Exhibit No. _____(CRD-1T)
Docket No. UT-011439

BEFORE THE

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

IN THE MATTER OF THE PETITION OF VERIZON NORTHWEST INC. FOR WAIVER OF WAC 480-120-071(2)(a)	**)** **)** **)**	**DOCKET NO. UT-011439**

DIRECT TESTIMONY OF

CARL R. DANNER

ON BEHALF OF

VERIZON NORTHWEST INC.

March 6, 2002

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I. INTRODUCTION

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

A. My name is Carl R. Danner. I am a Director at Wilk & Associates/LECG, LLC, 100 Bush Street, Suite 1650, San Francisco, CA 94104.

Q. PLEASE SUMMARIZE YOUR BACKGROUND AND QUALIFICATIONS.

A. I hold a Ph.D. in Public Policy from Harvard University, where my dissertation addressed the strategic management of telecommunications regulatory reform. My experience involves research into and teaching about regulation, as well as helping to perform regulation inside government.

I was formerly Advisor and Chief of Staff to Commissioner G. Mitchell Wilk at the California Public Utilities Commission (CPUC). In that role I designed key components in telephone regulation for California and helped develop new regulatory policies and programs for the cellular industry, long distance telecommunications, and other communications services -- including the CPUC's adoption of price cap incentive regulation for local telephone companies.

Since leaving the CPUC I have served as a consultant and advisor on utility regulatory issues for a decade, with an emphasis on the telecommunications and energy industries. I have published articles and case studies addressing the regulation of telecommunications, natural gas, electricity, and postal services, and filed testimony before the public utility

commissions of six states. Exhibit ____ (CRD-2) provides a full resume of my qualifications and experience.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. I have been asked by Verizon Northwest Inc. (Verizon) to consider whether it is appropriate for the Commission to grant a waiver of its line extension rule for the two locations covered by Verizon's petition in this case: the Taylor location and the Timm Ranch location, which are described in the testimony of Verizon's witness Kay Ruosch.

Q. WHAT IS YOUR CONCLUSION AND RECOMMENDATION TO THE COMMISSION?

A. From the standpoint of sound economics, fairness, and good regulatory policy, a waiver is appropriate in this case, and I recommend that Verizon's request be granted.

Q. WHY IS A WAIVER APPROPRIATE FROM THE STANDPOINT OF ECONOMICS?

A. What it would cost to put wired lines in place from Verizon's existing facilities is dramatically more than the service could be worth either to the subscribers in question or to customers generally. Practically speaking, the economic loss would not just be a matter of accounting or of subsidy flows, but would be measured in terms of lost goods and services to the people of Washington. Unfortunately, these extensions are just not worth the expense, no matter who might end up footing the bill.

Moreover, there are more economical alternatives available to the applicants, and some are already using them.

Q. WHY IS A WAIVER FAIR?

A. Under the Commission's rule beyond the nominal charge paid by the applicants, these extensions would be funded by other telecommunications customers and/or by Verizon's shareholders. It is not fair to require customers or shareholders to subsidize line extensions that will not benefit them (or anyone) in any way proportional to their cost.

Q. WHY IS A WAIVER GOOD REGULATORY POLICY?

A. Good regulatory policy should not require outcomes that are wasteful or unfair. The waiver provision the Commission included in its line extension rule appears perfectly intended for an instance such as this one, where an unthinking application of the rule would lead to a wasteful and unfair result.

Q. WHAT ABOUT THE INTERESTS OF THE CUSTOMERS WHO HAVE REQUESTED THE LINE EXTENSIONS?

A. It is understandable that individual customers might want to take advantage of an opportunity apparently offered them by the Commission's new policy. But we need to remember that this opportunity would have to be funded by others. Additionally, these customers have reasonable telecommunications capabilities already in use, or available to them.

Some people find value in living in remote or isolated locations, but there are tradeoffs involved -- such as peace and quiet versus limited social opportunities, natural beauty versus limited cultural and entertainment options, freedom from urban stress versus distance from specialist medical care, etc. Similarly, from a more tangible perspective, while remote property or housing may be relatively inexpensive, the cost of connecting to fixed utility networks may be very high and render such service impractical from an economic standpoint.

It is not the Commission's role (or my role) to tell people where they should live, or how they should manage the tradeoffs that come with different lifestyles or locations. But it is the Commission's responsibility to set some reasonable bounds on its line extension policy – based on economics and fairness to those who would foot the bill – that can then be relied upon by customers in making their own choices about the costs and benefits of remote living.

II. PRINCIPLES FOR CONSIDERING THE ECONOMICS OF LINE EXTENSION REQUESTS

Q. WHAT BASIC PRINCIPLES OF ECONOMICS APPLY TO THIS SITUATION?

A. While I expect that the Commission is familiar with economic principles, it is helpful to begin with a brief discussion.

Two of the fundamental principles of economics are as follows:

1. People face tradeoffs – to get one thing that we like, we usually have to give up another thing we like.
2. The cost of something is what you give up to get it.[1]

The first principle is dictated by the reality that resources are limited. There are not enough goods and services in the world to give everyone everything they might want. We must choose.

The second principle affirms the consequence of choice. By deciding to have one thing, we consume resources that could have been used to create something else. The genuine cost of anything is not the dollars spent to acquire it, but the loss of other things that one could have had instead. For example, if a government agency adopts policies to promote building more housing, then the raw materials and labor used in that process will be diverted from creating something else. It does not matter how the housing is paid for; carpenters working on a billionaire's mansion are just as unavailable for other purposes as their counterparts who might be erecting subsidized low-income housing.

Q. HOW DO THESE PRINCIPLES OF ECONOMICS APPLY TO TELEPHONE LINE EXTENSIONS?

A. Building a telephone line extension uses up real resources. The equipment and supplies and the labor of the numerous people involved create a new telephone line instead of

[1] These are the first two of the "Ten Principles of Economics" described in Mankiw, N. Gregory. Principles of Economics (The Dryden Press, 1998), chapter 1.

other goods or services for the people of Washington. If the Commission ordered these line extensions to go ahead, costly resources would be consumed in the process regardless of who paid the bill for the construction – whether it is the telephone company, customers generally, taxpayers, or the particular customer who is getting the new telephone line.[2]

Q. WHEN DOES IT MAKE ECONOMIC SENSE TO USE UP RESOURCES TO CREATE SOMETHING LIKE A LINE EXTENSION?

A. Just as for any decision to build something or deliver a service, it makes economic sense to go ahead when the result is more valuable than what is consumed in making it. If we take a dollar's worth of resources and create a product that is worth two dollars to a consumer, that is a gain. If we take a dollar's worth of goods and create something that is worth only fifty cents to a consumer, that is a loss, and we would have been better off just keeping the dollar's worth of resources we had to begin with.

The beauty of the American economy is that it is pretty good at adding value in the process of making goods or creating services for people. That is what drives the measured output of the economy. Every time a dollar's worth of resources is turned into a product that sells for two dollars, people get better off and the economy gains.

[2] I focus on the initial construction costs of the extensions because they are so large, and because it is evident that they could never be recovered from typical residential telephone bills. Ms. Ruosch's testimony describes reasons why the on-going maintenance of these lines would be costly, as well.

Q. WHAT IS THE VALUE OF A PRODUCT OR SERVICE TO A CONSUMER?

A. Consumers determine value by deciding how much they are willing to pay for something – really, what else they are willing to forego. This decision is based on tradeoffs consumers face. For example, a consumer might look at a dozen apples and decide that they are at least as attractive as anything else he might find for five dollars. In that case, the apples are worth five dollars. Consumers make these kinds of tradeoffs all the time.

Note that value is determined by the maximum a consumer would be willing to pay not a lower amount he actually pays. That is why buying things makes people better off. If the apples were only worth three dollars to the consumer, then buying them would involve trading three dollars for three dollars – in other words, a no-gain situation. In the more usual situation, the consumer pays less than the value he gets, and ends up ahead. So, value is related to the maximum someone is willing to pay for a service, not necessarily the price he happens to pay.

Q. IS TELEPHONE SERVICE WORTH MORE TO CUSTOMERS THAN THE TARIFFED PRICE THEY PAY?

A. For most customers, the answer clearly is yes. We know this because price elasticity studies show that most customers would keep telephone service even if its price increased significantly. Thus, on average the value of telephone service must be higher than its current, tariffed price.

Q. ARE THERE CUSTOMERS FOR WHOM TELEPHONE SERVICE IS WORTH ABOUT WHAT THEY ARE NOW PAYING, OR LESS?

A. Clearly so. There is a relatively small group of consumers who do not see very much value in telephone service. These are the customers who might drop service in response to even a small price increase, or who have no service at all. For example, in my early years on staff at the CPUC I worked with one person who lived in a cabin and did not have a telephone, even though service was available to him. He said he would have found a telephone intrusive at his home.

Q. IS VALUE CREATED FOR OTHER SUBSCRIBERS OF A TELEPHONE NETWORK WHEN A NEW SUBSCRIBER TAKES TELEPHONE SERVICE?

A. It is often suggested that an "externality" value is created when a telephone network gets larger, because (on average) the larger the network, the more valuable it is to any given subscriber. Of course, this works both ways: new subscribers also gain by being able to call the old subscribers. In any event, in principle the value of telephone service should include its value to the customer in question, plus the externality value of that customer to other subscribers.

However, it is also my experience that this externality value is usually spoken of only in the abstract; those who discuss it cannot say how large it is in dollars and cents. A study by the late Lewis Perl is the only analysis of which I am aware that allows one to make

an estimate of how much that externality is actually worth, as Professor Woroch of U.C. Berkeley described in a recent survey article:

> In his study, Perl (1983) found that demand for residential access was increasing in the density of phone subscription in a household's local calling area, confirming the presence of a network externality. The effect was small, however, as might be expected given the high U.S. telephone penetration rates during the sample period. Furthermore, unlike the earlier competitive experience, all networks were interconnected, further realising the available network externalities. [3]

Based on a study of 1980 data about telephone demand for a large sample of U.S. households, Dr. Perl calculated a rough estimate that a subsidy of between $2 and $7 per month to any given subscriber would account for the externality value that subscriber would bring to the network (and hence to other customers collectively).[4] Clearly, this value is orders of magnitude less than would be needed to justify the costs under discussion in this case. [5]

Aside from the numerical results of Dr. Perl's study, there are some common-sense explanations as to why this externality value has to be relatively small. As Professor Woroch notes, a network achieves most of its potential value once most people are subscribers; at that point, adding the relatively few customers who still lack service may not add much more value to the network as a whole. Indeed, we are past the time when

[3] Woroch, Glenn A. "Local Network Competition," forthcoming in Cave, Martin, Majumdar, Sumit, and Ingo Vogelsang. Handbook of Telecommunications Economics (Elsevier Publishing, 2002). Accessed via http://elsa.berkeley.edu/users/woroch/ on February 16, 2002.

[4] Perl, L.J. "Residential Demand for Telephone Service, Central Services Organization, Inc. of the Bell Operating Companies" (1983).

[5] Today's higher telephone subscribership might reduce Dr. Perl's estimates further. Nationwide telephone penetration grew from 92.9 percent in 1980, to 94.1 percent in November 2000. Comparable figures for Washington were 93.0 percent in 1984 and 94.9 percent in 2000. FCC, Trends in Telephone Service (August 2001), tables 17.1, 17.2, and 17.3.

most people have to wonder whether the people they want to call will also have a telephone – which is the essence of the externality question.

Q. ARE THERE WAYS TO LEARN WHAT TELEPHONE SERVICE MAY BE WORTH TO A CUSTOMER?

A. As I noted above, the full value of telephone service to customers is not evident from the tariffed price they pay. However, we can at least set a ceiling for that value if a customer does not buy the service at a particular price. For example, my former colleague at the CPUC could have had telephone service for about $10-15 a month, but chose not to. That decision showed that telephone service was worth less than $10-15 a month to him. As another approach, we can start with what the line extension would cost, and ask whether it is at all reasonable to believe that service could possibly be worth that much.

III. THE COST AND VALUE OF THE LINE EXTENSIONS

Q. TO WHAT TELECOMMUNICATIONS CAPABILITIES DO THE POTENTIAL CUSTOMERS AT TIMM RANCH ALREADY HAVE ACCESS, EVEN WITHOUT A WIRED SERVICE EXTENSION?

A. I understand that radiophone service has been up and running to at least one subscriber at that location for years, and that a number of the residents also have cellular service that functions if they drive two or three miles down the road to obtain reception. Emergency calls can be made on the radiophone, or by cellular phone on occasions when the radiophone may be out due to a facilities problem. At least one of the households

subscribes to premium DirecTV satellite service (in addition to a second satellite service of some kind), and presumably could also obtain high-speed Internet access from the same satellite provider.[6] Thus, at this location the potential customers already have access to (or are using) most of the capabilities that wired service would provide to connect to the telephone network, or the Internet. It appears that the Timm Ranch residents have been resourceful and creative at meeting their communication needs.

Q. TO WHAT TELECOMMUNICATIONS CAPABILITIES DO THE POTENTIAL CUSTOMERS HAVE ACCESS AT THE TAYLOR LOCATION, WITHOUT A WIRED EXTENSION?

A. At least one potential customer already has two wireless phone options in use, a radiophone and a cellular phone that provides reliable service. This potential customer also has satellite TV service from a provider that also offers high-speed Internet access. Emergency calls can be made either on the radiophone or on the cellular phone. The residents at this location have also installed booster antennas to improve their wireless services. Here again, it appears that these potential customers have been resourceful and creative at meeting their communications needs.

Q. HOW MUCH WILL THE TWO LINE EXTENSIONS COST?

A. As Ms. Ruosch reports, the estimated total investment cost is $881,497 for five customers at the Timm Ranch location and $329,839 for three customers at the Taylor location – or, roughly $150,000 per customer.

[6] This is known as DirecPC service. A combination TV and Internet access service called DirecDuo can be obtained using a single satellite dish.

Q. WHAT PHYSICAL RESOURCES WOULD THE ABOVE COST REPRESENT?

A. Verizon estimates the effort would include, over at least a three-month period:

- Use of an array of heavy equipment, including a D8 Cat or equivalent, two industrial size backhoes, a boring machine and rocksaw cutter as needed, four to five medium sized trucks, and a probable need for a fire protection water pumper truck;
- The full time efforts of a five to seven person crew;
- 750 hours of skilled engineering labor (including some labor already used in the planning process), 635 hours of skilled cable splicer labor, and 200 hours of skilled central office installer labor; and
- Tens of thousands of feet of copper wire and fiber, with associated electrical, electronic and other outside plant components.

Clearly, this would be a considerable construction effort consuming actual physical resources on a substantial scale.

Q. IS THERE ANY CHANCE THAT THE VALUE CREATED BY THE EXTENSIONS WOULD EQUAL OR EXCEED THEIR COST?

A. I do not believe there is any reasonable way to conclude that these extensions would create $150,000 of value for each customer, even if they were to provide service where none now exists.

Q. IS THERE DATA THAT CAN HELP DETERMINE WHAT THIS SERVICE COULD POTENTIALLY BE WORTH TO A CUSTOMER?

A. Under the prior line extension tariff, Verizon calculated that the line extension charges to the customers would have been approximately $102,000 for the Timm Ranch and $33,000 for the Taylor location – or about one-eighth to one-tenth of the cost. The applicants did not apply for service under this prior tariff. With respect to Timm Ranch, one of the applicants recalls being quoted a price of about $23,000 for the line extension in 1983-84 (roughly $41,000 in 2000 dollars)[7] and declining to pay that amount. It also appears that an applicant at the Taylor location declined to pursue service in response to a quote of about $40,000 at one point. Although this information only determines a ceiling, we thereby know that the value of the service to these customers is less than ten to twelve cents on the dollar of what it would cost to provide.

To go a step further, we can consider what it would mean to assume a lesser but still significant value that each customer might place on the service. If, for example, all eight customers were willing to pay $5,000 each – still a considerable sum – then the service would be worth less than a nickel out of every dollar spent to provide it. In my opinion, turning dollars into nickels is not good public policy.

It is understandable, of course, why the customers in question may not have wanted to – or been able to – come up with $33,000 or $102,000 to obtain wired telephone service before. It ought to be equally understandable to question why, in that case, other

[7] 2001 Statistical Abstract of the United States, table 693 (Seattle-Tacoma consumer price index rose from 100 in 1982-84 to 179.2 in 2000).

customers and shareholders should be asked to come up with as much as ten times those amounts to provide it.

IV. POLICY IMPLICATIONS FOR WASHINGTON

Q. IS THERE A GENERAL PROBLEM WITH UNIVERSAL TELEPHONE SERVICE IN WASHINGTON?

A. There does not appear to be. The most recent Federal Communications Commission statistics show that 94.9 percent of households have telephone service, as compared to 94.4 percent of households nationwide. In Washington, 68,000 subscribers received discounted monthly Lifeline service in 2000, while 29,000 received Linkup assistance in paying charges to establish service; the total payments for these low-income support programs were $6.6 million.[8] By contrast, in this case we are discussing spending $1.2 million in order to provide service to eight potential customers.

Q. WOULD ANY LINE EXTENSIONS MADE POSSIBLE BY THE NEW POLICY PASS A TEST OF PROVIDING BENEFITS EQUAL TO THEIR COSTS?

A. While it is difficult to anticipate all situations and reasons why service may not previously have been provided, the large subsidies the rule permits for line extensions will probably mean that most will be losing propositions from the standpoint of societal costs and benefits.

[8] Statistics from FCC, Trends in Telephone Service, August 2002, tables 7.2, 7.3, 7.6, 17.2.

Q. IS YOUR POSITION THAT ANY APPLICATION OF THE RULE IS INAPPROPRIATE?

A. No. Verizon is asking to work within the rule by using the waiver provision it includes. In that regard, from a standpoint of common sense and fairness there have to be some bounds to a policy that (in these instances) would require other people to spend over a million dollars so these eight customers can have wired telephone service at the locations they prefer. By comparison, it would be less costly to buy these customers nice houses that already have telephone lines installed. This is also a highly inefficient way to transfer money to these potential subscribers. For every dollar taken from a customer paying the subsidy, the recipients will gain just pennies in value. The rest will be wasted.

Q. DO YOU HAVE A SPECIFIC COST-BENEFIT THRESHOLD TO RECOMMEND TO THE COMMISSION?

A. No, except to point out that these proposed extensions, in my opinion, fail any reasonable sense of what the Commission should compel other customers to subsidize. By authorizing waivers in this case, the Commission can begin to define the bounds of what is reasonable.

Q. IF THE COMMISSION DOES NOT AUTHORIZE WAIVERS IN THIS CASE, WHAT SIGNAL WILL THAT SEND TO PERSONS MAKING DECISIONS TO RELOCATE?

A. People move and make relocation decisions all the time, and weigh a range of tradeoffs in doing so. Up to this point, one disadvantage of moving to remote locations has been an obligation to pay a significant portion of the expense of obtaining wired telephone

service. If the Commission decides that other customers and shareholders can be compelled to spend over a million dollars just to satisfy eight households' request for wired telephone service, it will signal that no matter where someone chooses to locate, someone else will pay whatever it takes to give them a wired telephone. This will create an increased incentive of some size for people to move to remote places. To the extent that incentive has an impact, it will increase economic losses and expense to other customers due to such line extensions. While such an inducement will exist to some degree under any application of the new policy, I believe the Commission should recognize that it is not a good idea to offer the kind of open-ended commitment represented by these highly costly requests.

Q. DOES THAT COMPLETE YOUR DIRECT TESTIMONY?

A. Yes.