Exhibit _____, WLF – RbT3

BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

In the Matter of the Continued Costing and Pricing of Unbundled Network Elements And Transport and Termination	)))))	DOCKET NO. UT-003013 *Part A*

Rebuttal Testimony

of

William L. Fitzsimmons

August 4, 2000

TABLE OF CONTENTS

I. INTRODUCTION AND PURPOSE OF TESTIMONY

Q. PLEASE STATE YOUR NAME AND POSITION.

A. My name is William L. Fitzsimmons. I am a Director at LECG; my business address is 2000 Powell Street, Suite 600, Emeryville, CA 94608.

Q. ARE YOU THE SAME WILLIAM L. FITZSIMMONS WHO FILED DIRECT AND RESPONSE TESTIMONIES IN THIS DOCKET?

A. Yes.

WHAT IS THE PURPOSE AND STRUCTURE OF YOUR TESTIMONY?

The purpose of this testimony is to respond to comments of Covad and Rhythms witness Dr. Cabe and Staff witness Mr. Spinks.

Q. WOULD YOU PLEASE SUMMARIZE YOUR TESTIMONY?

A. The first issue that I address in this testimony goes to the question: What portion of the cost of a loop should be recovered by the price of the high-frequency spectrum unbundled network element (UNE)? The answer to this question will influence the development of an efficient competitive market for high-speed Internet access in Washington. At the end of my testimony I address a second issue. The second issue goes to the question: Should this Commission to be concerned at this time with the possibility that Qwest could over recover the cost of its loop network if it sells this UNE for a positive price? The answer to this question has implications about the role of wholesale and retail prices in the transition to a competitive local telecommunications market, but has little impact on the development a competitive market for high-speed Internet access. It is far from clear that this is even an appropriate issue for this proceeding. The implications of these two issues are very different, and the answers to the two questions should be considered sequentially but separately.

The price for the high-frequency spectrum UNE should be cost-based and replicate a competitive price to the greatest extent possible. The process of deriving this price begins with the recognition that: 1) line sharing recasts the loop cost as a cost that is common to two dedicated connections on a shared line; and 2) the FCC established that the cost-based price of an unbundled network element should recover a reasonable portion of common costs. Fulfilling the cost-based requirement for UNE pricing is, therefore, accomplished by setting a price that recovers a reasonable share of the common loop cost. What remains is to determine the most reasonable allocation of common loop costs for recovery in the price of the high-frequency spectrum UNE.

Additional guidance for allocating a reasonable share of the joint loop cost to this UNE comes from the FCC's recognition that prices for UNEs should replicate, to the best of our ability, prices that would prevail in a competitive market. This is consistent with the

development of efficient competition. In a competitive market, a firm would not give away a productive asset without expecting something in return. Moreover, there are two dedicated connections on a shared line, and there is no meaningful evidence that more or less than fifty percent of the loop cost should be allocated to either connection. The most reasonable solution is to allocate one-half of the loop cost for recovery by the price of the high-frequency spectrum UNE. This represents a substantial discount from the full unbundled loop price, and, given the availability of unbundled loops at TELRIC based prices, this price will act only as a price ceiling for competitors.

Dr. Cabe claims that the possibility of over recovery of loop costs by Qwest is relevant to setting a price for the high-frequency spectrum UNE. It is not. The purpose of setting the price of this UNE is the promotion of an efficient competitive market for broadband services. If the appropriate price raises concerns about over recovery of the cost of Qwest's loop network, these concerns should be addressed at the proper time in the context of all retail price imbalances. Setting the wrong price because of concerns about over recovery will disrupt the ongoing development of a competitive market. Furthermore, with the increasing development of competition, there is a legitimate concern that Qwest may not recover the full cost of its loop network, even with a positive price for the high-frequency spectrum UNE. Two facts are clear: 1) given the long-term and ongoing nature of loop investments it will take many years for Qwest to recover the cost of the loop network; and 2) local telecommunications is becoming increasingly competitive. A determination of full recovery, therefore, needs to include a consideration of the ability of Qwest to recover its loop investment with periodic payments from service revenues and UNE prices over a number of years in a competitive environment.

SETTING THE APPROPRIATE PRICE FOR THE UNE

A. Loop Costs are Common Costs on a Shared Line

Q. IN HIS RESPONSE TESTIMONY, DOES DR. CABE SEEM TO CONTRADICT HIS EARLIER POSITION REGARDING THE NATURE OF THE LOOP COST FOR A SHARED LINE?

A. Yes, in his response testimony Dr. Cabe seems to contradict his earlier position regarding the nature of the loop cost for a shared line. The proper interpretation of the loop cost on a shared line is that it is a joint cost that is common to the two dedicated connections. In his direct testimony, Dr. Cabe supported this correct interpretation when he stated that:

> "In economic parlance, the vast majority of the costs of providing various portions of the loop bandwidth are joint or 'shared' costs…There is no one economically correct way to identify a specific portion of the joint cost of the

loop with a specific portion of that loop's bandwidth" [Cabe Direct, p. 10]

This statement comports with proper economic analysis; it is supported by the behavior of joint products; and it is supported by Covad's own witness in another proceeding. It is curious that in his response testimony, Dr. Cabe contradicts his correct interpretation by taking the position that:

> "the analog voice portion of the loop causes the [loop] costs and the line shared access to the high bandwidth portion of the loop does not cause any loop costs." [Cabe Response, p. 12]

Dr. Cabe bases what seems to be an about-face on a faulty analysis of joint costs. He claims that, because the low-frequency spectrum is sold first, it causes the cost of the loop on a shared line. While it may be true that the low-frequency spectrum is most often sold first, the order of sale is not relevant to the proper analysis of costs and prices of joint products. For costing and pricing purposes, joint products are defined by how they are produced, not the order in which they are sold. Joint products are produced by the same process, and the cost of producing two products with the same process is a joint cost. No matter which is sold first, the low and high-frequency are both inherent in the loop, and neither is produced before the other. Because the two bandwidths on shared lines are produced in the same process, the two dedicated connections are joint products, and the cost of the loop on a shared line is a joint cost. Dr. Fagerlund, of the Department of Commerce in Minnesota, summed up the issue correctly as follows:

> "The additional cost to use the HUNE [high-frequency spectrum UNE], over and above the cost of the loop used for voice grade spectrum, is zero. Likewise, the additional cost to use the voice grade portion of the loop, over and above the cost of the HUNE, is zero."[1]

In other words, the loop is a joint cost in the production of the two dedicated connections on a shared line. From the perspective of proper costing and pricing analysis, it does not make sense to claim that one dedicated connection causes all of the cost of the loop, and the other causes none. It is a matter of good economics and sound business practice that a competitive firm would not give away the high-frequency spectrum on its loops, especially to a potential competitor, without expecting something in return. A competitive firm would allocate a portion of the loop cost for recovery by the high-frequency spectrum UNE. Dr. Cabe's new position is

[1] Rebuttal Testimony of Dr. Edward Fagerlund on behalf of the Minnesota Department of Commerce, Before the Minnesota Public Utilities Commission, Docket No. P999/CI-99-1665, May 26, 2000, p. 12.

contrary to his earlier position, contrary to proper economic analysis, and contrary to what would occur in a competitive market.

Q. IS DR. CABE'S POSTION ALSO CONTRARY TO THE TESTIMONY OF THE ECONOMIC WITNESS FOR COVAD AND RHYTHMS IN MINNESOTA?

A. Yes. In the Minnesota line sharing proceeding, the economic witness for Rhythms and Covad, Dr. Beard, stated correctly that line sharing creates a circumstance that is "termed 'joint supply' in the economics literature, and efficient pricing rules for jointly supplied goods have been studied for many years."[2] Dr. Beard went on to explain that the analysis of this goes back at least to John Stuart Mill (1806-1873) who wrote that:

> "It sometimes happens that two different commodities have what may be termed joint cost of production. They are both products of the same operation…and the outlay is incurred for the sake of both together, not part for one and part for the other. The same outlay would be incurred for either of the two, if the other were not wanted or used at all."[3]

This statement is as true today as it was over one hundred years ago. It is a very good description of a cost that is common to two jointly produced commodities or, in this case, two dedicated connections provided on one loop. When a line is used to provide two dedicated connections, these connections are jointly provided, and the underlying loop costs are common to both.[4]

Q. WHAT GUIDANCE CAN BE DRAWN FROM COMPETITIVE MARKETS FOR ALLOCATING A PORTION OF THE LOOP COST FOR RECOVERY BY THE PRICE OF THE HIGH-FREQUENCY SPECTRUM UNE?

A. In a competitive market, a firm would not give away the high-frequency spectrum UNE without expecting something in return, even if the low-frequency dedicated connection was sold first. As a general proposition, the joint product with the stronger demand will tend to have the higher price. With the rapidly growing demand for high-bandwidth services by many households and businesses, the demands for the low and high-frequencies on a loop may change relative to each other. A proper pricing structure will allow for the changing

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2 Direct Testimony of Dr. T. Randolph Beard on behalf of Covad Communications Company, New Edge Networks, Inc., Northpoint Communications, Jato Communications Corp. and Rhythms Netconnections, Inc., Before the Minnespta Public Utilities Commission, Docket No. P999/CI-99-1665, May 26, 2000, p. 11.

3 Mill, John Stuart. "Principles of Political Economy," Longmans, Green and Co., 1929 (First Edition 1869), pp. 569-570.

4 It bears noting that Dr. Beard goes on to reach the incorrect conclusion that the price of the high-frequency spectrum UNE should be priced at zero. His error comes from failing to recognize that prices for retail services, especially subsidy-laden prices, are not relevant to the process of setting a cost-based price for an unbundled network element.

pattern of demand. As I discuss below, setting the price for this UNE equal to 50 percent of the price of an unbundled loop will allow room for a competitive market to develop for the high-frequency spectrum on loops. A very low, or zero, price will preclude the development of a market for this spectrum.

DOES MR. SPINKS RECOGNIZE THAT THE PRICE FOR AN UNBUNDLED NETWORK ELEMENT SHOULD RECOVER A REASONABLE SHARE OF COMMON COST?

Yes. Mr. Spinks establishes the correct position that the price for an unbundled element should include recovery of common costs. He states that "the TELRIC for line sharing is zero; the only question is what is the reasonable share of common and overhead cost to use for line sharing." [Spinks Response Testimony, pp. 12-13] The FCC provides a restatement of this concept in terms more applicable to this proceeding:

> "the prices that new entrants pay for interconnection and unbundled elements should be based on the local telephone companies' Total Service Long Run Incremental Cost of a particular element, which the Commission calls 'Total Element Long-Run Incremental Cost' (TELRIC), plus a reasonable share of forward-looking joint and common costs."[5]

The use of the term "joint cost" in the FCC's guidelines goes directly to the issue at hand. On a shared line, the bandwidths that are used to provide the two dedicated connections are produced in the same process, which means that the two connections are joint products, and the cost of the loop is a joint cost. The FCC and this Commission recognized that a cost-based price for a UNE should include a reasonable allocation of joint costs.

Q. DOES MR. SPINKS ESTABLISH A REASONABLE CEILING ON THE AMOUNT OF THE LOOP COST THAT SHOULD BE RECOVERED BY THE PRICE OF THE HIGH-FREQUENCY SPECTRUM UNE?

A. Yes. Mr. Spinks states that no more than 50 percent of the common cost should be allocated for recovery by the price of the high-frequency spectrum UNE. [Spinks Response Testimony, p. 14] This is conceptually consistent with my position. It bears noting that Mr. Spinks does not recognize that, for a shared line, the UNE loop is a joint cost or, in a broader sense, a common cost.[6]

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5 FCC 96-325, First Report and Order, Released August 8, 1996, CC Docket Nos. 96-98 and 95-185, Paragraph 29.

6 For purposes of this proceeding, a joint cost is a cost that is common to only a subset of network elements or services. As such, a joint cost is a special type of common cost.

B. UNE Prices and the Development of Efficient Competition

Q. DO YOU AGREE WITH DR. CABE THAT A UNE PRICE OF ZERO WILL PROMOTE THE DEVELOPMENT OF EFFICIENT COMPETITION? [CABE RESPONSE, P. 8]

A. No. Setting a price below what would reasonably prevail in a competitive telecommunications market will disrupt, rather than promote, the development of efficient competition. A price of zero for this UNE would not occur in a competitive market. A competitive firm would not give away the high-frequency spectrum on its loops, especially to a potential competitor, without expecting something in return.

The proper economic principle for allocating the portion of the joint loop cost for recovery by the price of the high-frequency spectrum UNE is that this allocation should replicate a competitive allocation to the greatest extent possible. A fundamental economic concept underlying the decision to transform local telecommunications into a competitive market is that competition will provide the proper incentives for more efficient investment and innovation. In its First Report and Order, the FCC explains its rationale as it relates to competitive local exchange carriers (CLECs) as follows:

> "Because a pricing methodology based on forward-looking costs simulates the conditions in a competitive marketplace, it allows the requesting carrier [of unbundled elements] to produce efficiently and compete effectively, which should drive retail prices to their competitive levels."[7]

For the development of efficient competition it is also necessary for UNE prices to provide adequate compensation to the incumbent local exchange carrier (ILEC) that owns the asset. In the First Report and Order, the FCC recognized that this goal is also served by prices for UNEs that replicate competitive prices to the greatest extent possible. The FCC explains its rational as it relates to the ILECs as follows:

> "The just and reasonable rate standard of TELRIC plus a reasonable allocation of the joint and common costs of providing network elements that we are adopting attempts to replicate…the rates that would be charged in a competitive market."[8]

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7 FCC 96-325, First Report and Order, Released August 8, 1996, CC Docket Nos. 96-98 and 95-185, Paragraph 679.

8 FCC 96-325, First Report and Order, Released August 8, 1996, CC Docket Nos. 96-98 and 95-185, Paragraph 740.

In other words, to promote efficient investment, prices for unbundled elements should, from an economic viewpoint, replicate prices that would prevail in a competitive telecommunications market. A price for the high-frequency spectrum UNE that is out of sync with a price that would reasonably prevail in a competitive market will have a disruptive impact on local telecommunications services competition.

ARE YOU CONCERNED THAT A POSITIVE PRICE FOR THIS UNE WILL DISCRIMINATE AGAINST DSL PROVIDERS WHO USE THE HIGH-FREQUENCY SPECTRUM ON LOOPS?

To the contrary, a price of zero for spectrum on a loop will discriminate against other providers of high-speed Internet access that pay for the productive assets that they use. For example, there are a number of firms providing and preparing to provide high-speed Internet competition using wireless spectrum. Spectrum used by wireless competitors is not free.[9] The price for spectrum is either set in the auction process used by the FCC or by the forces of supply and demand in the competitive market.

Q. IS A POSITIVE PRICE ON SPECTRUM, WHICH HAS NO DIRECT COST, CONDUCIVE TO THE DEVELOPMENT OF EFFICIENT COMPETITION?

A. Yes. The main corollary between spectrum in the air and high-frequency spectrum on shared lines is the absence of direct costs. The corollary is limited by the fact that there are no direct or common costs associated with spectrum in the air. Nonetheless, a consideration of the prices of wireless spectrum is instructive. First and foremost, prices for wireless spectrum demonstrate that a competitive market will create prices for productive assets that are in limited supply, even if these assets do not have a direct cost. In a competitive market, prices have an important function of directing the assets to their highest value use. In wireless auctions, firms that have the highest expected value for spectrum are likely to bid more for the spectrum than other firms. In the words of Drs. Milgrom and Wilson:

> "Since a bidder's abilities to introduce valuable new services and to deploy them quickly, intensively and efficiently increase the value of a license to a bidder, an auction design that awards licenses to those bidders with the highest willingness to pay tends to promote the development and rapid deployment of new services in each area and the efficient and intensive use

[9] In the recent 39 Gigahertz auction, Winstar., ART, Hyperion, Milkyway Multipoint, and Tooker Fiber each purchased spectrum in Washington. In total, these firms bid over $5.7 million dollars for this spectrum.

of the spectrum."[10]

To the extent that the expected values of competitive firms are accurate, auctions will tend to deliver the spectrum to its highest value use. If efficient prices are not determined in the auction, the competitive process will drive the prices toward efficient levels after the auction. It also is instructive in our interpretation of the FCC's guidelines for pricing spectrum on copper wires to remember that this is the same Commission that auctions spectrum in the air.

Q. WOULD GIVING AWAY SPECTRUM ON COPPER LOOPS BE DISCRIMINATORY?

A. Yes. High-speed Internet access can be provided to consumers across a variety of mediums. Two of these mediums are wireless spectrum and spectrum on copper loops. Providers choosing between these two mediums for high-speed Internet access must determine which spectrum to use to provide service to their customers. This decision will depend in no small part on the cost of the underlying assets, including spectrum. If both types of spectrum are sold at competitive prices, the market will determine the efficient uses of each. This would be non-discriminatory. Setting a price for copper spectrum that is below a level that would be reasonable in a competitive market will discriminate against the use of wireless spectrum.

For wireless spectrum, the FCC uses an auction mechanism to set the initial price. For copper spectrum there is no auction mechanism. It is, nonetheless, important to set an initial price that would be reasonable in a competitive market. The initial price will act as a price ceiling, at least in the near term, for the use of the high-frequency spectrum.

Q. WHY WOULD A PRICE FOR THIS UNE EQUAL TO ONE-HALF OF THE COST OF THE LOOP SERVE AS A PRICE CEILING?

A. Qwest is not the only readily available source of the high-frequency spectrum on loops. The full spectrum of the UNE loop (i.e., an unbundled loop) is available to all CLECs and data local exchange carriers (DLECs) at regulated wholesale rates. Both CLECs and DLECs are free to lease an entire loop and sublease either the high or low spectrum portion to the other. The same result could be obtained through joint ventures between CLECs and DLECs. It is within such a free market that the competitive price for the high-frequency spectrum on loops will be determined.

I am more concerned about the consequences of setting the price too low. If, for example, the price is set at zero, the market for loop spectrum described above will not develop.

[10] Joint Statement of Paul R. Milgrom and Robert B. Wilson, FCC, Dkt. No. 93-253, In the Matter of Implementation of Section 309(j) of the Communications Act Competitive Bidding, at 7. (attached to Comments of Pacific Bell and Nevada Bell), November 10, 1993.

Q. WOULD YOU PLEASE SUMMARIZE YOUR REBUTTAL COMMENTS RELATED TO SETTING THE PRICE FOR THE HIGH-FREQUENCY SPECTRUM UNE?

A. The cost of the loop is common to the two dedicated connections on a shared line. As stated repeatedly in the FCC's First Report and Order, the price for a UNE should include a reasonable allocation of joint and common costs. This allocation can be guided by the recognition that: 1) the price should replicate that price that would prevail in a competitive market; 2) in a competitive market, the price would recover a portion of the loop cost; 3) there is no meaningful evidence that more or less than fifty percent of the loop cost should be allocated to the high-frequency spectrum UNE; and 4) whatever price is set in this proceeding will act as a price ceiling for competitors. Given these conditions, the most reasonable solution is to adopt a price for this UNE that is equal to one-half of the price of an unbundled loop.

C. An Imputation Test Does Not Prevent Price Competition

Q. WOULD YOU PLEASE COMMENT ON DR. CABE'S CONTENTION THAT AN IMPUTATION TEST WILL INSULATE QWEST FROM PRICE COMPETITION? [CABE RESPONSE, P. 7]

A. An imputation test will not insulate Qwest from price competition. With escalating competition, no player is insulated from price competition. The emerging competitive market for high-speed Internet access is not restricted to Qwest, Rhythms, and Covad. It includes other broadband providers, such as cable modem and broadband wireless service providers, and it can easily include full service CLECs. Competition from cable modem service providers is already established and expanding rapidly. The National Cable Television Association reports that there were 1.6 million cable modem subscribers at the end of 1999 and projects that the number will more than double, to 3.6 million, by the end of this year.[11]

An imputation test will not insulate Qwest from price competition from DLECs. If it turns out that the price for the high-frequency spectrum UNE set in this proceeding is above the competitive price, DLECs can form agreements with CLECs to gain ready access to the high frequency spectrum on unbundled loops. There are 21 active CLECs collocated in Qwest's wire centers in Washington, and 92 percent of Qwest's access lines are in wire centers where one or more of these CLECs are already collocated. Over 75 percent of Qwest's access lines are in wire centers with three or more collocated CLECs. An imputation test will also not insulate Qwest from price competition directly from full-service CLECs. If CLECs believe that they can improve their competitive positions by undercutting Qwest's prices for DSL service, an imputation test will not prevent them from doing so. And an imputation test will not protect Qwest from any DLEC that is able to gain an operating cost advantage over Qwest.

[11] Press Release, "Cable to Double Digital Video, Modem, and Telephony Subscribers During 2000", July 26, 2000, http://www.ncta.com/press-release.html.

Finally, an imputation test will not protect Qwest from price competition from broadband wireless providers. Wireless firms have already invested in spectrum to compete for broadband service revenues.

Q. IS DR. CABE CORRECT THAT QWEST HAS THE USE OF THE LOOP AT ZERO COST? [CABE RESPONSE, P. 7]

A. No. Qwest does not have use of the loop at zero cost. Qwest incurs the entire cost of the loop. In an increasingly competitive local exchange market Qwest faces legitimate concerns about its ability to recover the cost of its loop network.

FULL RECOVERY OF LOOP INVESTMENT BY QWEST IS UNCERTAIN

WOULD YOU PLEASE COMMENT ON DR. CABE'S STATEMENT THAT A PRICE GREATER THAN ZERO FOR THE HIGH-FRQUENCY SPECTRUM UNE WOULD "AMOUNT TO DOUBLE RECOVERY FOR QWEST"? [CABE RESPONSE, P. 4]

A. With the increasing development of competition, there is a legitimate concern that Qwest may not recover the full cost of its loop network, even with a positive price for the high-frequency spectrum UNE. It is a fact that it will take many years for Qwest to recover the long-term and ongoing investments in its loop network. It is also a fact that local telecommunications is becoming increasingly competitive. A determination of full recovery, therefore, needs to include a consideration of the ability of Qwest to recover its loop investment with periodic payments from retail service revenues and UNE prices over a number of years in a competitive environment.

Q. HOW HAS COMPETITION CHANGED THE CONSIDERATION OF FULL RECOVERY OF QWEST'S INVESTMENT IN ITS LOOP NETWORK?

A. The pertinent question for considering full recovery of Qwest's investment in its loop network is: Will Qwest will be able, in the future, to fully recover the cost of its investments? Considerations of this issue were more straightforward in the past, when implicit subsidies were sustainable and almost all local telecommunications demand was served by the ILEC. The Telecommunications Act of 1996 irrevocably changed the environment of local telecommunications. All of Qwest's products are now open to competition. With competitors eagerly seeking and exploiting profitable opportunities, there is no assurance that the prices and volumes required to provide full recovery will continue to be realized.

In the increasingly competitive local telecommunications market, this Commission is no longer able to guarantee the full recovery of Qwest's long-term investments. Other firms will serve an increasing proportion of local telecommunications demand. There will be winners and losers among competitors. This is the nature of competition. Furthermore, it is clear that Qwest cannot depend on recovering its loop costs from its current subsidy-laden pricing structure, which is unsustainable in a competitive market.

Q. THE HIGH-FREQUENCY SPECTRUM IS A NEW UNE; WILL ALL REVENUE GENERATED BY THIS UNE BE INCREMENTAL TO QWEST'S CURRENT REVENUES?

A. No, it will not. It is likely that the high-frequency spectrum UNE will be used to replace current elements or services. For example, many of Qwest's customers currently use a second line to access the Internet with dial-up modems. The high-frequency spectrum UNE can provide much faster Internet access and also eliminate the need for a second line for these customers. It is expected, therefore, that revenues from the high-frequency spectrum UNE will be at least somewhat offset by losses from second lines. Perhaps even more significant is the prospect of voice over DSL service, which has the potential of supplanting Qwest as the provider of voice services which currently make substantial contributions to the recovery of costs.

Q. WOULD YOU PLEASE SUMMARIZE YOUR REBUTTAL COMMENTS RELATED THE RECOVERY OF THE COST OF QWEST LOOP NETWORK?

A. Competition is escalating across a wide range of local telecommunications services. The increase in competition is due, in part, to the availability of Qwest's productive assets to competitors at TELRIC based prices. Qwest is required to lease bare unbundled loops at TELRIC, and it is now required to lease just the high-frequency of its customers' loops at a price that will be determined in this proceeding. Escalating competition is also due to the fact that competitors are eagerly seeking profitable opportunities, including opportunities to exploit Qwest's subsidy-laden retail pricing structure. In this environment, there is a legitimate concern about Qwest's ability to recover the full cost of its loop network from its current customers and prices.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.