section 1.2
29 notes that "the power usage rate reflects a discount from the rates for those feeds

1 greater than sixty (60) amps.” There are two different power usage charges in the
2 Exhibit A – \$7.27 for more than 60 amps, and a lower charge of \$3.64 for orders of
3 less than 60 amps. However, as noted above, the three power plant rates are all
4 identical and clearly do not reflect the discount referred to in the first sentence of
5 section 1.2. Read together with the rest of the agreement, particularly the
6 referenced language from section 1.2, the language in section 2.2.1 – again
7 referencing power *usage* and not power *plant* – can apply only to the Power
8 Usage More than 60 Amps charge on Exhibit A, not the power plant charge.

9
10 **Q. IS THERE ANY SIGNIFICANCE TO THE FACT THAT POWER PLANT**
11 **CHARGES AND POWER USAGE CHARGES BOTH COME UNDER THE**
12 **HEADING “POWER USAGE”?**

13 **A.** No. First, Sections 2.2 and 2.2.1 of the DC Power Measuring Amendment provide
14 only that the “-48 Volt DC Power Usage Charge” is affected by measured usage.
15 This reference is in the singular, which indicates that only one charge is affected.
16 The references to the “power usage rate” and the “monthly usage rate” in section
17 1.2 are similarly phrased in the singular. McLeod’s interpretation requires altering
18 each occurrence of this language to read in the plural: “-48 Volt DC Power Usage
19 Charges” and “monthly usage rates.” Moreover, there is no charge associated with
20 the heading “-48 Volt DC Power Usage, per Ampere, per Month” on the Exhibit A.
21 The only charges for power usage are associated with the elements “Power Usage
22 Less Than 60 Amps, per Amp” and Power Usage More Than 60 Amps, and the DC

1 Power Measuring Amendment clearly does not alter the rate for "Power Usage
2 Less than 60 Amps".

3
4 Second, Section (A)3.28 of the underlying interconnection agreement between
5 Qwest and McLeod provides that headings have no force or effect in the
6 interpretation of the agreement:

7
8 (A)3.28 HEADINGS OF NO FORCE OR EFFECT

9 The headings of Sections of this Agreement are for convenience of
10 reference only, and shall in no way define, modify or restrict the meaning
11 or interpretation of the terms or provisions of this Agreement.
12

13 McLeod's interpretation of the Amendment would void this provision of the
14 interconnection agreement. The reference to "48 Volt DC Power Usage, per
15 Ampere, per Month" in Exhibit A is clearly a "heading", not a separate rate element,
16 and as such should not be read to have any effect on the language of the
17 Amendment. At page 9 of his testimony Mr. Starkey attempts to minimize this
18 language of the interconnection agreement by referring to this heading as a rate
19 "grouping", but I see no real difference between these terms. Because no charges
20 are associated with "48 Volt DC Power Usage, per Ampere, per Month", it is clearly
21 a heading.
22

23 **Q. IN PROCEEDINGS IN OTHER STATES MCLEOD HAS ARGUED THAT THE**
24 **AMENDMENT MODIFIES THE "POWER PLANT" CHARGE BECAUSE**
25 **SECTION 2.1 OF THE AMENDMENT DEFINES "DC POWER USAGE CHARGE"**

1 **TO BE "FOR THE CAPACITY OF THE POWER PLANT AVAILABLE FOR**
2 **CLEC'S USE". DO YOU AGREE?**

3 A. No. McLeod's interpretation is problematic for several reasons. First, Section 2.1
4 of the Amendment is a general, contextual section which does not identify the
5 rights and obligations of the parties. It is Section 2.2.1 which discusses the
6 specifics of how power measuring applies. Second, this interpretation is
7 inconsistent with the references to power usage rates and charges in section 1.2
8 and 2.2.1 of the Amendment. Further, McLeod's interpretation is inconsistent with
9 McLeod's own advocacy. McLeod's interpretation of Section 2.1 would require that
10 Power Measuring applies *only* to Power Plant, a position that even McLeod does
11 not take. Finally, Mr. Ashton's testimony establishes that the capacity of the power
12 plant available for CLEC's use continues to be the ordered amount, regardless of
13 usage. Thus, reading the agreement as a whole, the mere mention of power plant
14 in the amendment does not necessarily mean that the rate is affected by the Power
15 Measuring Amendment.

16
17 **Q. IS QWEST'S INTERPRETATION CONSISTENT WITH INFORMATION MADE**
18 **AVAILABLE TO ALL CUSTOMERS, INCLUDING MCLEOD, THROUGH THE**
19 **PRODUCT CATALOG ON THE QWEST WEBSITE?**

20 A. Yes. Attached, as Exhibit WRE_1, is a copy of the Collocation Direct Current (DC)
21 Power Overview as it appeared on the Wholesale Products and Services portion of
22 the Qwest.com website at the time McLeod executed the Amendment and many
23 months prior. Page 1 of the overview plainly distinguishes between power plant

1 capacity and usage charges and, in the "greater than 60 amps" usage description,
2 notes that "Qwest will adjust the monthly usage rate based upon the actual usage
3 on a going forward basis if the CLEC has opted into DC Power Measurement."
4 The overview mentions nothing about reducing the power plant capacity charge
5 based upon actual usage.
6

7 **Q. WERE CLECS INVOLVED IN THE DEVELOPMENT OF THE POWER**
8 **MEASUREMENT PRODUCT OFFERING?**

9 A. Yes. The Power Measurement offering went through the formal Change
10 Management Process (CMP) to insure that all CLECs were informed of the offering
11 and had an opportunity to offer comments and ask questions about its application.
12 The CMP resulted in the creation of the PCAT attached as Exhibit WRE_1.
13

14 **Q. PLEASE DESCRIBE HOW THIS ISSUE WAS ADDRESSED IN THE CHANGE**
15 **MANAGEMENT PROCESS.**

16 A. On May 7, 2003, pursuant to the formal CMP process, Qwest entered a Change
17 Request (CR) to introduce the Power Measurement process to the CLEC
18 community. At the May 2003 monthly CMP meeting, the CLECs requested an
19 input meeting to discuss the CR in more detail. This input meeting was held on
20 June 5, 2003. Throughout the summer of 2003, a status report on the CR was
21 provided to CLECs at the monthly CMP meetings. At the September monthly CMP
22 meeting, CLECs requested another input meeting to further discuss the details of
23 the CR in more detail.

1 Accordingly, an *ad hoc* meeting was scheduled and held on October 8, 2003 with a
2 follow-up additional ad hoc meeting held on October 20, 2003. Throughout the
3 process, multiple redline versions of the Power Measurement language were made
4 available to the CLECs as discussions progressed. The end result of the process
5 was the final approved language incorporated into the Collocation Direct Current
6 (DC) Power Overview on November 18 and implemented on December 23rd.

7
8 **Q. WERE THERE ADDITIONAL EXCHANGES OF INFORMATION AND NOTICES**
9 **BEYOND THE MONTHLY CMP AND AD HOC MEETINGS?**

10 A. Yes. As a part of the CMP process, CLECs submit questions via the CMP website
11 and ask for Qwest responses. One CLEC, Allegiance, formally submitted a
12 question requesting clarification on what specific DC power rate elements were to
13 be impacted by Power Measuring Amendment. Significantly, Allegiance's
14 interpretation of the Power Measuring Amendment at that time was consistent with
15 Qwest's interpretation in this proceeding. The Allegiance question and the Qwest
16 response are attached as Exhibit WRE_2. Qwest's response to Allegiance states
17 very clearly that only the power usage charge was affected, the power plant charge
18 was not. All CLECs - including McLeod - were notified that Qwest's response to
19 the Allegiance question was available on the public CMP website as of October
20 2003. McLeod admitted in Utah that these documents were easily accessible on
21 the Qwest website¹

¹ Utah transcript, Page 43, lines 1-6.

1 **Q. DID MCLEOD PARTICIPATE IN THESE MEETINGS?**

2 A. Yes, McLeod participated in these meetings. Stephanie Prull of McLeod attended
3 the 5/21/03 meeting where the DC Power Measuring Amendment topic was first
4 introduced, as well as the monthly CMP meetings for June, July, August,
5 September and October where status for the DC Power Measuring Amendment
6 CR was provided to the CLECs.² McLeod apparently chose not to participate in
7 any of the three *ad hoc* meetings where the subject was discussed in detail.

8

9 **Q. WAS INFORMATION REGARDING THE CHANGE REQUEST AVAILABLE TO**
10 **MCLEOD EVEN THOUGH IT CHOSE NOT TO ATTEND THE *AD HOC* POWER**
11 **MEASUREMENT MEETINGS?**

12 A. Yes.³ Many notifications were made to all CLECs including McLeod. In addition to
13 being notified about all meetings on the issue, on September 8, 2003 all CLECs
14 participating in CMP were notified that redline documents related to DC Power
15 Measuring Amendment CR had been posted to the CMP Document Review Site,
16 which was open and available to McLeod. On October 6, 2003 all CLECs were
17 notified that Qwest's responses to comments posted on the CMP Document
18 Review Site were available for CLEC review. This included the Qwest response to
19 the Allegiance question discussed previously. On October 10, 2003 all CLECs
20 were informed that the DC Power Measuring Amendment CR implementation was
21 on hold and another *ad hoc* meeting was scheduled for October 10th. On

² Utah Transcript, Page 40, lines 19- Page 41, line 3.

1 November 18, 2003 all CLECs were notified that a revised version of the DC
2 Power Measuring Amendment offering language, which included input from the ad
3 hoc meetings, was available for review. Finally, on December 9, 2003 all CLECs
4 were notified that the offering language would be implemented on December 23,
5 2003. The notices to the CLECs all contained an Internet link to allow for easy
6 access to all relevant documents.

7
8 **Q WERE MCLEOD EMPLOYEES ON THE DISTRIBUTION LIST FOR THE**
9 **NOTICES LISTED ABOVE?**

10 A. Yes. According to Qwest's records, the above notices were sent to 16 employees
11 at McLeod: Tami Spocogee, William Haas, Jennifer Kennicutt, J. Knoploh, Todd
12 Lechtenberg, Diane Bowers, Jeff Kramarczyk, Joan Eisenhart, Leo Lund, Lana
13 Bendixsen, John Taylor, Luann Harzen, Stephanie Prull, Sue Sedrel, Thomas
14 Jenkins and Joy Heitland.

15
16 **Q. DOES MCLEOD AGREE THAT IT IS IMPORTANT TO MONITOR THE CMP**
17 **PROCESS?**

18 A. Yes, McLeod has previously testified in proceedings on the identical Amendment in
19 Iowa and that McLeod regularly participates in industry forums and discussions
20 with Qwest regarding products and services that Qwest will offer to the industry,
21 and actively attempts to stay abreast of pertinent information. (Starkey Iowa

³ Utah transcript, Page 43, lines 1-6.

1 Rebuttal, page 5, lines 16-24). In Utah, McLeod further acknowledged that it
2 monitors CMP and would have been involved if it was important to McLeod.⁴

3
4 **Q. MCLEOD HAS ARGUED IN OTHER PROCEEDINGS THAT IT SOUGHT AN**
5 **AMENDMENT WITH THE “EXPRESS” GOAL TO BE BILLED FOR POWER**
6 **BASED ON WHAT IT ACTUALLY USES. DID MCLEOD EXPRESS THAT GOAL**
7 **TO QWEST?**

8 A. No, McLeod never shared their intent regarding the effect of the Amendment with
9 Qwest prior to its execution. This alone is significant given the substantial amounts
10 of money at issue. It would have taken little effort by McLeod to discuss the matter
11 with Qwest, or review the PCAT, or review the CMP process. Given the
12 importance McLeod places on DC power charges,⁵ a reasonably prudent carrier in
13 their position would probably do all three, any one of which would have made it
14 obvious to McLeod that only the usage rate would be affected by the Amendment.

15
16 In fact, the notion that obtaining “as-measured” billing for DC power plant charges
17 was McLeod’s express goal is belied by the fact that McLeod acknowledged in
18 Iowa that the persons charged with negotiating and obtaining the DC Power
19 Measuring Amendment were instructed to make sure that the DC Power
20 Measuring Amendment did not result in potentially increased power charges, as

⁴ Utah Transcript, Page 42, lines 10-17 and Page 43, lines 1-6.

⁵ Utah transcript, page 42, line 13-17.

1 had been the case in a similar agreement negotiated in Michigan.⁶ In reviewing
2 the documents produced in discovery in this case, I found no evidence that
3 McLeod even expressed to Qwest the supposed goal of avoiding the situation they
4 faced in Michigan. Regardless, this evidence shows at least two things: (1) in
5 negotiating the DC Power Measuring Amendment, McLeod was not focused on
6 obtaining "as-measured" billing for the power plant charge, but on avoiding the
7 Michigan problem; and (2) that at least internally, McLeod considered the issues
8 surrounding DC Power charges to be sufficiently significant and important to them,⁷
9 because they had previously participated in DC power charge negotiations in other
10 states prior to the 2004 amendment in discussion here⁸, and had instructed their
11 employees to manage their negotiations with Qwest to reflect the lessons learned
12 in those negotiations. These facts underscore the prudence of a reasonable
13 investigation into the publicly available documents and industry discussions
14 surrounding the Amendment.

15
16 **Q. HAS MCLEOD PROVIDED INFORMATION IN A DISCOVERY REQUEST THAT**
17 **CAN HELP THIS COMMISSION ASSESS WHAT MCLEOD'S INTENT WAS AT**
18 **THE TIME IT ENTERED INTO THE POWER AMENDMENT?**

19 **A.** Yes. In response to a discovery request in McLeod provided a spreadsheet it
20 developed over the three weeks prior to entering into the Amendment. This

⁶ Iowa Transcript p. 467.

⁷ Utah transcript, page 42, lines 10-17

1 spreadsheet applies to all states. Attached, as Exhibit WRE_3, is copy of that
2 spreadsheet as it existed in July/August 2004. Exhibit WRE_4 is the only other
3 version of that spreadsheet, which appears to have been populated and saved in
4 August 2005. Significantly in both the initial spreadsheet and the subsequent
5 spreadsheet, McLeod does *not* include any estimated or calculated savings related
6 to Power Plant Charges. Neither of the spreadsheets contains any columns
7 pertaining to such charges.⁹ In light of these spreadsheets, the only reasonable
8 conclusion that can be drawn is that, at the time it entered the Amendment,
9 McLeod had no intent or belief that the Power Plant Charge would be impacted by
10 the Amendment.

11
12 **Q. IS IT POSSIBLE THAT THE PERSONS WHO PUT TOGETHER THE SPREAD**
13 **SHEET WERE UNAWARE THAT THERE ARE SEPARATE POWER PLANT**
14 **AND POWER USAGE RATES?**

15 A. No. It is my understanding that these spreadsheets were put together by McLeod
16 engineers.¹⁰ McLeod testified in Iowa that these engineers, some of whom were
17 given the responsibility for negotiating the DC Power Measuring Amendment, had
18 the Exhibit A "in front of them" when they were calculating the savings they

⁸ Utah transcript, page 42, lines 18-25.

⁹ Nor did they in other states, See, Utah transcript, page 58, line 6 – Page 59 line 17

¹⁰ Utah Transcript, Page 49, line 16 – page 50, line 2

1 expected to see.¹¹ Moreover, given that the collocation quotes that Qwest provides
2 to McLeod clearly delineate plant and usage charges, I would find it hard to believe
3 that McLeod engineers were unaware that there are both plant and usage rates.
4 Attached, as Confidential Exhibit WRE_5, is a copy of a collocation price quote
5 provided to McLeod in May 2003, several months prior to the signing of the
6 amendment. The second page of the quote provides quotes for the monthly
7 recurring charges and has separate quotes for DC Power Plant and DC Power
8 Usage.

9
10 **Q. WHAT HAS MCLEOD STATED IN OTHER PROCEEDINGS REGARDING ITS**
11 **INTERPRETATION OF THE AMENDMENT?**

12 A. In both the Utah and Iowa proceedings, McLeod acknowledged that it was only
13 after signing the Amendment, in fact many months after signing the Amendment,
14 that it first began to interpret the language in the Amendment in the manner that it
15 is proposing in this proceeding.¹²

16
17 **Q. COULD THIS HELP EXPLAIN WHY MCLEOD DID NOT FILE A FORMAL**
18 **DISPUTE WITH QWEST UNTIL SEPTEMBER 2005?**

19 A. Yes. McLeod did not notify Qwest that it was disputing the billing until nearly a
20 year after the Power Measuring went into effect. This, despite the fact. Section
21 (A)3.4.2 of the Parties' interconnection agreement states:

¹¹ Iowa Transcript, Page 453, lines 18-22.

1
2 (A)3.4.2 Should McLeod dispute, in good faith, any portion of the
3 monthly billing under this Agreement, McLeod will notify
4 USW in writing within thirty (30) calendar days of the receipt
5 of such billing, identifying the amount, reason and rationale
6 of such dispute. McLeod shall pay all amounts due. Both
7 McLeod and USW agree to expedite the investigation of any
8 disputed amounts in an effort to resolve and settle the
9 dispute prior to initiating any other rights or remedies.
10 Should the dispute be resolved in McLeod's favor and the
11 resolved amount did not appear as a credit on McLeod's
12 next invoice from USW, USW will reimburse McLeod the
13 resolved amount plus interest from the date of payment.
14 The amount of interest will be calculated using the late
15 payment factor that would have applied to such amount had
16 it not been paid on time. Similarly, in the event McLeod
17 withholds payment for a disputed charge, and upon
18 resolution of the matter it is determined that such payments
19 should have been made to USW, USW is entitled to collect
20 interest on the withheld amount, subject to the above
21 provisions.
22
23
24

25 **Q. TO THE EXTENT THAT MCLEOD HAD REQUESTED AN AMENDMENT TO**
26 **PROVIDE FOR AN "AS CONSUMED" RATE FOR THE POWER PLANT**
27 **ELEMENT, WOULD QWEST HAVE BEEN WILLING TO ENTER INTO SUCH AN**
28 **AMENDMENT?**

29 A. No, Qwest would not have been willing to enter into such an amendment. Such an
30 amendment was never offered or even considered by Qwest. As discussed below,
31 Qwest offers other power options that allow a CLEC to reduce their power plant
32 charge if they choose to do so. Thus, an Amendment to affect the power plant
33 charge as McLeod wants makes no sense.
34

1 **Q. HAS MCLEOD BEEN HARMED IN ANY WAY BY ENTERING INTO THE**
2 **AMENDMENT?**

3 A. Not at all. McLeod has received a measured power usage rate, which is exactly
4 what was intended by the Amendment. McLeod has received the benefit of the
5 terms of the contract and the Amendment and as a result has experienced
6 significant power usage savings.¹³ In order to obtain these savings, McLeod gave
7 up nothing and made no additional promises.¹⁴ McLeod's attempt to force a much
8 broader interpretation, and receive benefits it did not bargain for, should be
9 rejected.

10

11 **Q. ARE ANY OTHER CARRIERS ADVANCING THE SAME INTERPRETATION OF**
12 **THE POWER MEASURING AMENDMENT AS MCLEOD?**

13 A. No. Approximately 50 carriers across the Qwest region have this same power
14 measuring language in their interconnection agreements or in amendments to their
15 interconnection agreements with Qwest. No other carrier has disputed the power
16 plant charges or advanced the same interpretation of this Amendment as McLeod

17

18

¹³ McLeod's witness Spocogee estimated McLeod's actual monthly power usage savings region wide from the Power Measuring Amendment to be approximately \$162,000 per month, Utah Transcript page 62, lines 19-23.

¹⁴ Utah Transcript, Page 63, lines 20-24.

1

V. QWEST DC POWER OFFERINGS

2 **Q. PLEASE DESCRIBE THE QWEST PRODUCT OFFERINGS RELATED TO DC**
3 **POWER.**

4 A. Qwest provides DC Power cabling, which is not at issue in this proceeding, along
5 with the following DC power offerings that I will describe below:

6

7 • -48 Volt DC Power Capacity

8 • -48 Volt Power Usage

9 • DC Power Measurement

10 • DC Power Reduction

11 • DC Power Restoration

12

13 These power offerings have been designed to offer CLECs flexibility in managing
14 their DC power requirements while at the same time allowing Qwest to manage the
15 overall power requirements of its central offices.

16

17 **Q. PLEASE DESCRIBE THE QWEST RATE ELEMENTS RELATED TO -48 VOLT**
18 **DC POWER CAPACITY AND POWER USAGE ELEMENTS.**

19 A. Qwest's DC Power offering, which provides -48 volt DC power to CLECs'
20 collocation equipment, has two separate rate elements: one of the rate elements is
21 for the power plant and the other is for power usage. The Power Plant charge
22 recovers the fixed costs of the power plant that is available for a CLEC's use. This

1 charge is applied on a per amp basis based upon the quantity of -48 volt DC power
2 specified in a CLEC's collocation order. For example, if a CLEC were to order a
3 power feed of 100 Amps, it would be billed for the 100 Amps as a power plant
4 charge.

5
6 The second rate element is the usage charge which recovers the cost for power
7 the CLEC uses. Qwest applies the appropriate -48 volt DC power usage charge to
8 the quantity of power ordered. For orders greater than 60 amps CLECs have the
9 option of opting into the DC Power Measurement offering which is described
10 below.

11
12 **Q. PLEASE DESCRIBE THE DC POWER MEASUREMENT OPTION.**

13 A. The Power Measurement option is offered through the Power Measuring
14 Amendment and provides a CLEC with the opportunity to adjust its power
15 consumption usage charges to reflect actual usage, while at the same time
16 maintaining the power capacity it originally ordered. Under the DC Power
17 Measurement offering, Qwest will measure power usage on feeds greater than 60
18 amps on a semi-annual basis provided that an agreement or amendment has been
19 signed between Qwest and the CLEC. Based on these measurements, Qwest will
20 apply the monthly DC power usage rate to the CLEC's actual power usage, rather
21 than to the ordered level. Qwest will also take measurements within 30 calendar
22 days of a written request by a CLEC after installation or removal of equipment.

1 Qwest will perform a maximum of four readings per year on a particular collocation
2 site. The Power Measurement option does not affect the Power Plant charge.

3
4 **Q. PLEASE DESCRIBE THE POWER REDUCTION OFFERING.**

5 A. Power Reduction is an option that allows a CLEC to change its power capacity by
6 reducing ordered amps on a primary and/or secondary feed. The Power
7 Reduction option is offered through a different Amendment than the Power
8 Measuring Amendment. Power Reduction can either be ordered "With
9 Reservation" or "Without Reservation". DC Power Reduction With Reservation
10 allows a CLEC to reduce ordered amps on a secondary feed to zero while at the
11 same time reserving the fuse position on the Power Distribution Board. The
12 monthly recurring maintenance charge for this reservation does not reserve power,
13 but does hold the power cabling and fuse positions in place for potential future
14 power restoration requests. Power Reduction Without Reservation allows a CLEC
15 to reduce the power on primary and secondary feeds down to a minimum of 20
16 amps. Billing for the initial power ordered at the collocation site will be modified to
17 reflect the reduced amount of power.

18
19 **Q. PLEASE DESCRIBE THE POWER RESTORATION OPTION.**

20 A. The DC Power Restoration option allows a CLEC to restore previously reduced DC
21 power levels to a level less than or equal to the original DC power level ordered. If
22 a CLEC requests Restoration Without Reservation, Qwest will restore the fuse and
23 breaker position at the power source, if available. If capacity is not available at the

1 original power board, the CLEC will be connected to an alternate power source. In
2 situations where secondary feeds were reduced to zero and the fuse positions
3 were reserved, if Qwest is unable to provide the requested power restoration of the
4 held secondary feed(s) due to power capacity exhaust, Qwest will refund all the
5 collected power maintenance charges mentioned previously. A Quote Preparation
6 Fee for performing a feasibility study and producing a quote is assessed for power
7 restoration in addition to a power restoration charge if the power is restored.
8

9 **Q. WHY DOES QWEST OFFER THESE OPTIONS?**

10 A. As mentioned previously, these offerings have been designed to offer CLECs
11 flexibility in managing their DC power requirements. Through these offerings,
12 CLECs can manage their power charges as their power needs change over time.
13 With the Power Measurement offering a CLEC can reduce power usage charges if
14 consumption is less than ordered. With the Power Reduction offering, a CLEC can
15 reduce the amount of power capacity it has available. Finally, Power Restoration
16 allows for reduced capacity to be restored at some point in the future.
17

18 **Q. WERE THESE OTHER OFFERINGS AVAILABLE AT THE TIME MCLEOD**
19 **SIGNED THE DC POWER MEASURING AMENDMENT?**

20 A. Yes. McLeod protests that the Power Reduction and Power Restoration offering
21 fail to provide as much relief as it seeks now in this proceeding. These offerings,
22 however, represent the full extent of Qwest's willingness to reduce the Power Plant
23 charge. If CLECs could reduce the Power Plant charge to measured levels

1 through the DC Power Measuring Amendment, these offerings would be largely
2 superfluous and unnecessary. The only way to reconcile the fact that the Power
3 Reduction and Power Restoration offerings were offered to CLECs at the same
4 time the DC Power Measuring Amendment was offered, is to conclude that those
5 elements covered by the Power Reduction and Power Restoration offerings are not
6 covered by the DC Power Measuring Amendment. In my view, the existence of
7 these offerings makes it very clear what Qwest's intent was with regard to the DC
8 Power Measuring Amendment.
9

10 **VI. REBUTTAL OF STARKEY AND MORRISON TESTIMONY**

11 **Q. ON PAGES 7 OF HIS TESTIMONY, MR. STARKEY PRESENTS TABLES**
12 **DEPICTING AN EXAMPLE OF THE DOLLAR IMPACT OF EACH PARTY'S**
13 **INTERPRETATION OF THE AMENDMENT. PLEASE COMMENT.**

14 **A.** Mr. Starkey's example demonstrates why McLeod's interpretation, in addition to
15 not complying with the Amendment language, is not logical. Under the McLeod
16 interpretation, when power usage goes from the ordered 180 amps to an actual
17 usage of 24 amps, power plant charges are reduced from \$1,935 to \$258, yet the
18 costs Qwest incurred to provide McLeod with capacity for 180 amps have not
19 changed at all. In fact, despite the lesser actual usage, McLeod still has 180 amps
20 of power capacity available for its use if McLeod needs it. McLeod may not want
21 to continue to pay for the capacity it ordered, but the fact remains, it did order this

1 capacity and Qwest has made it available. If McLeod now decides that it doesn't
2 need all of the capacity it originally ordered, the power reduction options I
3 described previously would allow it to reduce its capacity. Instead, McLeod would
4 like to interpret the Amendment to allow for retention of the ordered capacity but
5 avoid paying for all of the capacity it has been provided.

6
7 **Q. MR. STARKEY STATES ON PAGE 9 OF HIS TESTIMONY THAT "IT SEEMS**
8 **VERY CLEAR THAT THE INTENTION WAS TO APPLY THE AMENDMENT TO**
9 **THE RATES WITHIN THE REFERENCED RATE GROUP." PLEASE**
10 **COMMENT.**

11 A. As I discussed previously, the interconnection agreement between the two parties
12 has explicit language stating that headings are not intended to be a part of or affect
13 the meaning of the agreement. The basic problem with McLeod's interpretation is
14 that the amendment refers to a power "usage charge" from Exhibit A to the
15 Amendment. The heading or "rate grouping", as Mr. Starkey refers to it, has no
16 associated rate. Given the language in the Amendment and the charges in Exhibit
17 A, Qwest's interpretation is the only logical interpretation. Further, given that all
18 available evidence regarding McLeod's actual intent clearly indicates that McLeod
19 did not intend to see Power Plant charges reduced, Mr. Starkey's testimony rings
20 hollow.

21

1 Q. ON PAGE 15 OF HIS TESTIMONY MR. STARKEY ARGUES THAT, "TO THE
2 EXTENT QWEST ASSESSES (OR HAS IN THE PAST ASSESSED) THE
3 POWER PLANT CHARGE BASED ON THE NUMBER OF AMPS INCLUDED IN
4 A CLEC'S ORIGINAL ORDER FOR POWER CABLE(S)(AS OPPOSED TO ITS
5 ACTUAL USAGE), QWEST'S APPLICATION WOULD BE CONTRARY TO
6 COST CAUSATIVE REQUIREMENTS INHERENT IN THE FCC'S TOTAL
7 ELEMENT LONG RUN INCREMENTAL COST (TELRIC) RULES." DO YOU
8 AGREE?

9 A. Absolutely not. Mr. Starkey provides no basis for this claim. Moreover, this
10 argument is not an attack on the DC Power Measuring Amendment, but on the
11 Power Plant rate itself. McLeod has not challenged the Power Plant rate in this
12 proceeding – indeed, McLeod paid the Power Plant rate at the Commission-
13 approved ordered levels for several years before ever entering the DC Power
14 Measuring Amendment.

15
16 Q. HAS MCLEOD RECOGNIZED THAT QWEST INCURS COSTS FOR DIFFERENT
17 POWER RATE ELEMENTS IN DIFFERENT MANNERS?

18 A. Yes, Mr. Starkey explained in his rebuttal testimony in Iowa (page 11) that he
19 thinks "it is important to break Qwest's central office power system into the three
20 distinct components detailed below in order to distinguish between the manner by
21 which Qwest incurs cost relative to each." Mr. Starkey then sets out a table
22 showing the rate elements and rates for power plant, power delivery, and power
23 usage. Thus, early on in this proceeding, Mr. Starkey recognized that Qwest does

1 indeed incur costs differently, and structure its rates differently, for each of those
2 three "distinct" elements.

3
4 **Q. HAS MCLEOD INCLUDED THAT TESTIMONY HERE IN ARIZONA?**

5 A. No, that portion of Mr. Starkey's rebuttal testimony is curiously absent. This may
6 be because that testimony from Mr. Starkey supports Qwest's contention regarding
7 the differences between the various rate elements.

8
9 **Q. ON PAGE 19 OF HIS TESTIMONY MR. STARKEY ARGUES THAT THE POWER
10 REDUCTION OPTION IS NOT A GOOD ALTERNATIVE TO THE POWER
11 MEASUREMENT OPTION. DO YOU AGREE?**

12 A. No. As noted above, the Power Reduction offering makes clear Qwest's intent
13 with regard to the DC Power Measuring Amendment. Apart from contractual
14 issues, however, the existence of the Power Reduction Amendment represents an
15 opportunity for McLeod to reduce some of its Power Plant costs. McLeod's
16 dismissal of the Power Reduction option it is not a reasonable position. McLeod
17 would prefer to have the maximum capacity available but not be responsible for the
18 costs associated with providing this capacity. Under the Power Reduction option,
19 McLeod could avoid paying for unneeded capacity, but it would not have the
20 capacity available should it require it. Through its interpretation of the Power
21 Measuring Amendment McLeod is attempting to have the guarantee of available
22 power, without paying for that availability.

23

1 From Qwest's perspective, both Power Reduction and Power Measurement are
2 useful options depending on the needs of the CLEC. With Power Measurement, a
3 CLEC can reduce its power usage charges while at the same time maintaining its
4 power capacity should it need it. The cost to the CLEC in choosing this alternative
5 is to continue to pay for the ordered capacity. On the other hand, should a CLEC
6 choose to reduce its capacity through Power Reduction, it can reduce its capacity
7 charge. The downside to the CLEC with this alternative is that the CLEC no longer
8 has the higher capacity available to it. Qwest is willing to provide a variety of
9 options to meet the needs of individual CLECs, but is not willing, nor did it do so
10 through the DC Power Measuring Amendment, to provide an option that allows
11 CLECs to avoid compensating Qwest for the capacity the CLEC ordered.

12
13 **Q. AT PAGES 19 OF HIS TESTIMONY MR. STARKEY STATES THAT "THE**
14 **POWER REDUCTION AMENDMENT WOULD REQUIRE MCLEOD TO INCUR**
15 **LARGE RE-ARRANGEMENT FEES TO RE-ARRANGE POWER DISTRIBUTION**
16 **FACILITIES THAT IT DOES NOT NECESSARILY WANT TO CHANGE."**
17 **PLEASE COMMENT.**

18 **A.** Mr. Starkey's statement simply confirms my previous answer that McLeod would
19 prefer to have the maximum capacity available but not be responsible for the costs
20 associated with providing this capacity.

21

1 Q. ON PAGE 53 OF HIS TESTIMONY MR. MORRISON DISCUSSES THE HIGH
2 COST OF POWER REDUCTION. DOES THIS LIMIT THE VALUE OF THE
3 POWER REDUCTION OPTION TO CLECS?

4 A. No. During discovery in Colorado, McLeod asked Qwest how many carriers had
5 availed themselves of the Qwest Power Reduction offering, the cost of the
6 reduction and net change in amperage related to the reduction. Attached, as
7 Exhibit WRE_6, is a data request response that Qwest provided. I have
8 summarized the information in the following table:
9

POWER REDUCTION SAVINGS

Sites	Cost	Amps Reduced	Monthly Savings	Payback In Months
1	\$861	120	\$736.80	1.2
2	\$861	120	\$736.80	1.2
3	\$861	120	\$736.80	1.2
4	\$861	300	\$1,842.00	0.5
5	\$1,944	80	\$491.20	4.0
6	\$972	120	\$736.80	1.3
7	\$972	120	\$736.80	1.3
Total	\$7,332	980	\$6,017.20	1.2

10
11

12 In total, 7 carriers in Colorado have made use of Qwest's Power Reduction offering
13 to reduce amperage by a total of 980 amps. The total cost of the 9 reductions was
14 \$7,332. In all cases, the monthly savings associated with the reductions offset the
15 cost in 4 or less months. In some cases, the jobs paid for themselves in the first
16 month. On average, the costs were offset in 1.2 months. The same principles
17 would apply to similar power reduction orders placed in Arizona. Mr. Morrison's

1 claims about cost are clearly undermined by the actual experience of other
2 carriers.

3
4 **Q. ON PAGES 54-56 OF HIS TESTIMONY MR. MORRISON DISCUSSES THE**
5 **POSITIONS TAKEN BY QWEST COMMUNICATIONS CORPORATION (QCC) IN**
6 **AN ILLINOIS PROCEEDING. MR. STARKEY CLAIMS THAT QCC EXPRESSED**
7 **THE SAME CONCERNS THAT HE HAS WITH REGARDS TO QWEST POWER**
8 **REDUCTION AMENDMENT. PLEASE COMMENT.**

9 A. The proceeding that Mr. Morrison refers to differs in several key aspects from the
10 issues related to the Qwest Power Reduction offering. First the Illinois case
11 involves a proposal by AT&T/SBC that would require CLECs to fuse at a level not
12 more than 200% of the CLEC's actual usage. This is really a re-fusing proposal,
13 not a power reduction offer. Critically, the re-fusing proposal would be mandatory,
14 unlike the Qwest power reduction offering which is a voluntary offering that CLECs
15 can choose to avail themselves of or not. Second, the SBC Illinois proposal would
16 require frequent mandatory re-fusing as usage levels change. Finally, the power
17 rate structure in Illinois is a blended rate which combines both power plant and
18 power usage. Trying to compare this proposal with the Qwest Arizona rate
19 structure which has separate elements for power plant and usage is a classic case
20 of apples and oranges.

21
22 In the Illinois case, Ms. Hunnicutt-Bishara expressed three concerns about the
23 mandatory re-fusing: legal, financial and operational. Ms. Hunnicutt-Bishara's

1 legal concern had to do with compliance with the Illinois Administrative Code, a
2 code that is not relevant to Arizona and thus not an issue here. Ms. Hunnicutt-
3 Bishara's financial concern had to do with the fact that, under the SBC proposal, as
4 I mentioned above, CLECs must constantly re-fuse as power usage changes,
5 forcing CLECs to constantly incur costs for re-fusing. Again, this is a far cry from
6 Qwest's power reduction offering. Ms. Hunnicutt-Bishara's final concern, an
7 operational concern, had to do with the limitation of fusing to 200% of usage levels,
8 a limitation that is not associated with Qwest's Power Reduction offering. None of
9 Ms. Hunnicutt-Bishara's concerns that Mr. Morrison cites have anything to do with
10 the Power Reduction Offering that Qwest offers CLECs.

11
12
13 **VII. SUMMARY/CONCLUSION**

14 **Q. PLEASE SUMMARIZE YOUR TESTIMONY.**

15 A. This complaint centers on the interpretation of language in a contract amendment.
16 In Qwest's view, the language is clear that the power Measuring Amendment
17 affects only the DC Power Usage charge, not the Power Plant charge. Qwest's
18 interpretation is consistent with the way the rate elements are broken out in the
19 Exhibit A to the interconnection agreement. It is also consistent with the
20 information that is and was available to CLEC customers on Qwest's website.
21 Finally, McLeod's interpretation is not only inconsistent with all of the objective
22 indicators of intent discussed above, it is also inconsistent with McLeod's own

1 internal analysis prepared in connection with its decision to enter into the
2 Amendment.

3

4 Qwest respectfully requests that the Commission rule in favor of Qwest's
5 interpretation of the Amendment language.

6

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

8 A. Yes it does.

BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISSIONERS

JEFF HATCH-MILLER, Chairman
WILLIAM A. MUNDELL
MARC SPITZER
MIKE GLEASON
KRISTIN MAYES

**IN THE MATTER OF McLEODUSA
TELECOMMUNICATIONS SERVICES, INC.,**

Complainant,

vs

QWEST CORPORATION

Respondent

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)
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) **DOCKET NO. T-03267A-06-0105**
) **DOCKET NO. T-01051B-06-0105**
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EXHIBITS

OF

WILLIAM R. EASTON

ON BEHALF OF

QWEST CORPORATION

JUNE 22, 2006

Purpose of the Direct Current (DC) Power Download Document

This document describes Direct Current (DC) Power rate elements that are associated with all Central Office Collocation. Next this document will describe the optional DC Power Measurement process which applies to Central Office Collocations. Finally this document explains the DC Power Reduction and DC Power Restoration processes and the associated rate elements.

DC Power Rate Element Descriptions

The following language applies in all states, where separate charges for DC Power Capacity and DC Power Usage have been established. Additional charges may also apply per Exhibit A of your Interconnection Agreement (ICA).

-48 Volt DC Power Capacity and Usage Charges – Charges for –48 volt DC power to your collocated equipment, which is fused at a minimum of 125% of the request. The Capacity Charge recovers the cost of the capacity of the power plant available for your use. The Usage Charge recovers the cost of the power used. Both the Capacity Charge and the Usage Charge are applied on a per amp basis.

-48 Volt Capacity Charge – The –48 volt Capacity Charge is specified in Exhibit A and applies to the quantity of –48 volt DC power Capacity specified on your order.

-48 Volt DC Power Usage Charge – The –48 volt DC Power Usage Charge is specified in Exhibit A and applies to the quantity of –48 volt DC power capacity specified on your order. Different rates may apply; if specified in Exhibit A.

- a) –48 volt DC Power Usage Charge – Applies on a per amp basis to all orders of greater than 60 amps. Qwest will initially apply the –48 volt DC Power Usage Charge from Exhibit A to the quantity of power ordered. There is a one amp minimum charge for –48 volt DC Power Usage for CLECs that have opted into the DC Power measurement. Qwest will adjust the monthly usage rate based upon the actual usage on a going forward basis if the CLEC has opted into DC Power measurement.
- b) –48 volt DC Power Usage Charge – Applies for your orders of 60 amps or less of –48 volt DC power usage. Qwest will apply the –48 volt DC Power Usage Charge in accordance with Exhibit A for the quantity of power ordered. Qwest will not adjust the billed usage based upon actual usage.

The following rate elements would apply in North Dakota, Oregon and South Dakota, where separate charges for Capacity and Usage have not been established.

-48 Volt DC Power Charge – Charges for –48 volt DC power to your collocated equipment, which is fused at a minimum of 125% of your requested power. There is a single charge applied monthly on a per amp basis for the use of the power plant and the actual AC power purchased from the electric company. This charge will be assessed based on the –48 volt DC power capacity specified on your order.

Direct Current Power Measurement

The CLEC will order DC power to meet their needs with a 20-ampere (amp) per feed minimum. CLECs can order multiple feeds of DC Power, one being designated as primary and each additional as secondary feed(s). If the CLEC orders more than 60 amps, Qwest typically terminates such feeds on a power board. If the CLEC orders 60 amps or less, the power feed is typically terminated at a Battery Distribution Fuse Board (BDFB). When the CLEC orders 60 amps or less the power usage rate is based on the CLEC's ordered amount of amps and reflects a discount from the rates for power feeds requested at greater than 60 amps.

Optional DC Power Measuring for feed greater than sixty (60) amps

Qwest will measure power usage on feeds greater than 60 amps on a semi-annual basis provided an amendment has been signed between Qwest and the CLEC. Qwest will also take measurements within 30 calendar Days of a written request by the CLEC after the CLEC's installation or removal of equipment. Qwest will perform a maximum of four (4) readings per year on a particular collocation site. Based on these measurements, Qwest will adjust the new monthly usage rate to the CLEC's actual usage. Until the initial semi-annual measurement is performed, or until such time that the CLEC places or removes equipment and a written request is received from the CLEC for Qwest to take a measurement, the ordered amount will be billed to the CLEC. If the CLEC wants a measurement after the installation or removal of equipment a written request should be sent to rfsmet@qwest.com containing the central office location and the 11 digit CLEC CLLI where you want Qwest to perform the measurement. The next measurement date may be generated as a result of the CLEC's request or Qwest's routine semi-annual measurement, and billing will be adjusted back to the time of the semi-annual measurement or written request for a power measurement. CLEC wanting to utilize the DC Power Measuring process may access the Amendment at the following link <http://www.qwest.com/wholesale/clecs/amendments.html>

Direct Current Power Reduction/Restoration

The following definitions are used to describe the intent of the language in the DC Power Reduction and DC Power Restoration processes.

Deactivation eliminates a secondary feed(s) (the power cable and fuse positions are not reserved).

Reduction Without Reservation reduces the ordered amps on a primary or secondary feed(s). The reduced feed(s) must be maintained with a minimum of 20 amps.

Reduction With Reservation reduces the ordered amps on a secondary feed(s) to zero, and reserves the fuse positions of the feed(s) at the power source and cabling to the power source is left in place.

Restoration Without Reservation restores power on primary and secondary feed(s) previously reduced as part of a Reduction Without Reservation request back to the original or lesser amp value(s), with a 20 amps minimum. Restoration of a reduced secondary or primary feed(s) without reservation is contingent upon the availability of spare amps at the power source at the time the restoration request is validated.

Restoration With Reservation restores power on previously reduced and reserved secondary feed(s) to at least 20 amps or up to the original amount of amps prior to reduction. Restoration of a reduced secondary feed(s) with reservation is contingent upon the availability of capacity (i.e., spare amps) at the power source at the time the restoration request is validated.

Direct Current Power Reduction

Description

Direct Current (DC) Power Reduction will allow you to reduce the ordered amps on your primary feed and /or secondary feed(s). DC Power Reduction With Reservation will also allow you to reduce ordered amps on a secondary feed(s) to zero and reserve the fuse positions. DC Power Reduction Without Reservation will allow you to reduce the ordered amps on a primary or secondary feed(s) down to a minimum of 20 amps, eliminate or reduce the value of multiple DC power feeds or reduce the value of a single feed to 20amps.

Terms and Conditions

You must have terms and conditions for DC power ~~Power reduction-Reduction~~ in your Interconnection Agreement. If terms and conditions for DC power ~~Power reduction-Reduction~~ are not in the your Interconnection Agreement, an amendment must be negotiated before an application for this service may be submitted.

If you wish to reduce your amount of power and it will not be required for future use, Qwest will process the request as a standard augment order and not as a DC Power Reduction request. You may only request DC Power Reduction at Central Office based Collocations.

Qwest will allow you to reserve a fuse or breaker position on the power board Power Distribution Board also known as Power Board Distribution (PDB/PBD) or Battery Distribution Fuse Board (BDFB) for a recurring maintenance charge when reducing ~~at the multiple secondary feed(s)~~ to zero. The monthly maintenance charge does not reserve the ~~excess amount of power~~ but does hold the power cabling and fuse positions in place for your potential future power augment power restoration requests.

You may only submit a Collocation Application (New/Change/Augment) Form applications for DC Power Reduction for Collocation sites that have been previously accepted by you. DC Power reductions ~~Reductions are not available to for sites under construction, or for sites not previously accepted by you, will follow standard change or augment procedures and rates. Standard change or augment procedures and rates apply to sites that do not meet the conditions for DC Power Reduction.~~

You must pay 100% of the quoted non-recurring charges to Qwest within thirty (30)-calendar Days of receipt of the quote. If Qwest does not receive the payment within the thirty (30)-calendar Day period, the quote will expire and your DC Power Reduction will be canceled. You will be charged a Quote Preparation Fee (QPF) for work performed up to the point of expiration.

Before submitting a Collocation Application (New/Change/Augment) Form for DC ~~Power Reduction~~ application, your financial obligations must be current, with the exception of formally disputed charges. Your financial obligations include your payment of 100% of all non-recurring quoted charges for the ~~collocation~~ Collocation site and all applicable monthly recurring charges that are more than thirty (30)-calendar days-Days past due. DC Power Reductions cannot be canceled after submitting 100% of non-recurring charges for the DC Power Reduction.

When eliminating a secondary feed, you may purchase the option to have the power cable and fuse position held for your future use. You will be required to pay a monthly Power Maintenance Charge until such time as you notify Qwest that you wish to either reenergize the feed or to discontinue the option. You may utilize the DC Power Reduction Without Reservation process to reduce the power on primary and secondary feeds down to a minimum of 20 amps. If you reduce secondary feed(s) to zero and do not reserve the fuse positions, it is considered a deactivation.

In instances where a shortage of fuse position is imminent, Qwest reserves the right to notify you of the need to exercise your option or relinquish the fuse position to Qwest. Upon receipt of such notification, you will have the option of energizing the secondary feed to at least 20amps or returning the fuse position to Qwest within 30 calendar days of receipt of notification. Recurring billing for the Power Maintenance Charge will be eliminated the day that you energizes the feed or return the fuse position to Qwest.

When purchasing DC Power Reduction With Reservation you will be requesting the reduction of the secondary feed(s) to zero and reserving the power cable and fuse positions for potential future use. You will be required to pay a monthly Power Maintenance Charge until such time as you notify Qwest that you wish to either restore the feed or discontinue the reservation.

You are responsible for outages and/or impacts to the service and equipment, you provided, due to the reduction in DC Power.

Restoration of the desired power is contingent on if desired power and fuse position are available. In instances where a shortage of fuse positions is imminent, Qwest reserves the right to notify you of the need to exercise your option or relinquish your reserved fuse positions to Qwest. Upon receipt of such notification, you will have the option of restoring the secondary feed to at least 20 amps or returning the fuse positions to Qwest within thirty (30)-calendar Days of receipt of notification. If Qwest does not receive a response within the thirty (30)-calendar Day timeframe, Qwest will deactivate your secondary feed and return the fuse positions to Qwest. Recurring billing for the Power Maintenance Charge will be eliminated the day that you restore the feed or return the fuse positions to Qwest.

You are responsible for outages and/or impacts to your service and equipment, you provided, due to your reduction of DC Power.

If you have requested to be present during the DC Power Reduction and do not keep the appointment or do not notify Qwest 48 hours prior to the scheduled time, Qwest will charge you a minimum one hour maintenance charge plus any additional costs incurred by Qwest.

Rates

Collocation charges will be based on the information you provided to Qwest on the Collocation Application (New/Change Augment) Application form. Below is an example of additional charges that are unique to a Power Reduction Request and will be provided to you via a quote.

The nonrecurring charges that could apply:

- **Quote Preparation Fee (QPF):** The cost of charge(s) for performing a feasibility study and producing a quote for the power reduction request.
- **Power reduction-Reduction Charge:** Costs associated with reducing the fuse/breaker size. Rates are categorized in this manner based on the work involved and power distribution point (e.g., BDFB or power board). Where additional work is required such as rewiring the power leadleads at to the power source (or in some cases may require relocation of the feed(s) may be required) rates will be calculated on a Time-time and Materials-materials basis.
- **Power Restoration Charge (assessed if power is restored):** Charge associated with restoring the power cable to the power source and is contingent on if desired power and fuse position is available. Qwest will evaluate work required to perform power restoration request and provide you with a quote utilizing standard power element charges (DC power usage, labor, and cabling charges etc.) found in your Interconnection Agreement. This charge will be on an individual case basis (ICB).

The recurring charges that could apply:

- **Power Maintenance Charge:** Monthly recurring charge(s) associated with the option to hold reserve the power infrastructure from fuse positions and power cables for a secondary feed(s) in-place for your potential future needs.

Ordering

Submit a ~~Collocation~~ Collocation Application (New/Change/Augment) form ~~Form (New, Augment or Change)~~.

- The form and information on ordering Collocation can be found in the Ordering section of the ~~Collocation - General Information web page at~~ (Link italicized text to: <http://qwest.com/wholesale/pcat/collocation.html#apform>.

On the application form indicate the specific power feed(s) to be reduced, ~~(i.e., eliminate or reduce multiple feeds from 60 to 0 amps or reduce main feed from 60 to 20 amps)~~.

Under the type-Type of Order section check Augment and complete the appropriate DC Power Ordering information and - Augment sub-section. This will indicate to the Collocation Project Management Center (CPMC) that this is a request for DC Power reduction request category you should indicate that this is an Augment - DC Power Reduction request. This will indicate to the Collocation Project Management Center (CPMC) that this is a "reduce and hold" request for the power and not a standard removal.

A walkthrough will be performed prior to quote to determine the amount of work required to perform the power reduction and charges provided on the quote. Based on this evaluation of work the following pricing strategy will apply. Based on the work required to complete your DC power reduction Collocation order the following pricing strategy will apply:

- Only one QPF per application will be charged, ~~so if~~ if multiple feeds at the same collocation/Collocation space are reduced, or eliminated (i.e. main feed reduced to 20 amps and multiple feed totally reduced) you will only pay the associated power reduction charges, power maintenance fee if applicable, and one QPF.

The charge to reduce the power desired on a feed is based on the original amount of power ordered and the amount of work required to perform the reduction.

Billing

Billing from for the initial power value at the collocation/Collocation site will be modified to reflect the reduced amount upon receipt of payment for the quoted charges and will be made effective back to the date of acceptance of the DC Power Reduction Application application by the CPMC.

Direct Current Power Restoration

Description

DC Power Restoration will allow you to restore your previously reduced DC power feed(s) to a level less than or equal to your original DC power level.

Terms and Conditions

You must have terms and conditions for DC Power Restoration in your Interconnection Agreement. If the terms and conditions for DC Power Restoration are not in your Interconnection Agreement, an amendment must be negotiated before an application for this service can be submitted.

You can only request DC Power Restorations at Central Office based Collocations.

If you are requesting Restoration Without Reservation, Qwest will restore your fuse or breaker positions at the power source, if available, for your requested capacity up to the original amount. If capacity (including protector size) is not available at the original power board or BDFB you will be connected to an alternate power source and appropriate charges will apply.

Restoration With Reservation of secondary feed(s) is contingent upon power capacity. This applies when secondary feed(s) were reduced to zero and the fuse positions were reserved. If Qwest is unable to provide the requested power restoration of the held secondary feed(s) due to power capacity exhaust, Qwest will refund all collected Power Maintenance Charges.

You must pay 100% of the quoted non-recurring charges to Qwest within thirty (30)-calendar Days of receipt of the quote. If Qwest does not receive the payment within the thirty (30)-calendar Day period, the quote will expire and your DC Power Restoration will be canceled. You will be charged a QPF for work performed up to the point of expiration.

Before submitting a Collocation Application (New/Change/Augment) Form for DC Power Restoration, your financial obligations must be current, with the exception of formally disputed charges. Your financial obligations include your payment of 100% of all non-recurring quoted charges for the Collocation site and all applicable monthly recurring charges that are more than thirty (30)-calendar Days past due. DC Power Restoration cannot be canceled after submitting 100% of non-recurring charges.

If you have requested to be present during the DC Power Restoration and do not keep the appointment or do not notify Qwest 48 hours prior to the scheduled time, Qwest will charge you a minimum one hour maintenance charge plus any additional cost(s) incurred by Qwest.

Rates

Collocation charges will be based on the information you provided to Qwest on the Collocation Application (New/Change/Augment) Form. Below is an example of additional non-recurring charges that are unique to a Power Restoration request and will be provided to you via a quote.

- Quote Preparation Fee (QPF): The cost for performing a feasibility study and producing a quote for the power restoration request.
- Power Restoration Charge (assessed if power is restored): Charges associated with restoring the power are classified into two categories: 1) If the power cabling exists and the power capacity is available at the original power source, Qwest utilizes the standard power element charges. 2) If new power cabling is required to reach a new power source; Qwest will charge based on standard power Collocation augment rates.

Ordering

Submit a Collocation Application (New/Change/Augment) Form.

- The form and information for ordering Collocation can be found in the Ordering section of *Collocation – General Information* (Link italicized text to: <http://qwest.com/wholesale/pcat/Collocation.html>).

Under the Type of Order section check Augment and complete the appropriate DC Power Ordering information – Augment sub-section.

Based on the work required to complete your DC Power Restoration Collocation order the following pricing strategy will apply.

- Only one QPF per application will be charged. If secondary feed(s) at the same Collocation space are restored, you will only pay the associated power restoration charges and one QPF.

Billing

Billing for the current power value at the Collocation site will be modified to reflect the restored amount upon completion of your DC Power Restoration order.



Arizona Corporation Commission
 Docket No. T-03267A-06-0105
 Docket No. T-01051B-06-0105
 Qwest Corporation - Exhibit WRE-2
 Exhibits of William R. Easton
 June 22, 2006

PROD/PROC DOCUMENT TEMPLATE – QWEST RESPONSE

Version 4.0
 01-10-03

Qwest Response to Document In Review

Response Date: October 6, 2003
Document: Product/Process: Collocation – General Information V17.0
Original Notification Date: September 8, 2003
Notification Number: PROD.09.08.03.F.03533.Collo_General_V17.0
Category of Change: Level 4

Qwest recently posted proposed updates to *Collocation – General Information V17.0* CLECs were invited to provide comments to these proposed changes during a Document Review period from September 9, 2003 through September 23, 2003. The information listed below is Qwest's Response to CLEC comments provided during the review/comment cycle.

Resources:

Customer Notice Archive http://www.qwest.com/wholesale/cmp/review_archive.html
 Document Review Site <http://www.qwest.com/wholesale/cmp/review.html>

If you have any questions on this subject or there are further details required, please contact Qwest's Change Management Manager at cmpcomm@qwest.com.

Qwest Response to Product/Process: Collocation – General Information Comments

#	Page/Section	CLEC Comment	Qwest Response
1		<p><i>Allegiance</i> September 22, 2003 Comment: In reference to the "DC Power Rate Element Descriptions" section:</p> <p>- If a CLEC is ordering more than 60 amps, will the change from non-</p>	<p>Qwest will initiate the DC Power Reading Process without the CLEC having to amend their Interconnection Agreement or submit an order.</p>

Note: In cases of conflict between the changes implemented through this notification and any CLEC interconnection agreement (whether based on the Qwest SGAT or not), the rates, terms and conditions of such interconnection agreement shall prevail as between Qwest and the CLEC party.

The Qwest Wholesale Web Site provides a comprehensive catalog of detailed information on Qwest products and services including specific descriptions on doing business with Qwest. All information provided on the site describes current activities and process. Prior to any modifications to existing activities or processes described on the web site, wholesale customers will receive written notification announcing the upcoming change.

	<p>measured to measured be automatic or will the CLEC be required to amend their Interconnection Agreement and/or submit an order to initiate the change?</p> <p>- Page 1, paragraph 3, refers to a capacity charge; does capacity refer to the term "power plant" listed in the SGATs?</p> <p>- Per the SGAT, Oregon has only one charge, a -48 Volt DC Power Usage, per Ampere, per Month charge of \$7.52. Is OR excluded from this process? If not, would the CLEC be billed the same charge for Amps ordered as well as usage, e.g. 120 Amps @ \$7.52 and 75 (the measured reading) Amps for \$7.52.</p> <p>- I noticed that MN also has a single -48 Volt DC Power Usage, per Ampere, per Month charge. Will MN be treated the same as North Dakota, Oregon, and South Dakota?</p> <p>In reference to the "Direct Current Power Measurement" section:</p> <p>- Will Qwest need to install equipment in order to measure power usage?</p> <p>- Will the measurement be taken manually or via a mechanized process?</p> <p>- Will the measurements be in single amps (e.g. 50, 51, 63) or will it be rounded up?</p> <p>- For the initial</p>	<p>The Capacity Charge does refer to the power plant as it is listed in the SGATs.</p> <p>If the state has not ordered separate usage and power capacity charges then, Qwest will not perform the readings. So yes Oregon will be excluded from this new process.</p> <p>No Minnesota will not be treated the same as North Dakota, Oregon and South Dakota. Minnesota has an AC usage charge and a -48 volt DC Power Charge. The Minnesota AC usage charge is the equivalent of the DC usage charge in states such as Colorado and Arizona.</p> <p>No new equipment will be required for Qwest to perform DC Power measurements.</p> <p>Both, depending on the existing equipment at the site.</p> <p>The measurements will be in single Amps, rounded up or down to the nearest whole number.</p> <p>CLEC's bills will be adjusted, as of the first</p>
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		<p>start-up, how long will it take Qwest to measure all of the offices? Will CLECs be billed at the new usage level effective 10/23/02 or the date of the first Qwest reading?</p> <p>- I understand that billing will be adjusted back to the time of the semi-annual or written request for a power measure, but once a reading is taken, what is the timeframe for the new usage to be reflected on the bill?</p> <p>- As a result of this change, measured to non-measured, will there be additional or incremental costs/charges passed on to the CLEC?</p> <p>- On page 2, paragraph 2 it states that "Qwest will adjust the new monthly usage rate to the CLEC's actual usage." Am I correct in assuming that this is not a new rate, but instead the new usage level that would trigger the appropriate already existing SGAT/ICA rate?</p> <p>- Will Qwest publish a schedule listing when they will take the semi-annual readings?</p> <p>- Will a notice or pre-quote be sent out when the reading is complete? What if the reading is the same as the prior reading, will we receive a notice or pre-quote?</p> <p>- For the following</p>	<p>reading, which will occur in the first 6 months after 10/23/03.</p> <p>You will be notified of a change in the -48 volt usage and it will be backdated to the date of the reading and appear pursuant to your billing cycle.</p> <p>The measurement time and /or equipment is built into the recurring charge.</p> <p>Your assumption is correct.</p> <p>No but Qwest will notify you prior to a change in your usage charges.</p> <p>Yes a notice will be sent out when the reading is complete if there is a change in usage. Qwest will not send out a notice if the reading is the same as the prior reading.</p> <p>The rate that will be applied to the measured</p>
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State	TTL Amps	Qwest Metered Amps Used Q1	Qwest Metered Amps Used Q2	Qwest Metered Amps Used Q3	Qwest Metered Amps Used Q4	Actual Difference	USOC amount	Calculated Monthly Billing	New Monthly Billing	Calculated Monthly Savings	Percent Monthly Savings
Arizona	3,935	528	429	0	0	3,506	\$7.27	\$28,607	\$3,119	\$25,489	89%
Colorado	8,337	1,566	782	0	0	7,555	\$4.50	\$37,517	\$3,519	\$33,998	91%
Iowa	6,670	1,673	1,390	0	0	5,280	\$4.37	\$29,148	\$6,074	\$23,074	79%
Idaho	1,110	240	197	0	0	913	\$4.93	\$5,472	\$971	\$4,501	82%
Minnesota	4,302	658	632	0	0	3,670	\$4.43	\$19,058	\$2,800	\$16,258	85%
North Dakota	550	161	139	0	0	389	\$3.97	\$2,184	\$552	\$1,632	75%
Nebraska	1,700	375	392	0	0	1,308	\$4.56	\$7,752	\$1,788	\$5,964	77%
New Mexico	2,202	192	228	0	0	1,974	\$7.70	\$16,955	\$1,756	\$15,200	90%
Oregon	2,004	217	221	0	0	1,783	\$7.52	\$15,070	\$1,662	\$13,408	89%
South Dakota	750	105	0	110	0	645	\$15.24	\$11,430	\$1,600	\$9,830	86%
Utah	3,964	669	0	629	0	3,964	\$3.89	\$15,420	\$0	\$15,420	100%
Washington	3,753	483	0	598	0	3,270	\$3.13	\$11,747	\$1,512	\$10,235	87%
Total	39,277	6,867	4,410					\$200,360	\$23,840	\$164,773	82%

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CO Name	CO CLLI	ST	LEC	Space Type	Total AMP	Estimated Amp Draw	Diff	USOC Amount	Qwest Metered Amps Used Q1	Qwest Metered Amps Used Q2	Qwest Metered Amps Used Q3	Qwest Metered Amps Used Q4	Calculated Monthly Billing	New Monthly Billing	Calculated Monthly Savings	Percent Monthly Savings	Effective Billing Date	Fac'd New Closures
Kearns	KRNSUTMAHG6	UT	USW	Caged Physical	300	27		3.89	27		28	29	\$1,167.00	\$1,068.92	\$98.08	91%	6/28/2005	8/1/2005
Kaysville	KYVLUTMAHG4	UT	USW	Caged Physical	175	20		3.89	20		21	21	\$680.75	\$81.69	\$599.06	86%	7/28/2005	8/1/2005
Logan	LOGNUTMAHG4	UT	USW	Caged Physical	170	28		3.89	28		32	32	\$861.30	\$124.48	\$536.82	81%	6/24/2005	8/1/2005
Madvale	MDVAVUTMAHG5	UT	USW	Caged Physical	170	34		3.89	34		36	36	\$661.30	\$140.04	\$521.26	79%	7/28/2005	8/1/2005
American Fork	AMFKUTMAHG5	UT	USW	Caged Physical	100	43		3.89	43		45	45	\$389.00	\$175.05	\$213.95	55%	6/29/2005	8/1/2005
Brigham City	BCCYUTMAHG2	UT	USW	Caged Physical	100	18		3.89	18		20	20	\$389.00	\$77.80	\$311.20	80%	6/24/2005	8/1/2005
Bountiful	BNTBUTMAHG6	UT	USW	Caged Physical	170	39		3.89	39		35	35	\$661.30	\$136.15	\$525.15	79%	6/24/2005	8/1/2005
Collonwood	CTWDTUTMAHG9	UT	USW	Caged Physical	132	20		3.89	20		20	20	\$435.68	\$77.80	\$357.88	85%	6/24/2005	8/1/2005
Opden Main	OPDNUTMAHG4	UT	USW	Caged Physical	170	29		3.89	29		27	27	\$661.30	\$105.03	\$556.27	84%	6/23/2005	8/1/2005
Oren	ORENUTMAHG8	UT	USW	Caged Physical	170	34		3.89	34		33	33	\$661.30	\$128.37	\$532.93	81%	6/23/2005	8/1/2005
Clearfield	CLFUTMAHG7	UT	USW	Caged Physical	170	30		3.89	30		17	17	\$661.30	\$66.13	\$595.17	90%	7/28/2005	8/1/2005
Draper	DRPRUTMAHG7	UT	USW	Caged Physical	170	59		3.89	59		46	46	\$661.30	\$178.94	\$482.36	73%	7/12/2005	8/1/2005
Holiday	HLDYUTMAHG8	UT	USW	Contiguous Physical	170	24		3.89	24		24	24	\$661.30	\$83.36	\$577.94	86%	6/29/2005	8/1/2005
Murray	MRRYUTMAHG8	UT	USW	Caged Physical	170	32		3.89	32		33	33	\$661.30	\$128.37	\$532.93	81%	7/28/2005	8/1/2005
Pleasant Grove	PLGVUTMAHG5	UT	USW	Physical	100	21		3.89	21		21	21	\$389.00	\$81.69	\$307.31	79%	6/23/2005	8/1/2005
Provo	PROVUTMAHG4	UT	USW	Caged Physical	170	25		3.89	25		25	25	\$661.30	\$97.25	\$564.05	85%	6/29/2005	8/1/2005
Tollie	TOOLUTMAHG2	UT	USW	Caged Physical	132	16		3.89	16		14	14	\$513.48	\$54.46	\$459.02	89%	6/23/2005	8/1/2005
Salt Lake City East	SLKUTEAHG4	UT	USW	Caged Physical	170	17		3.89	17		20	20	\$661.30	\$77.80	\$583.50	88%	7/1/2005	8/1/2005
Salt Lake City	SLKUTMAHG6	UT	USW	Caged Physical	340	48		3.89	48		45	45	\$1,322.60	\$121.77	\$1,200.83	92%	7/1/2005	8/1/2005
Salt Lake City Shaul	SLKUTSORHG6	UT	USW	Caged Physical	170	35		3.89	35		33	33	\$661.30	\$128.37	\$532.93	81%	7/1/2005	8/1/2005
Salt Lake City West	SLKUTWHRG4	UT	USW	Caged Physical	170	32		3.89	32		32	32	\$661.30	\$124.48	\$536.82	81%	6/24/2005	8/1/2005
Spanish Fork	SPFKUTMAHG3	UT	USW	Caged Physical	200	21		3.89	21		20	20	\$778.00	\$77.80	\$700.20	90%	6/29/2005	8/1/2005
Stansbury	STNSUTMAHG4	UT	USW	Physical	375	20		3.89	20		20	20	\$680.75	\$77.80	\$602.95	89%	6/29/2005	8/1/2005
Total					3964	669			669	0	629	629	\$15,419.96	\$2,446.81	\$12,973.15	84%		

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June 22, 2006

REDACTED

Arizona Corporation Commission
Docket No. T-03267A-06-0105
Docket No. T-01051B-06-0105
Qwest Corporation - Exhibit WRE-5
Exhibits of William R. Easton
June 22, 2006

REDACTED

Colorado
06F-124T
McLeodUSA 02-018

INTERVENOR: McLeodUSA Telecommunications Services, Inc.

REQUEST NO: 018

Please indicate how many carriers have availed themselves of Qwest's Power Reduction offering and Power Restoration offering in the State of Colorado and for how many collocations has each carrier availed themselves of this offering.

- a. Please indicate how many of these carriers actually resized power distribution cables actively serving existing collocation cages.
- b. Please indicate the non-recurring charges that were associated with each of these instances, indicating whether resizing power distribution cables was included in the applicable charges.
- c. For subpart a, indicate the net change in amperage related to this resizing.
- d. Please explain whether Qwest reduced the amount of DC power plant capacity following these carriers resizing their power distribution arrangements. If so, provide any Qwest job numbers associated with this modification, all back up documentation related to this modification, and provide the net change in DC power plant capacity (in amps) that took place.

RESPONSE:

In Colorado 7 CLECs have availed themselves of Qwest's Power Reduction offering encompassing a total of 80 collocation sites. Seven sites required cable resizing. There were no requests for power restorations.

- a. Seven carriers.
- b. Non-recurring charges for the seven sites that required cable resizing:
 - (1). \$861.12
 - (2). \$861.12
 - (3). \$861.12
 - (4). \$861.12
 - (5). \$1944.00
 - (6). \$972.00
 - (7). \$972.00
- c. Net change in amperage related to resizing:
 - (1). Reduced 120 amps
 - (2). Reduced 120 amps
 - (3). Reduced 120 amps

- (4). Reduced 300 amps
- (5). Reduced 80 amps
- (6). Reduced 120 amps
- (7). Reduced 120 amps

d. Qwest does not reduce the amount of power plant capacity directly related to carriers resizing their power distribution arrangements.

Qwest does monitor the actual growth and projected growth and is currently going through a process for utilizing excess capacity in those locations in which the load did not increase as originally anticipated, but not directly related to the reduction of power from a carrier. Also see response to (c.) above.

Respondent: Ryan Gallagher

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I. IDENTIFICATION OF WITNESS

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS AND POSITION WITH QWEST CORPORATION.

A. My name is Curtis Ashton. I am employed by Qwest Corporation ("Qwest") as a senior staff technical support power maintenance engineer in the technical support group, local network organization. My business address is 700 W. Mineral, Littleton, Colorado, 80120.

Q. PLEASE REVIEW YOUR WORK EXPERIENCE AND PRESENT RESPONSIBILITIES.

A. I hold a Bachelor of Science in electrical engineering, summa cum laude from Arizona State University. I have been responsible for managing telecommunications power for Qwest and its predecessors since 1992. All of the positions I've held with Qwest Communications (formerly U S West Communications), including my current position, have dealt with power management. In my current position, I am the subject matter expert ("SME") for all powering and grounding issues for Qwest's Local Network organization in the Power Engineering department. I have worked with power issues as they relate to collocation since the original FCC collocation order in 1992. In addition, I have presented papers at multiple conferences and have been published in conference proceedings and trade magazines. Among the presentations are two on collocation powering. I am also a vice-chair of several sub-committees of the institute of electrical and electronics engineers (IEEE) stationary battery standards coordinating

1 committee (SCC) 29. In the past I served a term on the general IEEE
2 standards review committee (revcom).

3 **II. PURPOSE OF TESTIMONY**

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

5 A. The purpose of my testimony is to provide a response to the testimony
6 filed by Sidney L. Morrison and Michael Starkey on behalf of
7 McLeodUSA Telecommunications Services, Inc. ("McLeod") as it
8 relates to the claim that Qwest should be charging the "Power Plant"
9 rate element based on periodic usage measurements.

10 **III. RESPONSE TO ALLEGATIONS BY MCLEOD**

11 **Q. BRIEFLY DESCRIBE THE ISSUE RAISED BY MCLEOD.**

12 A. The actual issue raised by McLeod is a narrow question of contract
13 interpretation. Qwest and McLeod entered into a Power Measuring
14 Amendment to their interconnection agreement ("ICA") in order to
15 revise the method that Qwest uses to charge McLeod for power
16 usage. McLeod claims, incorrectly that Qwest should be charging the
17 "Power Plant" rate element based on periodic usage measurements
18 as well. That is not what the DC Power Measuring Amendment says.
19 While I am not a lawyer, the DC Power Measuring Amendment's plain
20 language provides for the charges for only one rate element to vary
21 based on measured usage: the "-48 Volt Usage Charge [that] applies
22 on a per amp basis to all orders of greater than sixty (60) amps." The
23 DC Power Measuring Amendment does not affect the charges for

1 "Power Plant", and does not identify those charges as ones which will
2 be reduced based on measured consumption.

3 Moreover, the rate for the Power Plant element was established by the
4 Commission in a cost docket – that rate element is, to my
5 understanding, not directly at issue in this case. If McLeod wanted to
6 challenge the methodology by which that rate was developed, it
7 should have participated in that cost setting proceeding.

8 **Q. IN THE DIRECT TESTIMONY OF BOTH MR. MORRISON AND MR.**
9 **STARKEY DO THEY PORTRAY AN ACCURATE PICTURE OF**
10 **THIS PROCEEDING?**

11 A. No. Both of these gentlemen have glossed over the real issue and
12 have provided quite a bit of testimony that clouds the real reason that
13 we are before this Commission. The real reason that we are here is to
14 discuss the language in the Power Measuring Amendment. Mr.
15 Morrison and Mr. Starkey seem to want to focus on their view of how
16 Qwest should or does actually incur cost with respect to DC power
17 plant. Setting aside the errors Mr. Morrison and Mr. Starkey make
18 with regard to Qwest's power plant planning and the costs Qwest
19 incurs, this "actual cost" methodology is both irrelevant to the contract
20 dispute, and inconsistent with TELRIC methodology. This
21 Commission has already ruled that Qwest may charge for the power
22 plant based on a forward looking, least cost TELRIC methodology,
23 based on the number of amps the CLEC specified in its order for
24 power distribution. Furthermore, as described in the testimony of Mr.

1 Easton, nothing in the DC Power Measuring Amendment changes the
2 pricing structure for the Power Plant rate element.

3 **Q. IF THAT IS THE CASE, WHAT TOPICS WILL YOU ADDRESS IN**
4 **YOUR TESTIMONY?**

5 A. I will address some of the incorrect statements by Mr. Morrison and
6 Mr. Starkey in regard to how Qwest designs and engineers power so
7 that the record in this case be clear on those issues, even though
8 Qwest does not believe that the engineering issues are the
9 appropriate focus of this contract dispute case.

10 **Q. HOW DO QWEST ENGINEERS DESIGN A POWER PLANT WITHIN**
11 **A QWEST CENTRAL OFFICE?**

12 A. Qwest Engineers take the total requirement of power needs into
13 consideration when designing the power plant for a central office.
14 What I mean by this is that the engineer factors in not only the power
15 requirements of Qwest equipment, but also collocators (CLECs) within
16 that central office. For example, when a CLEC provides Qwest with
17 an order for power feed (sometimes referred to as power distribution
18 or power cables), Qwest assumes that the order is based on List 2
19 Drain – the current the equipment will draw under the most power
20 demanding conditions, such as initial power-up after a power failure.
21 Mr. Morrison believes that Qwest designs a Central Office based on
22 List 1 drain – the current the equipment will draw when operating
23 normally at maximum capacity – and that is correct for Qwest
24 equipment. However, the reality of designing for CLEC needs is that

1 Qwest does not know, and cannot reasonably forecast, the draw that
2 CLEC equipment will take, so Qwest uses the ordered amount to size
3 the power plant capacity made available to CLECs.

4 Mr. Morrison recognizes this reality. In his direct testimony at lines
5 242 – 251, he explains how two identical pieces of equipment, serving
6 the same number of customers, could have very different power
7 requirements. I am not a lawyer, and do not understand all of the
8 legal obligations Qwest has to treat CLECs like McLeod in a
9 nondiscriminatory manner – but from an engineering perspective,
10 Qwest plans its DC power plant capacity so that if a CLEC orders a
11 certain amount of power capacity in its power feeds, that amount of
12 power capacity is made available to them in the power plant. My
13 experience working with various CLECs tells me many CLECs expect
14 Qwest to provide power plant capacity at that level.

15 **Q. DOESN'T MCLEOD TELL QWEST WHAT ITS ANTICIPATED**
16 **USAGE WILL BE WHEN IT PLACES AN ORDER?**

17 **A.** No, McLeod does not. Indeed, based on Mr. Morrison's testimony,
18 McLeod is likely unable to do so. And, since McLeod cannot forecast
19 its own usage, Qwest, who has less information about McLeod's
20 business plans, certainly cannot do so either. Under those
21 circumstances, the only reasonable amperage to include in power
22 plant planning for CLECs is the ordered amount, as that is the amount
23 that the CLEC has said, via its order that it might at some point need.

1 **Q. UNDER WHAT CIRCUMSTANCES WOULD THE CLEC NEED OR**
2 **USE THE ORDERED AMOUNT OF POWER?**

3 A. A good example of a situation in which the ordered amount of power
4 could be required would be if Qwest had a complete power failure
5 within a central office, and the batteries fully discharged. During
6 power outages, the power to the telecommunication equipment is
7 supplied by batteries. For a time, a diesel engine would be supplying
8 additional backup power for the batteries. If the engine cannot be
9 refueled, the batteries would become the sole source of power. Once
10 the power backup plant is running solely off battery power, the
11 batteries begin to discharge. Once the batteries are no longer
12 sufficient to power the equipment, the equipment would shut down.
13 After power is restored, CLEC and Qwest equipment would draw
14 significantly more power than a List 1 drain situation, approaching or
15 reaching List 2 drain, as the equipment is restarted. This is
16 sometimes referred to as a "List 2 Event." Qwest designs the power
17 plant so that in such an event, CLEC and toll equipment within the
18 central office will have the List 2 drain available to them, ahead of
19 even Qwest's own switch.¹

20 A central office power plant is sized on the total requirement of every
21 piece of equipment that has a power drain. Indeed, under the List 2
22 drain situation described above, each and every piece of McLeod's

¹ The engineering characteristics of Qwest's switches require that they be restored in stages after a battery discharge event described above. Thus, the List 2 draw for these switches is not experienced at one time – but not as a result of the availability of power plant capacity or the switches' need for power.

1 equipment in the central office would have List 2 drain power capacity
2 available to it.

3 **Q. WHAT POWER PLANT CAPACITY HAS MCLEOD ORDERED**
4 **FROM QWEST?**

5 A. Confidential Exhibit CA-1 shows the initial power orders that McLeod
6 submitted in Arizona. Qwest has taken these requests and combined
7 the McLeod and other CLEC power orders along with the equipment
8 demand that Qwest has and sizes the power plant to accommodate all
9 power requirements.

10 **Q. CAN YOU PROVIDE THE ACTUAL POWER USAGE THAT**
11 **MCLEOD HAS TODAY AND IS BEING BILLED FOR?**

12 A. Yes. That information is also shown on Confidential Exhibit CA-1.
13 That Exhibit shows the two most recent usage measurements for each
14 central office in which McLeod is collocated. These measurements
15 are taken at approximate six month intervals.

16 **Q. PLEASE DESCRIBE THE CORRELATION BETWEEN ORDERED**
17 **AMOUNTS AND THE ACTUAL USAGE?**

18 A. Actually there is no correlation, and that is a critical point. The
19 ordered amount of power capacity Qwest makes available to CLECs
20 bears no relationship to the amount of power usage, thus supporting
21 Qwest's contention that the only prudent course of action at the time
22 the order is placed is to engineer power plant in accordance with the
23 ordered amounts of power capacity. As noted above, this is also the

1 amount of power plant capacity that Qwest makes available for
2 McLeod's use.

3 **Q. MR. MORRISON, ON PAGE 24 LINES 509 – 518 STATES THAT A**
4 **COLLOCATOR ORDERS THE POWER THAT IT ULTIMATELY**
5 **WILL NEED BUT NOT THE AMOUNT IT WILL NEED**
6 **IMMEDIATELY. PLEASE COMMENT ON THIS REMARK.**

7 A. This may be true for some collocators like McLeod, but not necessarily
8 all collocators. Regardless, for purposes of Qwest's engineering
9 practices, it is irrelevant. This is because Qwest has no idea of any
10 particular CLEC's business plan – for example, whether that CLEC
11 has ordered power capacity based on its ultimate need or a shorter
12 planning horizon, or when the CLEC expects to have fully carded bays
13 and customers. Qwest fulfills the power requirements that McLeod
14 provides to Qwest in its order. If McLeod submits an order under the
15 interconnection agreement for 180 amps of power, then Qwest will
16 reasonably use and rely upon that order to design the power plant and
17 make certain that the ordered amount of power is available to
18 McLeod.

19 **Q. MR. MORRISON TALKS ABOUT “AS ORDERED” VS “AS**
20 **CONSUMED” POWER IN ITS COMPLAINT. WHAT IS THE**
21 **DIFFERENCE BETWEEN THE TWO?**

22 A. The “as ordered” is the total requirement that McLeod has asked
23 Qwest to be able to provide and Qwest has sized its power plant to
24 accommodate that ordered amount. This power plant is billed at a

1 constant according to the amount of amps specified in McLeod's initial
2 order for power distribution. As Mr. Morrison describes it, the "as
3 consumed" rate is the measured rate for actual power that traverses
4 the power cables that feed the McLeod collocation site. This is a
5 separately billed rate.

6 **Q. MCLEOD TALKS ABOUT WANTING TO PAY FOR POWER PLANT**
7 **ON AN "AS CONSUMED" OR "MEASURED" BASIS. IS POWER**
8 **PLANT "CONSUMED" IN THE SAME WAY THAT POWER ITSELF**
9 **IS CONSUMED?**

10 A. No, of course not. First, it is important to observe that power plant is
11 not "consumed." Power plant consists of several durable pieces of
12 equipment that last for years. As Mr. Morrison states, power plant
13 capacity is shared among the several users of power in a central
14 office, but power plant capacity is not consumed. A better way to
15 describe power plant capacity is in terms of availability, rather than
16 consumption. For any particular power user, the question is whether
17 there is sufficient capacity in the power plant available to convert and
18 deliver the electric current its telecommunications equipment will
19 eventually consume. That is a completely different question than how
20 much electric current the telecommunications equipment will
21 consume.

22 Secondly, power plant is a fixed investment, and the costs of that plant
23 do not vary with usage. The amount of power that McLeod may
24 consume at the point in time that any particular power measurement is

1 taken may not bear any relationship to the amount of power plant
2 capacity that McLeod has ordered or that Qwest makes available to
3 McLeod. Third, while electric power usage (in Amps or Watts) is
4 measured (and charged accordingly under the DC Power Measuring
5 Amendment), the "measurement" of DC power plant capacity does not
6 change until there are additions of primary components (e.g.,
7 batteries, rectifiers, etc.) that make additional power plant capacity
8 available to power users. In other words, Power Plant is not
9 amenable to "measurement".

10 **Q. MR. MORRISON CLAIMS ON PAGES 27 & 28 LINES 597 TO 619**
11 **THAT A POWER PLANT IS SIZED ON AN "AS CONSUMED"**
12 **BASIS. IS MR. MORRISON CORRECT IN HIS UNDERSTANDING?**

13 A. No. The reality is that power plant is sized based on the amount of
14 power that Qwest, McLeod and other CLECs forecast/order. When
15 McLeod placed the orders for power shown on Confidential CA-1, in
16 the 1999-2000 timeframe, there was no McLeod usage to take into
17 account, nor could McLeod forecast any usage. Thus, power plants to
18 meet the CLEC orders must be based on the ordered amount.

19 **Q. MCLEOD HAS CLAIMED THAT QWEST'S ENGINEERING OF**
20 **POWER PLANT BASED ON THE CLECS' POWER ORDERS**
21 **VIOLATES QWEST'S OWN TECHNICAL PUBLICATIONS AND**
22 **ENGINEERING GUIDELINES. CAN YOU PLEASE RESPOND?**

23 A. As McLeod has admitted in discovery, no Qwest technical publication
24 or engineering guideline specifically addresses engineering or

1 planning power plant capacity in response to CLEC orders, usage, or
2 demand. There are several legal and regulatory reasons Qwest
3 makes power plant capacity available to CLECs based on their power
4 orders that supplement and modify the engineering requirements for
5 Qwest's own equipment, and though I am not a lawyer, I have some
6 basic understanding of some of these obligations. For example, I
7 understand that in Arizona, the Commission approved a rate for DC
8 Power Plant, to be charged based on the number of amps in a CLEC's
9 power feed order. Qwest interprets the ordered rate amount and rate
10 design to require Qwest to make the ordered amount of amps in
11 power plant capacity available to CLECs as needed. Qwest plans its
12 power plant capacity accordingly. Another reason Qwest must be
13 proactive in planning power plant capacity are the limited timeframes
14 Qwest has to respond to collocation orders under applicable law.

15 **Q. MR. MORRISON INTIMATES ON PAGES 39 & 40, LINES 914 TO**
16 **932, THAT THE 90 DAYS QWEST HAS (BY LAW) TO PROVISION**
17 **A COLLOCATION IS MORE THAN SUFFICIENT TIME TO GROW A**
18 **POWER PLANT. IS THIS TRUE?**

19 **A.** No. Although in some cases, it may be enough time, Qwest must pre-
20 plan power plant growth many months to years ahead of time in order
21 to meet our legal obligation to have capacity available to the CLECs
22 upon turnup of their collocation presence. As I've explained
23 elsewhere in this testimony, since Qwest does not know when the
24 CLEC will require its full requested amount of power drain, that full
25 amount must be available as of day 90 after their collocation order is

1 placed. Qwest has held this point of view since even before
2 McLeodUSA placed its collocation orders in the 1999-2000 timeframe.
3 For example, in 1998, at the International Telecommunications Energy
4 Conference (Intelec '98) of the Institute of Electrical and Electronics
5 Engineers (IEEE) Power Electronics Society (PELS), I presented a
6 paper on Collocation issues (see attached Exhibit CA-2). In this
7 presentation (which has been provided to McLeod in this proceeding
8 in response to a Discovery Request), on slide 9, I described typical
9 engineering, installation, and acceptance intervals to add various
10 primary backup power components. Many of these components take
11 much longer than 90 days from beginning of engineering order to test
12 and acceptance. In addition, it is economically unwise for Qwest to
13 constantly be opening new power plant jobs every 3-6 months for
14 growth. A more prudent engineering planning interval would be 18-36
15 months, and this is what Qwest has been attempting to do since at
16 least 1998.

17 **Q. ON PAGE 28 MR. MORRISON TALKS ABOUT LIST 1 AND LIST 2**
18 **DRAINS. ARE HIS ASSUMPTIONS CORRECT?**

19 **A.** Most of his assumptions are correct. However, Mr. Morrison asserts
20 that List 1 drain corresponds with the "as consumed" capacity. This is
21 incorrect. In general, actual consumption will fall below List 1 drain,
22 sometimes far below that level. Mr. Morrison acknowledged this
23 earlier in his testimony, at pages 19, lines 399 – 402, where he states
24 that List 1 drain is the amperage when the equipment is operating
25 normally at maximum capacity. Since the equipment will only rarely

1 operate at maximum capacity, any suggestion that charging for power
2 plant on a measured, or "as consumed" basis would be equivalent to
3 charging for List 1 drain is clearly incorrect.

4 **Q. MR. MORRISON, AT PAGE 39 LINES 897-912 STATES THAT**
5 **QWEST DOES NOT NEED TO ENGINEER TO THE AS-ORDERED**
6 **LEVEL BECAUSE MCLEOD PROVIDES QWEST WITH A GREAT**
7 **DEAL OF INFORMATION ABOUT THE COLLOCATED**
8 **EQUIPMENT AND THE POWER DRAWS SO THAT QWEST**
9 **SHOULD BE WELL AWARE OF MCLEOD'S POWER USAGE.**
10 **COULD YOU PLEASE COMMENT ON THAT?**

11 A. Mr. Morrison's testimony suggests that McLeod provides a great deal
12 of information to Qwest. However, a careful reading shows that
13 McLeod does not. Items (1) – (5) at lines 906 – 909 are really no
14 more than a description of the equipment that McLeod will collocate.
15 In Qwest's experience with McLeod, some of this equipment is
16 equipment that Qwest is not familiar with. Additionally, the testimony
17 is more significant in what it does not list – it does not state that
18 McLeod will provide a forecast of usage or growth. Nor does McLeod
19 either provide Qwest with the List 1 drain of its equipment or claim that
20 any particular power capacity level is all they require to be available.
21 Rather, Mr. Morrison apparently expects Qwest to unilaterally
22 calculate or project such a number, when McLeod itself cannot do so.
23 Indeed, earlier in this same testimony (page 10), Mr. Morrison made a
24 point of explaining how two otherwise identical pieces of equipment
25 could have very different power needs. Furthermore, any review of

1 Confidential CA-1 shows that the ordered amounts and the consumed
2 amounts do not have any discernable correlation.

3 **Q. ON PAGES 40 & 41 LINES 934 TO 959, MR. MORRISON STATES**
4 **THAT IN IOWA, QWEST CLAIMED THAT IF MCLEOD ORDERED**
5 **175 AMPS OF CAPACITY, QWEST WOULD DEFINITELY**
6 **AUGMENT ITS DC POWER PLANT CAPACITY. WOULD YOU**
7 **PLEASE COMMENT ON THIS STATEMENT?**

8 A. Yes. It is my understanding that what the Qwest witness, Mr.
9 Hubbard, meant by that statement is that the larger the order, the
10 closer or more likely Qwest would be to augment its power plant.
11 However, the more important point here is that any CLEC order for
12 power entitles Qwest to charge its Commission-approved TELRIC
13 rates. My understanding of these rates is that they do not necessarily
14 relate to Qwest's real world experience, and that Qwest is not required
15 to demonstrate that it actually constructed any power plant in
16 response to an order for it to be entitled to charge those rates.

17 **Q. ON PAGES 41 TO 44 LINES 962 TO 1026 MR. MORRISON**
18 **DISCUSSES DECOMMISSIONING OF COLLOCATION SITES AND**
19 **WHETHER QWEST REMOVES POWER PLANT EQUIPMENT.**
20 **WILL YOU COMMENT ON THIS TESTIMONY?**

21 A. Yes. Once again Mr. Morrison is confused on this issue. Mr. Morrison
22 is correct, as reflected in Qwest data response, (McLeod data request
23 #5), that Qwest does not remove or reduce its Power Plant Capacity
24 based on decommissioned collocations. McLeod's orders for power

1 were in the 1999-2000 time frame when collocation was going strong
2 and Qwest had a lot of requests for power. Since that time, Qwest
3 has experienced a reduction in the number of operating collocators,
4 thus, a reduction in the amount of drain on an existing power plant.
5 However, these events that occurred after McLeod placed its power
6 orders do not impact in any way the amount of power that McLeod has
7 ordered, Qwest's obligation to have sufficient capacity to meet that
8 order at the time of that order, or McLeod's obligation to pay for that
9 ordered amount.

10 **Q. IS THERE AWAY THAT MCLEOD CAN REDUCE THEIR POWER**
11 **PLANT CHARGES?**

12 A. Yes. McLeod has the ability to restructure their power requirement as
13 addressed by Mr. Bill Easton through the Power Reduction offering
14 and the Power Reduction with Reservation product offered by Qwest.
15 McLeod has the option to reduce their power requirement through a
16 change to their original order; however, McLeod has not taken
17 advantage of that option. McLeod seems to want to have the
18 originally ordered amount of power still available to them but to reduce
19 their Power Plant charges so that they pay for much less capacity than
20 is available to them. McLeod's desire to only pay for what they use is
21 in fact accomplished through the Power Measuring Amendment,
22 which reduces the Power Usage charge to the measured amount. In
23 fact, in Discovery in this proceeding, McLeod admitted that its own
24 Collocation policy is similar to what the Qwest Power Reduction
25 product offers. McLeod assumed a theoretical 20 Amp CLEC usage,

1 and stated that they would fuse it at 30 Amps, charge the DC plant
2 cost at 20 Amps, but size the cables at approximately 60 Amps.
3 Qwest's power planning process works the same way. If the original
4 McLeod order were for 60 Amps but the usage at 20 Amps, Qwest
5 would fuse it at 80 Amps, charge the power plant rate at 60 Amps (in
6 keeping with the commission-ordered rates), and the usage rate at 20
7 Amps. If McLeod then requested a power reduction to 20 Amps,
8 Qwest would then re-fuse McLeod at approximately 30 Amps, and
9 charge for both usage and power plant at 20 Amps. It doesn't seem
10 credible to me that McLeod claims they would do this for their own
11 collocators, but at the same time claim that Qwest's power reduction
12 options are unsuitable.

13 **Q. ON PAGE 49 MR. MORRISON DISCUSSES THE ISSUE OF**
14 **STRANDED INVESTMENT, AND CLAIMS THAT AN ILEC WOULD**
15 **NOT INVEST IN ITS DC POWER PLANT BASED ON MCLEOD OR**
16 **ANY OTHER CLEC'S ORDER. IS THIS CORRECT?**

17 **A.** No it is not. Qwest has an obligation and a requirement to build or
18 invest in infrastructure to make available the required or ordered
19 amount of power that McLeod and every other CLEC has ordered

20 **Q. MCLEOD MAKES CERTAIN CLAIMS AND ASSUMPTIONS ABOUT**
21 **THE COST STUDY ON THE BASIS OF THE FACT THAT THE**
22 **COST STUDY ASSUMES 1200 AMPS OF RECTIFIER CAPACITY**
23 **FOR A 1000 AMP CAPACITY PLANT. CAN YOU PLEASE**
24 **COMMENT?**

1 A. Yes. Mr. Starkey is wrong when he claims that that Qwest's cost
2 study assumes 1000 amps of usage on a 1200 amp capacity plant.
3 Ms. Million describes how Qwest's cost study modeled the power
4 plant capacity costs on a "per amp" basis and how the study makes no
5 assumption about usage. Mr. Starkey's claim is based on his failure
6 to understand the engineering inputs for a 1000 amp capacity plant.
7 However, in the Utah hearings, McLeod's own witness, Mr. Morrison,
8 affirmed that the engineering standard requires n+1 rectifier, as well
9 as a 20% recharge capacity. Thus, for a 1000 amp capacity plant,
10 according to McLeod's testimony, Qwest should calculate costs to
11 include six or even seven 200 amp rectifiers. The use of 1200 amps
12 of rectifiers is necessary for a 1000 amp capacity power plant, and
13 does not mean that Qwest has used a "fill factor" or has otherwise
14 assumed any particular loading or usage on that plant.

15 **Q. ARE THE OTHER COMPONENTS OF THE POWER PLANT IN THE**
16 **COST STUDY, SUCH AS BATTERIES, SIZED FOR A 1200 AMP**
17 **CAPACITY PLANT?**

18 A. No, they are not. The batteries modeled in the study are the
19 appropriate size for a power plant with 1000 amps of capacity, not
20 1200. A 1200 amp capacity plant would require more batteries, as
21 well as additional rectifiers to meet the engineering standards
22 discussed above.

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

2 A. Power plants are sized and built according to Qwest and CLEC
3 demand. In other words, every element that is placed in a central
4 office that draws power is taken into account and the power plant is
5 sized for the peak demand. If McLeod ordered 100 amps, then Qwest
6 will make sure McLeod has 100 amps of power plant capacity
7 available to it. Once built, the power plant is not necessarily resized
8 simply because demand decreases – Qwest does not reduce the
9 ultimate capacity for McLeod just because they are not using the full
10 100 amps. On a usage basis, Qwest is only charging McLeod for
11 measured usage at its collocation sites. Because McLeod ordered
12 100 amps of capacity, Qwest must still maintain the ability to provide
13 McLeod with the 100 amps it ordered if necessary, and the “Power
14 Plant” rate element is accordingly not prorated.

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

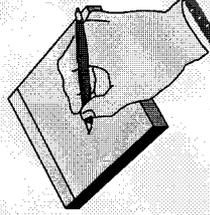
16 A. Yes it does.

CLI	CO Name	Original power ordered for colocation	What McLeod has ordered.	Previous Measurement (in amps)	Date Previous Measurement (in amps)	Current Measurement (in amps)	LAST DATE AMPERAGE READ
<h1>REDACTED</h1>							

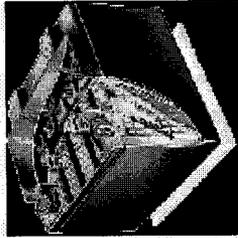
Collocation Power Issues

- Brief History of Interconnection
- Collocation Power Connection Diagram
- Why ILEC Should Provide Power
- Costs to be Recovered
 - Power Drain Monitoring
- Power Capacity Issues
- Collocation Time Frames
- Power Alarm Access

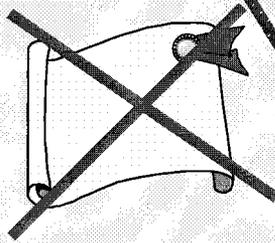
Interconnection Timeline



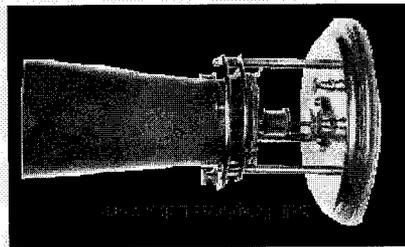
1913 —
Kingsbury
Commitment
(Interconnection
for Independents)



1896 — First Common Battery



1894 — Bell Patents Expire

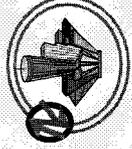
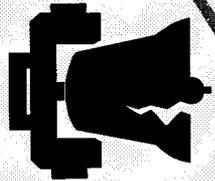
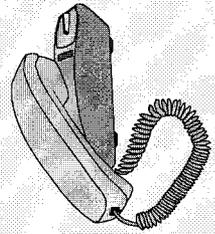
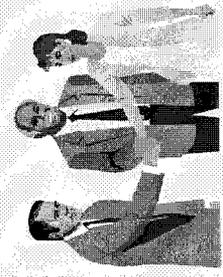
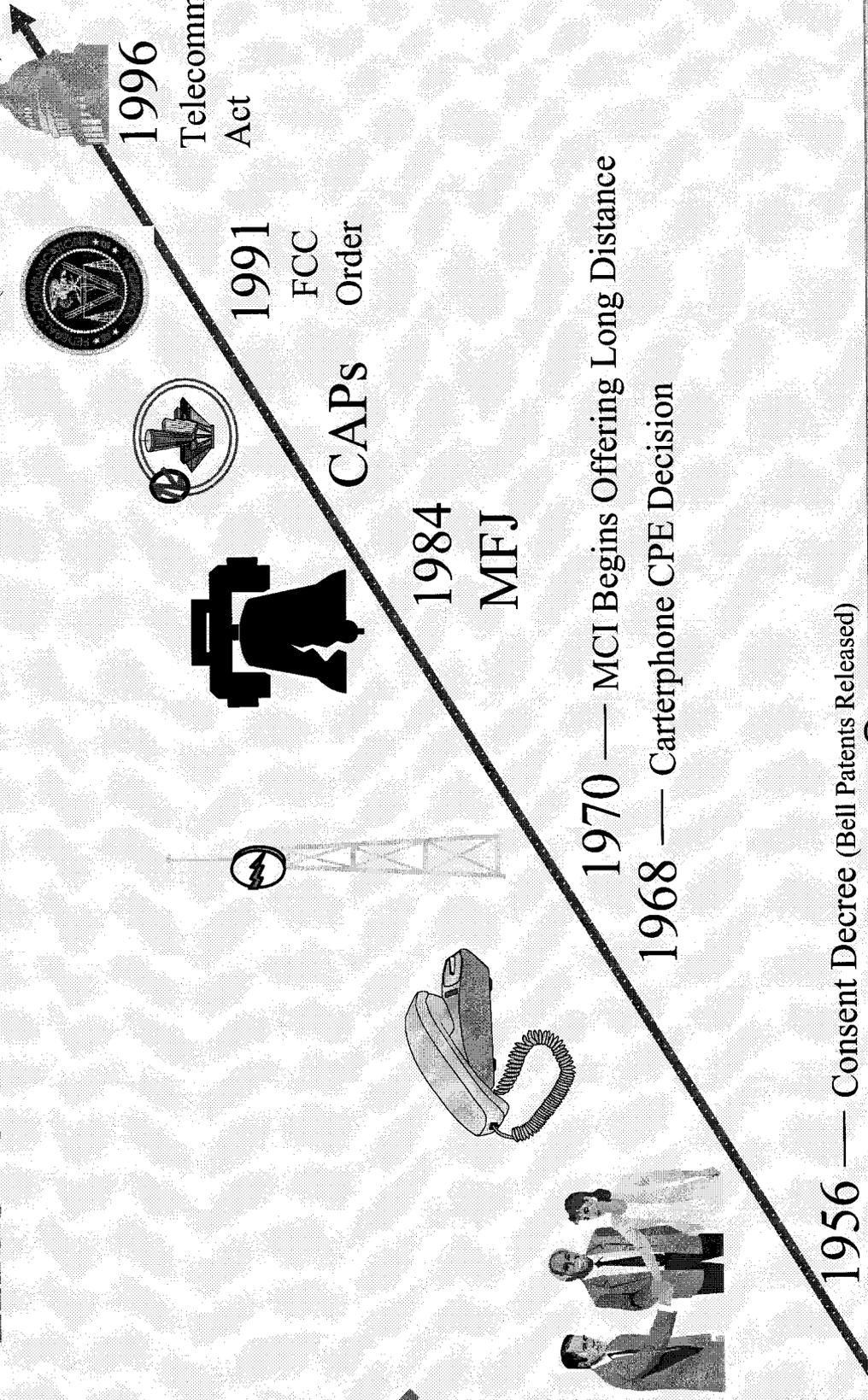


1876 — Bell Invents the Telephone

USWEST

Interac '98

Interconnection Timeline (Continued)

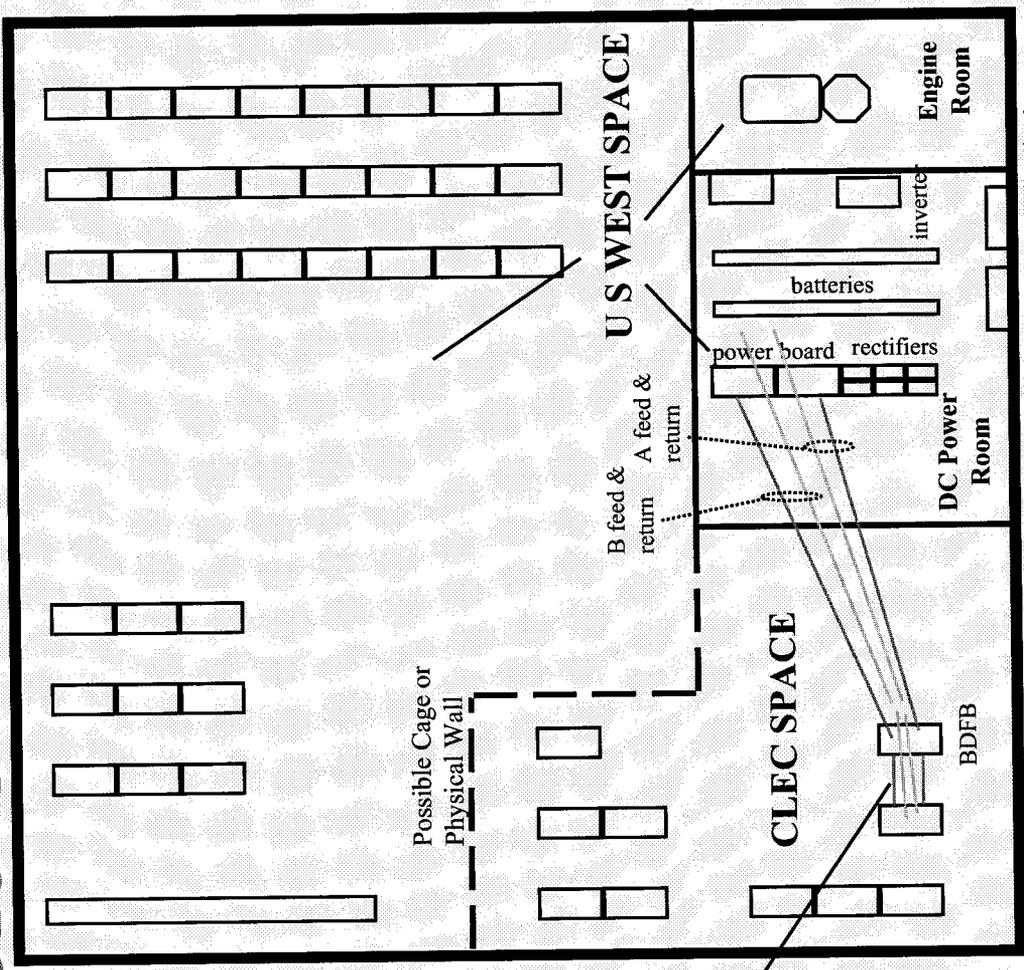


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Frontier '98

Sample Collocation Powering

U S WEST
Building



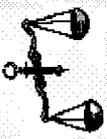
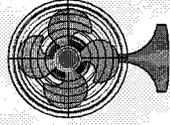
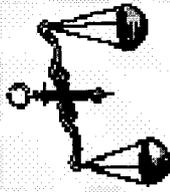
Each lineup or bay would probably be individually fed from the BDFB as shown if the feeder size is 60 Amps or less. However, larger feeder requirements would probably be fed directly from the Power Board

Thaler '98

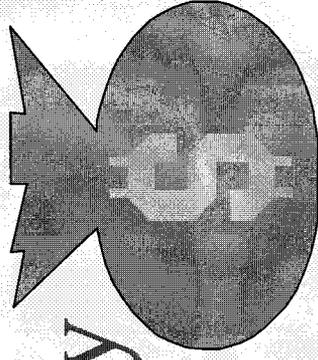
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Why ILECs Should Provide Power

- Floor Loading
 - Bellcore GR-63
- Ventilation
 - IEEE Stds 484 & 1187, & the UFC
- HazMat & Fire Concerns led UFC to Require Containment and Compartmentation
 - VRLAs Overcome this but have a Shorter Life & are Susceptible to Thermal Runaway
- Much Proactive Maintenance Required
 - IEEE Stds 450 & 1188 for Battery Maintenance are Examples
- AC Power Issues
 - ILEC Owns Engine
 - No UPS for CLECs, but Inverters Yes
- Present Telecomm NEC Exemption Might be Lost



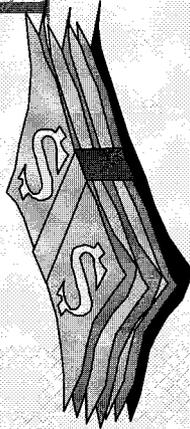
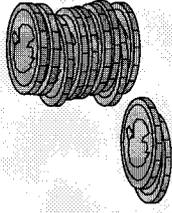
Power Cost Recovery



- Costs to be Recovered
 - One-time DC Cabling Costs
 - Power Infrastructure Portion Used by CLEC
 - DC Plant, Primary Cabling, Engine, Building AC
 - CLECs Portion of Maintenance and Monitoring
 - Cost of Electricity Used + Energy to Cool Eqpt.
- Cost-Recovery Methods
 - Up Front (use NPV)
 - Recurring (Amortization)
 - Possibly Use a Combination of Both

Power Cost Recovery

(Continued)



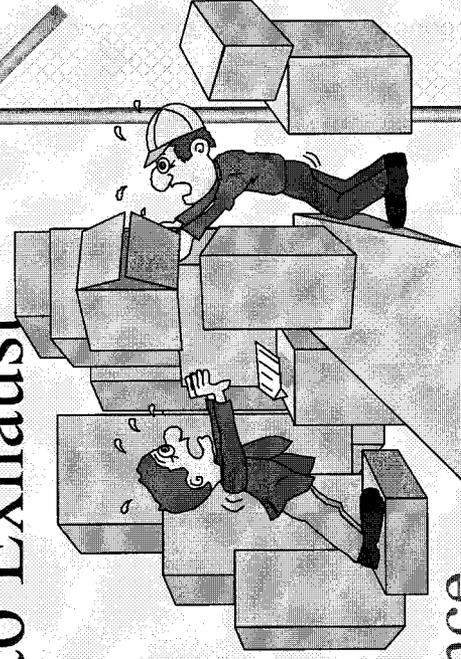
- Additional Possible “Power” Costs
 - Residual Ringing
 - Uninterruptible, Essential, or Convenience AC
 - Power Alarming
- Power Drain Monitoring
 - Power Monitors where Available
 - Manual Periodic “Average” Measurement
 - Predetermined, Contracted Amount
 - Possibly Use a Combination
 - e.g., Power Monitors & Manual for Large Drains, Predetermined for Small

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Filtertec '98

Power Capacity Issues

- CLEC Power Usage May Drive Immediate Addition of Power Backup, or Will Cause Earlier Exhaust for ILEC
- Backup Power Items Subject to Exhaust
 - Rectifiers
 - Batteries (3 or 8 hour backup)
 - BDFBs
 - Engine-Alternator(s)
 - House AC Service Panel/Entrance
 - AC Distribution Infrastructure

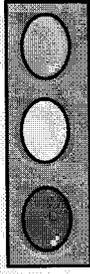


Collocation Time Frames

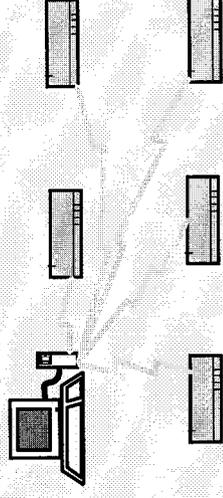
- FCC Suggests Collocation can be Completed in 90 Days from Date of Agreement for a Site
- Unless Capacity is Added to Selected Sites Beforehand the Following Can Cause Delays:
 - New BDFB (3 months)
 - Rectifier Addition (3 months)
 - Battery String(s) Addition (4 months)
 - New Engine-Alternator (6 months)
 - New DC Power Plant (6 months)
 - New AC Service Entrance (6 months)

1992						
		1	2	3	4	
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

Power Alarm Access by CLECs



- Can be Done but Costs should be Borne by CLECs and Control of “Control Points” should be Maintained by the ILEC
- Dry Contacts
 - Diode Protection
- Power Monitors with Dialup Access
 - Can Limit ILEC Access if CLEC Access Given
- Secure Protocols
 - X.25, SNMP, TCP/IP, etc.



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Filelec '98

Questions?



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Intellic '98

