Exhibit No._____(HEHEBP-34T)
Docket No. UT-050778

BEFORE THE

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

In the matter of the Petition of:	**)**	**DOCKET NO. UT-050778**
Douglas and Jessica Rupp; Kathie Dunn and	**)**	
Chris Hall; Melinda Inman; Verlin	**)**	
Jacobs; Anthony Williams; Christine and	**)**	
Samuel Inman; Robert Jacobs; and Sam	**)**	
Haverkemp and Chris Portrey,	**)**	
	)	
Petitioners,	**)**	
	)	
vs.	**)**	
	)	
Verizon Northwest Inc.,	**)**	
	)	
Respondent.	**)**	

REBUTTAL TESTIMONY OF

HEATHER E. HUDSON
and
EDWIN B. PARKER

ON BEHALF OF

RUPP, et al

MARCH 21, 2006

Q. DR. HUDSON, PLEASE STATE YOUR NAME, POSITION, AND WORK ADDRESS.

A. My name is Heather E. Hudson. I am Professor and Director of the Telecommunications Management and Policy Program in the Graduate School of Management at the University of San Francisco, 2130 Fulton Street, San Francisco, CA 94117.

Q. PLEASE SUMMARIZE YOUR BACKGROUND AND QUALIFICATIONS.

A. I am a professor and Director of the Telecommunications Management and Policy Program in the School of Business and Management at the University of San Francisco. I received an Honours BA from the University of British Columbia, MA and PhD from Stanford University, and JD from the University of Texas at Austin. I am a member of the State Bar of California.

My research focuses on applications of information and communication technologies (ICTs) for socio-economic development and policies to extend affordable access to new technologies and services in rural and developing regions. I have planned and evaluated communication projects in northern Canada, Alaska, and more than 50 developing countries and emerging economies in Africa, Asia, the South Pacific, the Caribbean, the Middle East, Eastern Europe, and Latin America. I am the author of numerous articles as well as several books including *From Rural Village to Global Village: Telecommunications for Developing in the Information Age, Global Connections: International Telecommunications Infrastructure and Policy, Communication Satellites: Their Development and Impact* and *When Telephones Reach the Village,* and co-author with Edwin Parker et al. of *Electronic Byways: State*

Policies for Rural Development through Telecommunications and *Rural America in the Information Age.*

My full CV is attached to this submission as Exhibit HEH-35.

Q. HOW IS YOUR EXPERTISE RELEVANT TO THIS CASE?

A. I first became interested in the role of telecommunications in rural development when doing field work for the Canadian government in the early 1970s on communications planning for the Arctic and subArctic. Invariably people in isolated communities cited telephone service as their first priority – to get help in an emergency, to stay in touch with family and friends, to conduct business, to obtain public services. Their priorities were echoed by people in Alaskan villages where I worked with Ed Parker on telemedicine evaluation and rural communications planning in the mid 1970s, and by people in the developing world where I have worked frequently for more than 25 years. These priorities are echoed by Douglas and Jessica Rupp and their neighbors in the Skyko 2 community near Index, Washington, in 2006.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. I have been asked to assist Douglas Rupp and his neighboring petitioners in Skyko 2 to explain why telephone service should be provided to them, and to respond to arguments raised by Carl Danner in his testimony on behalf of Verizon Northwest.

Q. HAVE YOU PREVIOUSLY FILED TESTIMONY ADDRESSING SUCH ISSUES?

A. I have not testified on such issues in Washington State, but I have testified on similar issues in Alaska, and before the California Public Utilities Commission (CPUC), the National Telecommunications and Information Administration (NTIA), other federal agencies and legislators concerned with rural telecommunications, the National Association of Regulatory Utilities Commissions (NARUC), and the Western Conference of Public Service Commissioners. I have also been a member of advisory committees for the Federal Communications Commission (FCC), NTIA, Office of Technology Assessment (OTA) and National Research Council. Internationally, I have testified before the Canadian Radio-Television and Telecommunications Commission (CRTC), and conducted studies on rural communications and universal service for the World Bank, the International Telecommunication Union (ITU), the U.S. Agency for International Development (USAID), the International Development Research Centre (IDRC), and other international organizations and agencies.

Q. HOW DOES TELECOMMUNICATIONS CONTRIBUTE TO SOCIAL AND ECONOMIC DEVELOPMENT?

A. The literature on the socio-economic benefits of telecommunications is extensive. Research on the benefits of rural communications is summarized in my recent book *From Rural Village to Global Village: Telecommunications for Development in the Information Age* (2006).[1]

[1] Hudson, Heather E. *From Rural Village to Global Village: Telecommunications for Development in the Information Age.* Mahwah, NJ: Erlbaum, 2006. This book includes research on the impact of access to the Internet as well as to cellular telephony and other recent services. However, the research in this field goes back several decades. Research relevant to the situation in this case, where there the issue is provision of basic telephone service, is closer to the conditions addressed in my first book *When Telephones Reach the Village: The Role of Telecommunications in Rural Development.* Norwood, NJ: Ablex, 1984.

In general, the ability to access and share information can contribute to the development process by improving:

- *efficiency,* or the ratio of output to cost (e.g. saving time and/or money);
- *effectiveness,* or the quality of products and services (such as improving health care and other social services);
- *reach*, or the ability to contact new customers or clients (finding new suppliers or new markets, teleworking, taking courses at home, etc.)
- *equity*, or the distribution of development benefits throughout the society (such as to rural and remote areas, to minorities and disabled populations).

These benefits may be direct – i.e. to the parties using the telephone, or indirect, benefiting others in the society. These indirect benefits are also known as externalities. For example, a tourist who is injured will benefit if a local resident can use a telephone to summon help. An absent resident whose house catches fire will benefit if a neighbor calls the fire department.

There are also public health benefits of telecommunications services.[2] Among those relevant for this case are patient monitoring – to follow up on patients who have been discharged from hospitals or had serious illnesses, and logistics – arranging for medical appointments, ordering medications, etc. Another benefit is the ability to monitor elderly or disabled residents. In addition to the increased peace of mind for these residents and their family and friends, there are obvious health care benefits in being able to summon help immediately, and there may be economic benefits in enabling such residents to stay in their own homes rather

[2] See Hudson, Heather E. *From Rural Village to Global Village: Telecommunications for Development in the Information Age.* Mahwah, NJ: Erlbaum, 2006, pp. 47 ff.

than having to be placed in nursing homes or other institutions. For example, many available emergency monitoring systems are now available that can provide cost-effective means of enabling elderly and disabled residents to stay in their own homes.

Q. DR. HUDSON, HOW IS THIS RESEARCH RELEVANT TO PUBLIC POLICY?

A. It is the importance of communication for socio-economic development and equity that has been the foundation of public interest policies in telecommunications, including the concept of universal service as a means of providing accessible and affordable communications throughout the society.

Q. HOW ARE THESE SOCIO-ECONOMIC BENEFITS RELEVANT TO THIS CASE?

A. In terms of usage, the most frequently given reasons to install telecommunications systems are for public safety, for example, to get help in emergencies. As noted in my book, telecommunications is used not only "to summon immediate … assistance" but also "to communicate with emergency vehicles and staff."[3] The petitioners cite numerous examples of the need for telephone service for emergencies. Denise Blanchard notes several incidents for which she and other residents needed emergency assistance. Kathy Dunn adds: It's not uncommon to have people, especially during the summer time, stop at our residence and ask us for a telephone because there's been either an accident or a drowning or a

[3] Hudson, Heather E. *From Rural Village to Global Village: Telecommunications for Development in the Information Age.* Mahwah, NJ: Erlbaum, 2006, p. 47.

shooting up the road or overdose." The latter are examples of situations where there would be indirect benefits of having telephone service available.

However, the petitioners note that the role of telecommunications in emergencies goes beyond the ability to call for help. The availability of telephone service in the community could enable the emergency responders to stay in touch or call back to get additional information before reaching the scene. Without a telephone in Skyko 2 "[w]hile responding to the incident, information is not available to the responders, as the caller is now not at the location to give us up to date information, description, has the incident escalated to violence, direction of travel etc."[4]

Another public safety benefit of telecommunications is to protect property – for example, from fire, other natural disasters, and theft and vandalism. The Skyko2 residents cite numerous examples of the impact of lack of telephone service in being unable to report break-ins. They also note that some intruders are apparently aware that there will be a significant delay before any law enforcement officials are notified and able to reach the community.

Social benefits of telecommunications services include the ability to keep in touch with friends and family, often the most common use of telephone services, particularly in areas without major economic activity. While the benefits may be perceived as primarily personal, they have other societal benefits, including monitoring at-risk residents such as the elderly and disabled, as noted above. The

[4] Testimony of Timothy Freil, Deputy Sheriff.

petitioners have noted that there are both disabled and elderly residents requiring medical attention in Skyko 2.

The value of the network also increases with the number of subscribers.[5] The addition of subscribers provides utility not only to them, but also potentially to everyone else on the network who can contact them. Yet a payphone in a distant location does not provide this value because the isolated residents cannot be contacted. Nor does it generate any revenue from calls for personal, business or other purposes from the outside to the isolated residents that could result if they had telephone service.

Many economic benefits of telecommunications depend on other current or potential economic activity. Although current economic activity in Skyko 2 is limited, there is apparently some recreational activity – the petitioners refer to camps, tourists, and other visitors. The area would appear to have the potential for development of further outdoor-related tourism and construction of vacation houses or tourist lodges on private land. The availability of telecommunications is noted frequently in the research as a critical factor for development of tourism, recreation and vacation activities.[6]

Forgone benefits in the form of savings in time and money are noted by the petitioners. Certainly the time they take traveling to make phone calls has a measurable cost both in terms of out-of-pocket expense and in time taken from

[5] A basic principle of connectivity is known as Metcalfe's law for Robert Metcalfe, one of the pioneers of the Internet, states that the number of connections and thus the value of the network increases almost as the square of the number of users.

[6] Hudson, Heather E. *From Rural Village to Global Village: Telecommunications for Development in the Information Age.* Mahwah, NJ: Erlbaum, 2006

other activities and tasks. Further, the need to drive for half an hour or longer to make a telephone call could act as a strong disincentive to use the telephone and benefit from it, except in emergencies.

Q. DOES THE VALUE OF THE PUBLIC SAFETY AND ECONOMIC BENEFITS OF PROVIDING TELEPHONE SERVICE TO SKYKO 2 EXCEED THE CAPITAL AND OPERATING COSTS?

A. Probably not in the short term, although the value of saving lives cannot be readily quantified, and the petitioners cite specific examples of the role of emergency communications in saving lives. Yet if measurable excess of benefits over costs for each telephone line had been the criterion used for providing telephone service in this country, many rural communities would still not have telephone service. Universal service policies (discussed below) were designed to ensure that *all* residents have affordable access to telephone service. Initiatives such as the universal service funds and the telephone loan program of the Rural Electrification Administration (REA), now Rural Utilities Service (RUS), were designed to extend telephone service to rural communities that would otherwise not have had access to telephone service.

Q. HOW DOES THIS CASE RELATE TO UNIVERSAL SERVICE PRINCIPLES?

A. The Telecommunications Act of 1996 updated and explicated the concept of universal service. The universal service principles stated in the Act include:

> "ACCESS IN RURAL AND HIGH COST AREAS- Consumers in all regions of the Nation, *including low-income consumers and those in rural, insular, and high cost areas,* should have access to telecommunications and information services, including interexchange services and advanced

> telecommunications and information services, that are *reasonably comparable to those services provided in urban areas* and that are available at *rates that are reasonably comparable to rates charged for similar services in urban areas*."[7]

In recognizing that universal service is an evolving concept, the Telecommunications Act of 1996 cites as the first criterion for additional telecommunications services that may become eligible for universal service support, that such services are "essential to education, *public health, or public safety*."[8] The petitioners have given specific examples of how access to basic telephone service is important for public health and public safety. However, it should be noted that they are not requesting new or "advanced" services, but simply basic telephone service.

The Telecommunications Act further notes that "A State may adopt regulations not inconsistent with the [Federal Communications] Commission's rules to preserve and advance universal service."[9] The petitioners from Skyko 2 are requesting that the WUTC advance universal service by requiring telephone service to be provided to their community.

Q. WHAT IS WASHINGTON STATE'S RANKING IN UNIVERSAL SERVICE?

[7] Telecommunications Act of 1996, Sec. 254(b)(3) (italics added)

[8] Telecommunications Act of 1996, Sec. 254(c)1 (italics added).

[9] Telecommunications Act of 1996, Sec 254(f)

A. The most recent FCC data show US telephone penetration at 93.5 percent of households in November 2004.[10] As noted by Carl Danner, the FCC show that in Washington State, household penetration was 95.5 percent. While household penetration in Washington State is therefore above the national average, the FCC data indicate that Washington ranks 13th among the states in telephone penetration, behind several states with significant rural areas or low population densities including Alaska, Colorado, Maine, Minnesota, New Hampshire, Utah, and Vermont. [11] Clearly, the WUTC could be more proactive in ensuring that telephone service is available to all residents of Washington.

Q. IS SKYKO 2 A COMMUNITY FOR PURPOSES OF UNIVERSAL SERVICE?

A. Professor Jussaume and the petitioners have presented convincing testimony that Skyko 2 is a community. Of course, the definition of community can be contested. The real issue is that Washington needs to set criteria for provision of universal service for its residents. For example, the state of Alaska stipulated in 1976 that all permanent settlements of 25 residents or more were to be provided with telephone service.

Q. WHAT IS THE MAXIMUM FINANCIAL IMPACT OF SERVING SKYKO 2 PER VERIZON SUBSCRIBER IN WASHINGTON STATE?

A. Verizon data show that it had 228,518 residential subscribers in Washington and 562,532 business subscribers in the fourth quarter of 2005.[12] Thus, the estimated cost of $300,000 to extend service to Skyko 2 would amount to about $ 1.31 per

[10] FCC, Trends in Telephone Service (June, 2005), table 16.1.

[11] FCC, Trends in Telephone Service (June, 2005), table 16.2.

[12] Verizon Summary: Switched Access Lines in Service
http://investor.verizon.com/business/xls/access_lines-4q-05.xls

residential subscriber or about $0.38 per subscriber if allocated to all subscribers. However, Verizon Northwest would likely be eligible for universal service support to cover much of this cost

Q. WHY SHOULD VERIZON NORTHWEST BE REQUIRED TO SERVE SKYKO 2?

A. The petitioners have clearly shown that they require telephone service. Cellular service and other wireless options are not feasible because of the terrain and the forest. Satellite phone service is not "affordable" nor "reasonably comparable" in price to landline telephone service, and would not provide communication among the members of the community.

Further, Section 214 of the Communications Act of 1934 as amended states: "If no common carrier will provide the services that are supported by Federal universal support mechanisms under section 254 (c) to an unserved community or any portion thereof that requests such service, the [Federal Communications] Commission, with respect to interstate services, or *a State commission, with respect to instrastate services, shall determine which common carrier or carriers are best able to provide such service to the requesting unserved community or portion therof and shall order such carrier or carriers to provide such service for that unserved community or portion thereof."* [13]

Therefore, the WUTC should require Verizon Northwest to extend its services to Skyko 2.

[13] 47 U.S.C. 214 (e)(3) (italics added).

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

A. One of the professors in Communication Research at Stanford used to point out that sometimes research results meet "the interocular impact test." They hit you between the eyes. The evidence of the petitioners in this case certainly meets that test. It is obvious that telephone service should be extended to the residents of Skyko 2.

What is not obvious is why so much time and money has been spent on debating this issue, rather than getting on with the provision of service.

. Dr. Danner points out that people make choices. The people of Skyko 2 have chosen to pursue getting telephone service. They have organized and done their own research, and have stated that they are willing to complete installation of the telephone line from the road to their premises. They have chosen not to give up on getting telephone service, and have spent considerable time and effort and money from their own pockets on efforts to obtain it.

The petitioners should be commended for their patience and tenacity.

Q. DR. HUDSON, DOES THIS CONCLUDE YOUR PART OF THE TESTIMONY?

A. Yes.

Q. DR. PARKER, PLEASE STATE YOUR NAME, POSITION AND WORK ADDRESS.

A. My name is Edwin B. Parker. I am president of Parker Telecommunications, a telecommunications consulting business located at P.O. Box 402, Gleneden Beach, OR 97388. (There is no mail delivery to street addresses in my rural location.)

Q. PLEASE SUMMARIZE YOUR BACKGROUND AND QUALIFICATIONS.

A. I am President of Parker Telecommunications, a consulting business located since 1989 in Gleneden Beach, an unincorporated rural community on the Oregon coast. Previously, I was President of the Data Networks Division of Contel, a telephone company that included by acquisition the former Equatorial Communications Company. I had co-founded Equatorial in 1979, helped it grow from an entrepreneurial idea to a public company, and was its Board Chairman, President and Chief Executive Officer prior to its merger with Contel in 1987. Equatorial was the first company in the world to use very small satellite earth stations for data communications.

From 1962 to 1979 I was a professor of Communication at Stanford University, where I specialized in the social and economic effects of information technology. I taught at the University of Illinois from 1960 to 1962. I have co-authored or co-edited five books and more than 75 professional articles. The second edition of my latest book, *Electronic Byways: State Policies for Rural Development through Telecommunications*, was published by the Aspen Institute in 1995. An earlier book, titled *Rural America in the Information Age: Telecommunications Policy*

for Rural Development, was published in 1989 by University Press of America. I graduated from the University of British Columbia in 1954 and received my Ph.D. from Stanford University in 1960.

I am chair of the CoastNet committee of the Economic Development Alliance of Lincoln County. Oregon Governor John Kitzhaber named me local economic development leader of the year in 1995. I represent the Oregon coast on the Connecting Oregon Communities Advisory Board. I have served on the Oregon Telecommunications Coordinating Council since its inception in 2001 and was recently reappointed by Governor Ted Kulongoski to a new four-year term on that council.

A short bio as attached as Exhibit EBP-36 and my publication list is attached as Exhibit EBP-37.

Q. HOW IS YOUR EXPERTISE RELEVANT?

A. I have spent much of my career planning or using telecommunications for economic and community development in rural locations throughout the world, as a consultant for the US Agency for International Development and various international agencies. I served as a consultant to the governor of Alaska in the early 1970s and helped Alaska get telephone service to 100 rural communities, despite opposition from the monopoly incumbent telephone carrier. I have been active in telecommunications regulatory and policy issues throughout my career. I founded my own telecommunications company in 1979 to bring data communications services to rural communities when I found that incumbent carriers were usually unwilling to serve such markets.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. I was asked to assist Douglas Rupp and his neighboring petitioners in Skyko2 to explain why telephone service should be provided to them, and to respond to arguments raised by Carl Danner in his testimony on behalf of Verizon Northwest.

Q. HAVE YOU PREVIOUSLY FILED TESTIMONY ADDRESSING SUCH ISSUES?

A. I have not testified on such issues before the Washington Utilities and Transportation Commission, although I have worked on similar issues in other locations. I have provided testimony to a committee of the Washington legislature on related issues and have been an invited speaker at a meeting of the National Association of Regulatory Commissioners.

Q. DO YOU AGREE WITH THE REBUTTAL TESTIMONY OF PROFESSOR HEATHER HUDSON AS PRESENTED ABOVE?

A. I have read and fully agree with and am prepared to defend the rebuttal testimony of my colleague and frequent co-author, Heather Hudson. Our testimony joint is joint testimony.

Q. DO YOU AGREE WITH THE RESPONSE TESTIMONY OF CARL DANNER THAT THE COST TO PROVIDE SERVICE WOULD BE APPROXIMATELY $300,000?

A. I assume that the estimate was made in good faith by good people whose careers might be at risk if they estimated too low and then were unable to implement at the estimated price, and who also knew that their managers would prefer not to make the investment at all. I have not reviewed the basis for the cost estimate. I also assume that, if ordered to provide the requested services, the company could find a way to spend almost that much to justify the original estimate if they were permitted full cost recovery through the rate base and also permitted a return on that investment. I am not aware of any independent estimates of how much it would cost.

However, a similar experience in Alaska might be relevant here. The incumbent monopoly carrier and the state were in agreement that, if the 100 communities in question were to be served, satellite technology was appropriate. The monopoly carrier estimated the equipment costs at $500,000 per community, while the state and its consultants estimated $50,000 per community. (The monopoly carrier also suggested that it would be cheaper for the residents of those communities to relocate elsewhere than to provide telephone service to their communities.) Based on the consultant estimates, the state legislature appropriated $5 million ($50,000 each for 100 communities) and then went through a competitive procurement process to purchase the equipment needed to provide telephone service to their rural constituents. The winning bidder provided the necessary equipment at a price of approximately $35,000 per community. The result was that the carrier installed and operated the state-owned equipment and provided telephone service to all rural communities in Alaska with a population of 25 or more residents.

Q. DO YOU AGREE WITH CARL DANNER THAT THE ECONOMIC ISSUES IN THIS DOCKET SHOULD DETERMINE THE OUTCOME?

A. No. The key issues in this docket are regulatory issues, not economic issues. The carrier had already agreed to make the necessary investment as part of the MCI merger case. I presume that, if ordered to do so by the Commission, they would provide service. The issues in this docket, in my opinion, are for the Commission to define what is a community (for example, five or more households) and to decide whether they agree with the principle of universal service in accordance with the federal and state legislation in the context of the present petition. Also, in my opinion, the Commission needs to determine that it has authority under federal and state law to extend the Verizon service boundaries to provide service to the petitioners. As Professor Hudson stated in her testimony, federal law provides clear authority for the Commission to make that determination for purposes of providing telephone service. I am not familiar with Washington law, but I would be very surprised if there was anything in Washington law that prevented the Commission from following federal law.

Q. WHY DO YOU THINK VERIZON HAS ENGAGED A CONSULTANT TO OPPOSE THE PETITION IN THIS DOCKET?

A. Speaking as the former Chief Executive Officer of a publicly traded company that was acquired by a company later acquired by Verizon, I know that Verizon has a fiduciary responsibility to its shareholders to obtain for them the best return on investment possible within the regulatory constraints imposed on them by public policy. Currently, they can expect a higher rate of return on investment in fiber to the premises projects in upscale urban locations such as the Portland metropolitan

area portion of Silicon Forest that they serve in Oregon than they could in rural projects in either state. Therefore they must follow that fiduciary responsibility unless ordered otherwise by regulatory authorities.

Q. DO YOU AGREE WITH CARL DANNER THAT IF THE COMMISSION GRANTED THE PETITION VERIZON SHOULD BE ENTITLED TO COST RECOVERY?

A. Yes.

Q. DR. PARKER, DOES THAT COMPLETE YOUR REBUTTAL TESTIMONY?

A. Yes.