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| Exhibit No. | _____ |
| Issue: | Application for ETC Designation |
| Witness: | Glenn H. Brown |
| Sponsoring Party: | Spectra Communications Group, LLC d/b/a CenturyTel and CenturyTel of Missouri, LLC |
| Type of Exhibit: | Rebuttal Testimony |
| Case No: | TO-2005-0466 |
| Date: | May 9, 2006 |

**BEFORE THE PUBLIC SERVICE COMMISSION**
**OF THE STATE OF MISSOURI**

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|---|---|---|
| In the Matter of the Application of | ) | |
| Northwest Missouri Cellular Limited Partnership | ) | |
| For Designation as a Telecommunications | ) | Case No. TO-2005-0466 |
| Carrier Eligible for Federal Universal Service | ) | |
| Support Pursuant to § 254 of the | ) | |
| Telecommunications Act of 1996 | ) | |

# REBUTTAL TESTIMONY OF GLENN H. BROWN

# ON BEHALF OF SPECTRA COMMUNICATIONS GROUP, LLC, d/b/a CENTURYTEL

# AND CENTURYTEL OF MISSOURI, LLC

**May 9, 2006**

****Denotes Information Deemed to be Highly Confidential by Applicant NWMC****

**NP**

**Q. Please state your name and business address.**

A. My name is Glenn H. Brown, and my business address is 55 Cathedral Rock Drive, Suite 32, Sedona, Arizona 86351.

**Q. Please summarize your current employment and prior business experience.**

A. I am President of McLean & Brown, a telecommunications consulting firm specializing in universal service issues. Prior to joining McLean & Brown in 1998, I worked for U S WEST for 28 years, during which time I held a number of senior management positions in the regulatory and public policy area. I have testified before numerous state regulatory commissions, the Federal Communications Commission ("FCC") and the United States Congress on a wide variety of telecommunications costing, pricing and regulatory issues. My last six years with U S WEST were spent in Washington, DC, where I was intimately involved in the implementation of the Telecommunications Act of 1996 ("the 1996 Act" or "the Act"), with particular emphasis on universal service issues.

**Q. Please summarize your educational experience.**

A. I have a Bachelor of Science in Industrial Engineering from Lehigh University, and an MBA from the University of Colorado. Both of my degree programs focused on computer modeling technology and applications.

**Q. Please describe your experience with universal service issues.**

A. I have been active in almost every major universal service proceeding before the FCC since the passage of the 1996 Act. In 1998, the FCC appointed the Rural Task Force ("RTF") to develop policy recommendations for rural telecommunications carriers. While not a member of the RTF, I attended almost all of its meetings, and assisted it in

both analytical matters and in the preparation and drafting of several white papers. In my current position I provide advice and assistance to small and mid-size telecommunications companies regarding universal service and other regulatory and pricing issues before federal and state regulatory bodies.

**Q. On whose behalf are you presenting testimony?**

A. I am presenting testimony on behalf of Spectra Communications Group, LLC d/b/a CenturyTel ("Spectra") and CenturyTel of Missouri, LLC, ("CenturyTel"). Spectra is comprised of one study area in Missouri. CenturyTel is comprised of four distinct study areas: Central, Belle-Herman, Southern and Southwest. Spectra is a rural telephone company under the terms of the 1996 Act. CenturyTel's Belle-Hermann and Southern study areas also are classified as rural. CenturyTel's Central and Southwest study areas are non-rural under the terms of the 1996 Act.

## INTRODUCTION AND SUMMARY

**Q. What are the purposes of your testimony?**

A. The purposes of my testimony are:

1. To discuss the important responsibilities of the Missouri Public Service Commission ("Commission") under the 1996 Act in regards to implementation of the federal universal service program. Under the Act, and FCC rules, the Commission may approve additional Eligible Telecommunications Carriers ("ETCs") in areas already being served by an ETC only if the Commission determines that such designation is in the public interest.

2. To discuss the evolution of the FCC's guidelines regarding public interest standards for the designation of multiple ETCs in rural telephone company service areas, and the public interest and minimum ETC designation criteria articulated by the FCC in their March 17, 2005 Order[1].

3. To evaluate Northwest Missouri Cellular's ("NWMC") application and testimony in this proceeding against the ETC designation criteria recently developed by this Commission in Case No. TX-2006-0169, and soon to be codified in 4 CSR 240-3.570 (*ETC Designation Rules).*

4. To reply to the statements made by NWMC in its Application for ETC status, as well as the direct testimony of Roger Bundridge, Jonathan Reeves and Kathryn Zentgraf submitted February 13, 2006, the supplemental direct testimony Mr. Bundridge and Mr. Reeves submitted April 17, 2006, as well as information provided in response to subsequent Data Requests.

**Q. What are the critical issues that the Commission must address in this proceeding?**

A. Among the issues that the Commission must address in this proceeding are the following:

- The Commission must apply its *ETC Designation Rules* in a uniform manner to all prospective ETC applications to determine if approval of each particular application would be in the public interest.

[1] *In the Matter of Federal-State Joint Board on Universal Service,* CC Docket No. 96-45, Report and Order, 20 FCC Rcd 6371, released March 17, 2005 ("*ETC Designation Order"*).

- The Commission will need to determine in this proceeding how it will handle requests from multiple wireless providers for ETC designation in the same wire center area. For example, all of the wire centers for which NWMC has requested ETC designation have also have pending ETC designation requests from US Cellular in Case No. TO-2005-0384.
- The Commission necessarily must evaluate NWMC's Application against the *ETC Designation Rules* that it recently adopted to determine if approval of this application would be in the public interest.

**Q. Could you please summarize the conclusions that you have reached with respect to NWMC's Application?**

A. Based on my review, I have reached the following conclusions:

1. The criteria described by the FCC in the *ETC Designation Order* form a solid basis for determining when designating an additional ETC is in the public interest, and the criteria outlined in this Commission's *ETC Designation Rules* are generally consistent with those identified by the FCC, and indeed provide even more concrete standards directly applicable to Missouri from which to make the necessary public interest determinations.
2. The Commission must exercise great care when evaluating requests from multiple wireless carriers for ETC status for the same wire center areas. The Commission must assure that the incremental public benefits from designating an additional wireless ETC outweigh the incremental public costs that designating an additional wireless carrier for receipt of high-cost support will create.

3. While the Application of NWMC for ETC status meets some of the criteria outlined in 4 CSR 240-3.570, and certainly represents a more complete showing than that made by US Cellular in Case No. TO-2005-0384,[2] it still falls short of meeting many of the relevant criteria that this Commission has established for determining that the grant of this Application would be in the public interest. Specifically:

   a. The Application does not, with specificity, demonstrate how universal service high-cost support will be used to improve coverage, service quality or capacity on a wire center-by-wire center basis throughout the ETC service area.

   b. The Application does not contain *detailed* maps indicating the coverage area before and after improvements and existing tower site locations.

   c. To the extent that coverage maps are provided they do not show how consumers in rural and high-cost areas of the ETC service area will receive service and signal quality comparable to that available in more urban areas, as required by this Commission's *ETC Designation Rules*.

   d. The two-year plan provided by NWMC does not provide the necessary information to determine that support will be used only for its intended purposes, and proposed expenditures for tower expansion appear to be significantly less than the amount of high-cost support that NWMC would receive if granted ETC status. Specifically, in the first two years of the

[2] I was a witness for CenturyTel and Spectra in Case No. TO-0384, and presented extensive testimony and evidence regarding the deficiencies of US Cellular's filing as related to the criteria in the *ETC Designation Order*

plan NWMC would receive approximately $3 million in federal high-cost support, yet according to its plan it would commit to building only **___** new towers costing a total of **_____** in new investment

**THE ETC DESIGNATION PROCESS AND THE NEW COMMISSION RULES**

**Q. What are the key sections of the 1996 Act and the FCC rules that deal with universal service and the public interest test for designating multiple ETCs?**

A. Section 214(e) of the 1996 Act, 47 U.S.C. § 214(e), deals with the designation of multiple ETCs; 47 CFR 54.201 contains the FCC's corresponding regulations. 47 U.S.C. Section 214(e)(2) states that, to be eligible for ETC status, a carrier must offer the defined universal service elements (the FCC rules currently define nine elements) throughout the service area for which the designation is received, and advertise the availability of such services in media of general distribution. Section 214(e)(2) states that, consistent with the public interest, convenience and necessity, the Commission *may*, for rural telephone companies, and *shall*, for non-rural companies, designate more than one ETC. It further states that, "before designating an additional [ETC] for an area served by a rural telephone company, the State commission shall find that the designation is in the public interest." FCC Rule 54.201 contains very similar language.

**Q. Does the 1996 Act or the FCC regulations say how this public interest determination should be made?**

A. While neither the 1996 Act nor the FCC rules provide specific guidance in conducting the public interest test, over the past five years the FCC has issued a series of decisions that have provided an evolving set of guidelines regarding how it believes that

the public interest determination should be made. In looking back over this time period there have been three distinct phases in the evolution of the FCC's thinking. The specific orders that defined these phases, and some of the key characteristics of the public interest criteria utilized during each phase, are as follows:

**1. The *Wyoming* and *Alabama* Orders;**

- December, 2000 through January, 2004;
- Competition defines the public interest;
- Designation of multiple ETCs would advance competition in high-cost rural areas, and therefore is in the public interest; and
- Although not formally stated, burden was on the wireline incumbent to prove that the ETC designation was not in the public interest.

**2. The *Virginia Cellular* Order:**

- January, 2004 through March, 2005;
- Competition, alone, was not sufficient to satisfy the public interest test;
- A more stringent, public interest test was necessary due to rapid growth in support to competitive ETCs;
- A fact-specific analysis was required to demonstrate that the benefits of designating multiple ETCs outweighed the costs of supporting multiple networks;
- The competitive ETC must demonstrate its commitment and ability to provide the supported services throughout the designated service area within a reasonable time frame; and
- It was clearly stated that the burden is on the ETC applicant to prove that its designation as an ETC in the rural telephone company is in the public interest.

**3. The March 17, 2005 *ETC Designation* Order**

- This Order was issued in response to a Recommended Decision by the Federal-State Joint Board on Universal Service released February 27, 2004;

- The Order provides that in satisfying its burden of proof, the ETC applicant must:
  - Provide a five-year plan demonstrating how high-cost universal service support will be used to improve its coverage, service quality or capacity in every wire center for which it seeks designation and expects to receive universal service support;
  - Demonstrate its ability to remain functional in emergency situations;
  - Demonstrate that it will satisfy consumer protection and service quality standards;
  - Offer local usage plans comparable to those offered by the ILEC in the areas for which it seeks designation; and
  - Acknowledge that it may be required to provide equal access if all other ETCs in the designated service area relinquish their designation.

**Q. Does the ETC Designation Order address the applicability of these mandatory minimum requirements on state Commissions?**

A. While the 1996 Act explicitly grants to this Commission the responsibility for making the public interest finding, at several places in the *ETC Designation Order* the FCC provides specific encouragement for state commission's to adopt these same standards as minimum standards in their state ETC designation proceedings:

> We believe that application of these additional requirements by the [FCC] *and state commissions* will allow for a more predictable ETC designation process.[3]

> We encourage state commissions to require all ETC applicants over which they have jurisdiction to meet the same conditions and to conduct the same public interest analysis outlined in this Report and Order.[4]

**Q. Could you briefly describe the *ETC Designation Rules* recently approved by this Commission?**

A. On April 6, 2006 this Commission sent its Final Order of Rulemaking developed

[3] *ETC Designation Order* at paragraph 1 (emphasis added).

in Case No. TX-2006-0169 to the Missouri Secretary of State for publication in the Code of State Regulations. The Commission's new ETC rule, 4 CSR 240-3.570, provides detailed guidance and requirements in fur Specific areas:

- Applications for designation as an ETC;
- Service requirements of ETCs;
- Annual filing requirements for ETCs; and
- Additional requirements.

**Q. Could you please Summarize the specific rules that relate to an application for ETC designation?**

A. Following is a summary of the major requirements for an ETC Application

**Section 2(A)1 –** Intended use of the high-cost support including detailed descriptions of any construction plans with start and end dates, populations affected by construction plans, existing tower site locations for CMRS cell towers, and estimated budget amounts.

**Section 2(A)2, -** A two-year plan demonstrating, with specificity, that high-cost support shall only be used for the provision, maintenance and upgrading of facilities and services for which the support is intended. The concept of "support is intended" is defined more specifically to mean:

- Quality services should be available at just, reasonable and affordable rates;
- Access to advanced telecommunications and information services should be provided in all regions of the state; and
- Consumers in all regions of Missouri, including those in rural, insular and high cost areas will have access to telecommunications and information services that area reasonably comparable to those services provided in urban areas.

**Section 2(A)3. –** The two-year plan shall include a demonstration that universal service support shall be used to improve coverage, service quality or capacity on a wire center-by-wire center basis throughout the area where the carrier seeks ETC designation including:

- A detailed map of coverage before and after the improvements;

[4] *Id* at paragraph 58.

- A map identifying existing tower site locations;
- The specific geographic area where improvements will be made;
- The projected start and completion dates of each improvement;
- The estimated amount of investment that is funded by high-cost support;
- The estimated population that will be served as a result of the improvements;
- If an applicant believes improvements are not necessary, an explanation for this determination and how funding will be used to further the provision of supported services;
- A statement as to how the proposed plans would not otherwise occur absent the receipt of high-cost support and that such support will be used in addition to any expenses the ETC would normally incur.

**Section 2(A)4 –** A demonstration of the carrier's ability to remain functional in emergency situations.

**Section 2(A)5 –** A demonstration that the grant of the application would be consistent with the public interest, convenience and necessity.

**Section 2(A)6 –** A commitment to advertise the availability of services and charges therefore using media of general distribution.

**Section 2(A)7 –** A commitment to provide Lifeline and Link-Up discounts.

**Section 2(A)8 –** A statement that the carrier will satisfy consumer privacy protection standards.

**Section 2(A)9 –** A statement that the carrier acknowledges that it shall provide equal access to long distance if all other carriers relinquish their ETC designations.

**Section 2(A)10 –** A commitment to offer a local usage plan comparable to those offered by the ILEC in the areas for which the carrier seeks designation.

**Q. How do the *ETC Designation Rules* compare with the mandatory minimum requirements contained in the FCC's *ETC Designation Order*?**

A. With one exception, the *Missouri ETC Designation Rules* provide a more concrete definition of the required submission of the ETC applicant, and the expectations of the carrier if it is to be granted ETC status. The one exception would be in the requirement of a two-year build-out plan in the proposed rules as opposed to a five-year

build-out plan in the FCC guidelines.

**Q. Do the Commission's new *ETC Designation Rules* specify how the Commission will determine if a particular application for ETC status would be in the public interest.**

A. No. While the Rules do not specifically describe the analysis process that the Commission will use to make individual ETC decisions, they do provide requirements for the submission of the facts and data that will be necessary for the Commission to determine if a particular designation would be consistent with the statute and the public interest. First, the rules correctly define the statutory purpose of the universal service fund as to provide rural consumers with service comparable to that available in urban areas, at comparable prices. Second, the rules require the applicant to identify the specific use that will be made of the funds, the nature of the improvement in service quality and capacity, the number of consumers that will benefit from these proposed improvements, and the cost. Equipped with this information, the Commission will be in a position to make the necessary public interest determination of whether the benefits of spending scarce public funds will exceed the increased public costs that designating an additional ETC will create. Finally, the rules clearly spell out the expectations and obligations of a carrier receiving public high-cost funding, and provide reporting requirements and other metrics for the necessary annual determination of whether a carrier should continue to receive high-cost support.

**Q. Could you summarize your recommendations on the factors the Commission should consider as it conducts its public interest analysis?**

A. The Commission must ensure that scarce public funds are spent wisely and for the purposes for which they were intended. It has an obligation to ensure provider accountability. Thus, the Commission should approve additional ETCs in rural areas only when the increased public benefits that will come from supporting multiple carriers can be shown to clearly exceed the costs that are created by supporting multiple networks. The criteria in the Commission's recently adopted rules should be applied and evaluated consistently in this proceeding and in other pending ETC designation proceedings to assure that the public interest is served. When multiple wireless providers seek ETC designation in the same wire centers, as is the case in the instant proceeding, the Commission must be especially vigilant to assure that the increased public costs created by each additional wireless ETC designation produce commensurately increasing public benefits.

**COST/BENEFIT ANALYSIS**

**Q. What are some of the benefits that might be created by the designation of a additional ETCs?**

A. Benefits that might be created could include investments in new towers and facilities to bring mobile communications services to currently unserved areas, wider service areas over which consumers could use their mobile phones, new choices or service upgrades for consumers, lower prices, higher quality and potential competitive responses from other service providers.

**Q. What are some of the costs that would be created?**

A. The most easily identified cost would be the cost of providing support to the new ETC. Where multiple competing wireless carriers serve the same market, there will be

significantly increased cost, as these carriers, to ensure they remain on a competitive footing, will have no choice other than to request ETC status as well.

In very sparsely populated areas there could also be increased public costs due to the loss in network efficiency caused by multiple providers serving in a less efficient manner than a single provider could serve. These higher costs could lead to significant harms to consumers if finite universal service support resources are spread so thinly that no carrier (wireline or wireless) can justify the investment to viably function as a Carrier of Last Resort. Later in my testimony I will demonstrate how providing support to multiple carriers – wireless or wireline – will increase the cost of providing universal service in the most remote and sparsely populated areas

**Q. How much will high-cost support increase if NWMC is granted ETC status in all of the study areas for which it has requested ETC designation?**

A. On page 15 of her testimony, Ms. Zentgraf states that NWMC stands to receive approximately $1.5 million per year if their request for ETC status in all of the requested study areas is granted.

**Q If NWMC is designated as an ETC in this proceeding, would $1.5 million per year be the total cost to the USF for additional support payments?**

A. No. There are at least six other wireless carriers that currently provide service in the areas where NWMC seeks ETC designation. If the Commission grants ETC status to NWMC, it is likely that other wireless carriers will also apply for and receive approval for ETC status as well. The most recent public data available from the FCC indicates that in the state of Missouri there were 3.51 million wireline loops, and 3.11 million wireless

handsets at the end of 2004.[5] This yields a wireless handset to wireline loop ratio of 89%. Publicly available data from USAC indicates that as of the third quarter of 2005, ILECs in the state of Missouri were receiving universal service support at a rate of $91.1 million per year.[6] Thus, if all wireless carriers in the state of Missouri were to receive ETC status, the overall draw on the federal USF from Missouri wireless carriers could go up by as much as $81.1 million per year ($91.1 x 0.89 = $81.1).

**Q. You also mentioned that in sparsely populated rural areas supporting multiple carriers can also increase the cost of serving all customers. Under what circumstances can this occur?**

A Proxy cost modeling work done at the FCC in the late 1990s established a strong correlation between customer density and the cost of providing basic telephone service. The following Chart I, relying on data from the Benchmark Cost Proxy Model 3.0 for all ILECs in the state of Missouri, shows the relationship of subscriber density, measured in households per square mile, to the monthly cost of providing basic telephone service.

[5] Wireless data from *Local Competition Report*, FCC, July, 2005, Table 13,Wireline data from USAC Report HC05, 4Q04.
[6] USAC Report HC01, third quarter 2004.

| Households per Square Mile | All Missouri ILECs |
|---|---|
| 0 to 5 | $ 130.72 |
| 5 to 100 | $ 54.05 |
| 100 to 200 | $ 31.42 |
| 200 to 650 | $ 27.26 |
| 650 to 850 | $ 25.38 |
| 850 to 2550 | $ 23.36 |
| 2550 to 5000 | $ 22.16 |
| 5000 to 10,000 | $ 20.95 |
| > 10,000 | $ 18.47 |

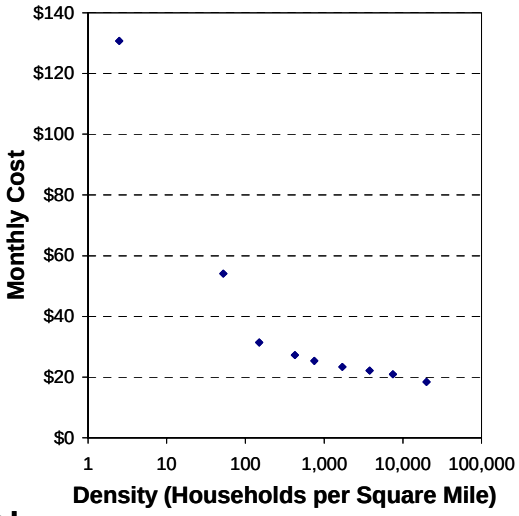


**Chart I**

Notice that at household densities of 100 households per square mile and greater, the per-line cost of basic telephone service is quite low. At densities of less than 100 households per square mile, costs increase dramatically and exponentially, with areas with density of 5 households per square mile or less costing well in excess of $100 per line per month.

**Q. What does this have to do with NWMC's cost of providing service?**

A. While the technologies of wireline and wireless networks are very different, they both experience high levels of fixed cost, or costs that do not necessarily vary with the number of customers served, which make the cost of providing service very sensitive to subscriber density. A good example of this type of fixed cost in a wireline network is a trench for the placement of distribution cable. Assume for discussion purposes that a trench costs $2 per foot to dig, place and fill. In a densely populated area where a trench might support 500 lines, the cost of this trench would be $0.004 per line per foot. In a sparsely populated area where the trench only supports 10 lines, the cost per line would be $0.20. In a very sparsely populated area with only 2 lines the per-line cost would be

$1, and for the customer at the very end of the line, the cost of the length of trench becomes $2 per line per foot. While not a perfect analogy, this shows why the cost to density curve shown above identifies costs increasing geometrically as population density decreases.

In a wireless network, a major fixed cost is the tower and associated radio equipment. A tower and associated equipment cover a given "footprint", or area where acceptable wireless coverage can be received from that tower. The per-customer cost of providing service from that tower is very sensitive to the number of customers within that footprint. In a densely populated or heavily traveled area where thousands of customers may be within that footprint, the cost per-customer is low. In sparsely populated or less traveled areas, the cost per customer becomes increasingly high, and would follow the same exponential relationship of increasing cost to decreasing density. As a result of this, wireless providers have tended to build their networks and provide conventional cellular service in towns and along major highways where subscriber density is high and per-customer costs are low. If two wireless carriers seek to serve the same sparsely populated area, the effective customer density for each carrier becomes even lower, and the cost for both carriers to expand to serve throughout such areas becomes even higher.

**Q. Can you explain how can costs go up for all customers when multiple carriers serve sparsely populated areas?**

A. As I described previously, both wireline and wireless networks are comprised of many fixed cost investments, and therefore the cost of providing service is highly dependent on the density of customers in a particular area. The following Chart II illustrates how when multiple providers serve the same sparsely populated area, the cost

for both providers increases. As I mentioned earlier, this relationship is equally valid if two wireless providers are serving the same sparsely populated area.

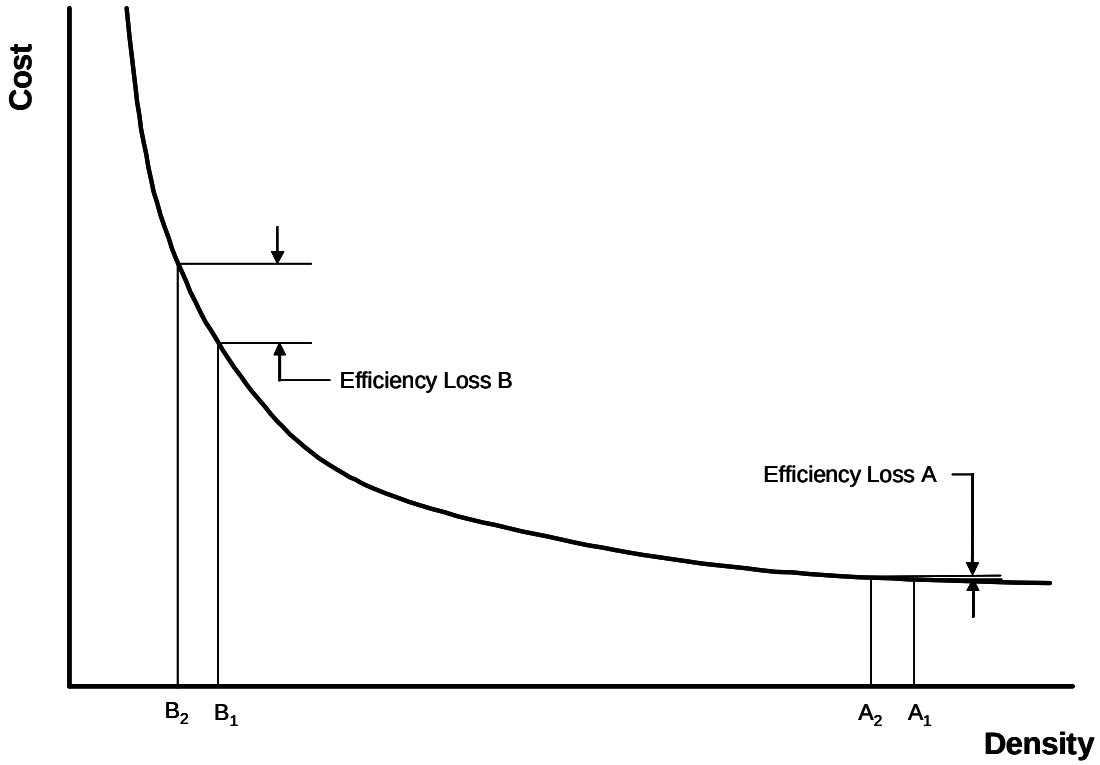


**Chart II**

When an additional carrier enters a service area and captures customers from the incumbent(s), the physical area of the service territory is unchanged, but the number of customers served is less. This will have the impact of reducing the average density in terms of households per square mile and increasing the cost per customer for both carriers. The impact that this reduction in density will have on the average cost of serving customers is highly dependent on the density of the serving area. This graph shows the cost impact for two hypothetical scenarios. Company A, shown on the right side of the chart, serves a densely populated area with relatively low costs. If the entry of an additional carrier results in a reduction in subscriber density from $A_1$ to $A_2$, the resulting efficiency loss is negligible. On the other hand, Company B, shown on the left

side of the chart, serves a relatively sparsely populated area. Notice that an equivalent reduction in density from $B_1$ to $B_2$ results in a significant and much larger loss of efficiency due to the nature of the density/cost relationship. Given the exponential increase in cost with decreasing density, the lower the initial density level, the higher will be the efficiency loss with the introduction of an additional carrier. Thus, as population density decreases below 100 households per square mile, the level of public benefit necessary to justify the corresponding increase in public costs becomes larger than would be the case in a more densely populated area. In the most extremely sparse areas, very significant additional public benefit would be necessary to justify the substantial increase in public costs that would be created by providing public support to multiple carriers.

**Q. Has the phenomenon of increasing costs when multiple ETCs serve sparsely populated rural areas been recognized as a problem?**

A. Yes. In May of 2001, the FCC released its MAG Order that eliminated the Carrier Common Line charge for rate-of-return carriers and replaced it with an explicit and portable Interstate Common Line Support (ICLS) mechanism. In his separate statement issued with this Order, FCC Chairman (then Commissioner) Kevin Martin said:

> "I also note that I have some concerns with the Commission's policy – adopted long before this Order – of using universal service support as a means of creating "competition" in high cost areas. I am hesitant to subsidize multiple competitors to serve areas in which costs are prohibitively expensive for even one carrier. This policy may make it difficult for any one carrier to achieve the economies of scale necessary to serve all of the customers in a rural area, leading to inefficient and/or stranded investment and a ballooning universal service fund."[7]

[7] 2nd R&O and FNPRM in CC Docket No. 00-256, 15th R&O in CC Docket No. 96-45, and R&O in CC Docket Nos. 98-77 and 98-166, Released November 8, 2001, *Separate Statement of Commissioner Kevin*

**Q. Does this economic relationship exist when two or more wireless ETCs are granted ETC status to serve sparsely populated rural areas.**

A. Yes. If multiple wireless carriers seek to build-out their networks into the same sparsely populated areas, the effective customer density for each carrier decreases, and the costs for each carrier to serve throughout the area and meet their Carrier of Last Resort obligations increase geometrically. Under this scenario, one of two things could happen. The first, and more likely, possibility would be that neither carrier is capable of extending its network to provide high-quality service throughout the service area, and thus are unable to meet their obligations as an ETCs or to effectively serve as a Carriers of Last Resort. The second possibility is that one or more of these carriers becomes financially insolvent, resulting in stranded investment and waste of scarce public support dollars.

**BENEFITS**

**Q. What benefits has NWMC identified that would result from its designation as an ETC for the receipt of high-cost universal service?**

A. Throughout its Application and testimony, NWMC offers its assessment of the benefits that this designation will bring. Among these benefits are:

- Increased competition;
- Increased consumer choice and service quality;
- Larger local calling area;
- The benefits of mobility; and
- Competitive response from affected ILECs.

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*J. Martin.* Commissioner Martin reaffirms this statement in his separate statement concerning the Joint Board Recommended Decision.

**Q. How would you assess the purported benefits that NWMC describes?**

A. First of all, these purported benefits consist totally of generalized statements regarding the generic benefits of competition, and as I have stated previously, NWMC is already competing in these areas today without USF support. The real question before this Commission is what *additional* competition and *increased* benefits will come from designating NWMC as an ETC in the Spectra and CenturyTel study areas. Second, to read NWMC's statements you would think that NWMC currently does not compete in these markets, and only if they are granted ETC designation will there be competition in rural areas in the state of Missouri. Nothing could be further from the truth. Wireless carriers, including NWMC, have built facilities throughout rural America, including rural areas in Missouri. Wireless carriers have built their networks in cities and towns and along major highways where customer concentration is high and costs are low.

**Q. Can you provide an illustration of NWMC's network in the state of Missouri?**

A. Schedule GHB-1 is a map of the state of Missouri that shows NWMC's proposed ETC service area. GHB-1 also is color-coded to indicate population density. Major highways within the state are also shown for reference. Schedule GHB-2, in addition to the information shown on Schedule GHB-1, shows the location of NWMC's current towers as obtained from publicly available data sources[8] Exhibit GHB-3HC also shows the approximate location of the 7 towers that NWMC has indicated that it plans to

[8] The location of a wireless carrier's cellular towers can be obtained from publicly available data on the FCC's Universal Licensing System (ULS) data base available at www.fcc.gov.

construct if granted ETC status in this proceeding, as well as four additional existing towers that are not contained in the publicly available data.

**Q. How can the coverage area and signal quality of NWMC's network be determined?**

A. The best way to determine network coverage is through what is called a "propagation analysis". In this type of analysis, numerous factors such as the transmission characteristics of the cellular tower and the end user's handset or receiver, the nature of the radio spectrum used, as well as the topographical contour of the area in question all have an impact on the area over which consumers can receive varying levels of performance from the wireless network.

**Q. How do topographical features influence network performance?**

A. Radio waves can't "see through" hills or mountains. Most of us have had the experience of talking on a mobile phone and losing the connection as we went down into a valley or went behind a hill, building or some other obstruction. Propagation studies take terrain data from the U.S. Geological Survey, as well as other factors related to the wireless network to predict areas where coverage will be good, marginal or non-existent.

**Q. How do the characteristics of the cellular tower influence network performance?**

A. Factors such as the height of the tower and the electromagnetic power of the radio transmitter and the characteristics of the antenna have a significant impact on the area that a tower can cover. Generally, the higher the tower and the more powerful the transmitter, the larger the radius will be that can be theoretically covered.

**Q. Are there other factors that influence the level of service that a customer might experience?**

A. Yes. Another important component is the receiving and transmitting equipment that the customer uses. Unlike a broadcast application such as commercial radio, a telecommunications network requires a two-way communication between the tower and the mobile equipment. Not only must the customer's receiver be able to detect and receive the signal from the tower, but it must send a signal back to the tower that the tower is capable of detecting and receiving. Thus the characteristics of the customer's equipment play a critical role in determining the coverage that a customer will experience. The same laws of physics that apply to the tower dictate that the transmitting power and antenna height of the customer's equipment will play a significant role in determining the coverage that will be experienced as well.

**Q. What types of equipment do customers generally use?**

A. By far, the most commonly used equipment is the cellular handset that most of us carry strapped to our belts or in our purses. These handsets generally operate at a power level of from 0.2 to 0.6 watts. The other type of equipment that is used, although less frequently than in the earlier days of cellular service, is the analog "bag phone", "car phone" or Telular-type wireless local loop units that operate at a power level of 3 watts. The higher power level of this equipment makes it heavier and bulkier, and not as mobile or convenient as the conventional cellular handset. The higher power level of such equipment does give it a significantly larger operating radius than the 0.2 to 0.6 watt handset. In more remote locations, service can also be achieved or improved by working on the "height" variable in the coverage equation. Many of us have had personal

experiences with going to a higher floor, or climbing a hill to improve cellular reception. In wireless local loop applications it is often possible to mount an external antenna to the roof of the building to gain additional height and therefore coverage.

**Q. Why should the Commission care about the quality of the signal coverage that customers experience and the different coverage characteristics of different types of equipment?**

A. The actual wireless coverage that customers experience should be a key factor in the cost/benefit analysis that lies at the heart of the public interest evaluation process. The original high-cost fund had its genesis in the public goal of making wireline telephone service available and affordable in remote and high-cost areas where, absent support, it would not otherwise be offered. Similarly, an equally valid public goal could be to make wireless service more widely available and affordable in remote areas where it would not otherwise be available, absent support. The key factor thus becomes what benefit will customers experience in terms of expanded ability to use their mobile service over wider areas in return for the increased universal service fund assessments that this will cost? If a wireless carrier merely offers to provide higher powered customer premise equipment and external antennas to a few customers in remote locations so that they can qualify for funding, that might not be worth the cost of providing "high-cost" support for all of that carrier's existing low-cost customer base. It is for this reason that it is critical that the Commission understand the benefits that customers will receive before it decides to spend their money.

**NWMC's COVERAGE AREA**

**Q. Has NWMC provided a propagation analysis indicating its view of the signal coverage provided by its network?**

A. Yes. In his direct testimony Mr. Reeves provides three maps of its service area showing signal coverage. His Highly Confidential Appendix F (Revised) shows "Areas where CDMA coverage would benefit from enhancement," his Highly Confidential Appendix G (Revised) shows the same information overlaid on the ILEC wire center map, and his Highly Confidential Appendix H shows the "Proposed Total CDMA coverage." In his supplemental direct testimony, Mr. Reeves provided his Highly Confidential Appendix O showing the location of existing tower sites as well as "CDMA coverage from current sites."

While each of the maps that NWMC did provide is shaded to indicate signal coverage, they are shaded in only one color, indicating a single level of signal coverage. In response to a data request from CenturyTel and Spectra, the level of signal coverage shown was stated to be **_____**. As I will describe shortly, this level of signal coverage is quite low, and will not provide service comparable to that experienced in the more urban areas of the service area. By showing coverage only at a very low level, the Commission is prevented from fully analyzing a carrier's signal quality, and how that signal quality might be improved through the use of universal service funds.

**Q. Why should a wireless carrier's signal quality be an important element of the public interest analysis?**

A. 47 U.S.C. Section 254(b)(3) describes the purpose of universal service funding as follows:

> 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.

It is significant to note that in its newly adopted *ETC Designation Rules*, this Commission had adopted identical language in Section (2)(A)2.(III), and has stated that this language is to be use in defining the purpose for which support is intended. Thus, this Commission clearly understands that when a wireless ETC seeks federal universal service funds, the quality of the signal coverage provided to rural consumers should be an essential part of the Commission's public interest analysis. Otherwise, the Commission would not be able to determine whether consumers in the rural portions of the ETC service area are receiving service reasonably comparable to consumers in the more urban parts of the service area. The prospective ETC must stand ready to assume Carrier of Last Resort responsibilities if necessary. If a wireless carrier is to accept federal universal service funding for serving high-cost, rural areas, then it should be required to invest that money in a network that provides signal quality reasonably comparable to that experienced in urban areas. If it is not willing to make that level of commitment, then it should not be receiving universal service support.

**Q. Does NWMC have the capability to show multiple levels of signal coverage?**

A. I certainly believe that they do. In another ETC proceeding currently before the Commission[9] and in which Mr. Reeves is the technical expert witness for the ETC applicant, the applicant provided in response to a discovery request a signal coverage

map that I have included in my testimony as Schedule GHB-4HC. This map shows coverage at 4 different levels of signal strength ranging from strong in the more populated areas and along highways, to relatively weak in the more remote areas. This is consistent with the experience of most users of mobile service that service quality is generally very good in towns and close to a tower, but that quality deteriorates and the incidence of dropped calls increases as you move farther away. It should also be noted that the **_____ _____ _____ _____**.

**Q. Have you been able to conduct an independent analysis of NWMC's signal coverage at multiple signal strength levels?**

A. Yes, using publicly available data from the FCC's web site I was able to perform the signal strength analysis shown on Schedule GHB-5HC. This analysis was done at the two extremes coverage levels of **_____**.

**Q. Does Schedule GHB-5HC depict the entire extent of NWMC's signal coverage?**

A. No. The FCC data base does not always provide information on all of a carrier's cell sites. By examining Highly Confidential Appendix O to Mr. Reeves' testimony which provides the location of NWMC's existing cell sites I was able to identify four towers which were not included in the FCC data base - ** _____ _____**. While Schedule GHB-5HC does not show the

[9] Case No. TO-2006-0172 regarding Missouri RSA No. 5 Partnership.

entirety of NWMC's signal coverage, it does show that such an analysis can be performed, and that the examination of multiple signal strength levels will assist the Commission in performing the necessary analysis of whether high-cost funds are being used for the purpose for which support is intended, which includes providing rural customers with quality services reasonably comparable to those in more urban areas. Section 2(A)3.A of the *ETC Designation Rules* is clear that a prospective wireless ETC applicant is to provide "A *detailed* map of coverage area before and after improvements." (emphasis added) Without more detail than is shown on NWMC's Appendices F, G, H and O, the Commission simply cannot perform its required analysis of how high-cost funds will be used to improve signal coverage, and ensure that such funds are being used for their intended purpose. Thus, unless and until NWMC provides the necessary detail, the Commission cannot find NWMC's application to be in the public interest.

**Q. On page 15 of his direct testimony, Mr. Bundridge describes a six-step process that NWMC proposes to use to demonstrate that NWMC provides service throughout requested ETC service area. Do you believe that this process is consistent with Section 254(b)(3) of the Act?**

A. No. The six-step process that Mr. Bundridge describes allows a carrier to claim that an area is "covered", even if high-powered customer premises equipment and/or a roof-mounted antenna is required for a customer to receive signal coverage. While this provides a benefit to the individual consumer receiving this service, it is of no benefit to the vast majority of customers utilizing conventional handsets who might be traveling through rural areas of the state. It also is inconsistent with the intent of Section 254(b)(3) (of the Communications Act) or Section (2)(A)2.(III) of this Commission's rules , since

the coverage provided is not comparable to that available in urban areas. In addition, this process is geared towards the response to requests for service at individual customer's residences and places of business. In describing the potential benefits of ETC designation, NWMC has relied heavily on the benefit of mobility. I agree that mobility of telecommunications services can be a public benefit, however this is only the case where there is adequate signal coverage. One of the major problems with the six-step process outlined by Mr. Bundridge is that it makes no provision for consumer's to request service along major roads where quality coverage currently does not exist. The Commission may want to consider making such a request itself, should it decide to grant NWMC or any other wireless carrier ETC status.

**Q. Could you please summarize the criteria that the Commission should adopt to assure that the Congressional intent for high-cost universal service funding is achieved and that any carrier so designated would truly serve the public interest?**

A. The Commission should require that a prospective ETC applicant provide coverage maps indicating coverage from its existing tower locations, as well as coverage that would result from its proposed build-out. Such maps should be sufficiently detailed to indicate the quality of the signal coverage, and the applicant should provide statistics indicating the improvement in the percentage of population and land area that can experience urban-quality service. Only with this type of data will the Commission be able to make the necessary determination of whether the increased public benefits warrant the increased public costs. NWMC has not provided this type of data in this proceeding, and should not be granted ETC status until it has done so and proven that it passes a reasonable cost/benefit test.

**THE NWMC FILING AND THE COMMISSION'S *ETC DESIGNATION RULES***

**Q. What are your conclusions regarding NWMC's efforts in its supplemental direct testimony to show its compliance with the Commission's new *ETC Designation Rules*?**

A. NWMC's attempts to respond to the requirements of these rules are contained primarily in the supplemental direct testimony of Mr. Bundridge, with Mr. Reeves' supplemental direct testimony providing one additional map indicating signal coverage from existing tower sites. Highly Confidential Appendix M to Mr. Bundridge's testimony purports to provide the 2-year plan demonstrating that the high-cost funds that it receives will be used only for the purposes for which the support is intended. In general, I find Appendix M to be poorly described, difficult to understand, poorly labeled, and, even when taken it the most favorable light, it utterly fails to show that funds will be used for the intended purposes. On page 15 of her testimony, Ms. Zentgraf states that NWMC expects to receive $1.469 million per year in high-cost support. Simple multiplication (ignoring any potential growth in NWMC's customer base) would yield $2.938 million in total high-cost support over the initial two year period, yet Appendix M appears to indicate that over this same two-year period NWMC appears to be building only ** ___ ** towers, at an investment of ** _____ ** each, for a total over the two years of ** _____ ** over the same two-year period. There would thus appear to be a significant shortfall in the amount that NWMC stands to receive, and the amount that it has committed to invest in improved rural infrastructure, that its application and testimony fails to fully explain. As I have more fully described earlier in my testimony, NWMC has also failed to provide coverage maps in sufficient

detail to permit the Commission to determine the nature of NWMC's signal enhancements and the number of rural consumers that will experience improvements to service levels reasonably comparable to those available in the more urban areas. As a result of this and other shortcomings identified below, NWMC has not complied with the *ETC Designation Rule* for an ETC application. Furthermore, NWMC has not made any demonstration that the benefits of its expanded signal coverage would exceed the significant costs that its designation as an ETC would create. Therefore the Commission cannot find that approval of NWMC's (defective) application would be in the public interest.

**Q. Could you comment of the NWMC application and testimony as related to each of specific provisions of the *ETC Designation Rules*?**

A. Following is a summary of my findings related to each of the specific Rule Sections:

**Section 2(A)1 – Intended use of the high-cost support including detailed descriptions of any construction plans with start and end dates, populations affected by construction plans, existing tower site locations for CMRS cell towers, and estimated budget amounts.**

- The application provides no detailed descriptions of any of its construction plans, and does not indicate any start or end date.
- While Highly Confidential Appendix E to Mr. Bundridge's testimony does provide the total population affected by each tower addition, it does not show or demonstrate the improvements in signal quality that will be experienced by rural consumers.
- NWMC fails to meet the requirements of this Rule.

**Section 2(A)2, - A two-year plan demonstrating, with specificity, that high-cost support shall only be used for the provision, maintenance and upgrading of facilities and services for which the support is intended.**

- The two year plan is incomplete, poorly documented, poorly organized and fails to demonstrate that support will only be used for its intended purposes.

- From what can be determined from the plan, it would appear that NWMC will receive $2.938 million in total high-cost support over the initial two year period, yet Appendix M appears to indicate that over this same two-year period NWMC appears to be building only ** ___ ** towers, at an investment of ** ____ _____ ** each, for a total over the two years of **_____ **.

- NWMC fails to meet the requirements of this Rule.

**Section 2(A)3. – The two-year plan shall include a demonstration that universal service support shall be used to improve coverage, service quality or capacity on a wire center-by-wire center basis throughout the area where the carrier seeks ETC designation.**

- The signal coverage maps are not sufficiently detailed for the Commission to determine the improvement of signal coverage in rural service areas.

- Appendix M does not indicate the projected start and completion dates for each improvement.

- Appendix M does not indicate the level of investment and expenses that NWMC would incur if it were not granted ETC status, and thus the Commission cannot determine how the proposed plans would not occur absent the receipt of high-cost support.

- NWMC fails to meet the requirements of this Rule.

**Section 2(A)4 – A demonstration of the carrier's ability to remain functional in emergency situations.**

- Mr. Bundridge describes steps that NWMC has taken to ensure network reliability on pages 20 - 21 of his direct testimony.

- The Commission will need to determine if the network reliability measures taken by NWMC are sufficient to meet the standards of this Rule.

**Section 2(A)5 – A demonstration that the grant of the application would be consistent with the public interest, convenience and necessity.**

- NWMC has made no meaningful attempt to demonstrate that the benefits that will result to rural consumers in the form of improvements to coverage, service quality or capacity will exceed the costs that will be created by its designation as an ETC.

- NWMC fails to meet the requirements of this Rule.

**Section 2(A)6 – A commitment to advertise the availability of services and charges therefore using media of general distribution.**

- NWMC would appear to meet the requirements of this Rule.

**Section 2(A)7 – A commitment to provide Lifeline and Link-Up discounts.**

- NWMC would appear to meet the requirements of this Rule.

**Section 2(A)9 – A statement that the carrier acknowledges that it shall provide equal access to long distance if all other carriers relinquish their ETC designations.**

- NWMC would appear to meet the requirements of this Rule.

**Section 2(A)10 – A commitment to offer a local usage plan comparable to those offered by the ILEC in the areas for which the carrier seeks designation.**

- On page 9 of his testimony, Mr. Bundridge describes an "ILEC Equivalent Plan" that would offer unlimited local calling and limited mobility within the area served by the customer's home cell site at a fixed monthly price of $17.95 per month.

- What is unstated, and what the Commission needs to know, is what rates a consumer would pay if they stray beyond their "home cell site" area.

- The Commission will need to determine if the service and pricing commitments made by NWMC are sufficient to meet the standards of this Rule.

## SUPPORT FOR MULTIPLE WIRELESS ETCS

**Q. Will designating NWMC as an ETC in the requested areas increase the competitive choices that Missouri customers currently experience?**

A. No. Designating NWMC as an ETC will not increase the competitive choices that Missouri customers currently have, and NWMC has provided no specific facts or data to prove otherwise. NWMC already provides wireless service in the areas where it has requested ETC status. NWMC has neither identified nor quantified any customers who cannot currently get basic universal service that will be able to do so as a result of its ETC designation. NWMC has not indicated that any prices will be reduced if ETC status is granted. There are already at least six other wireless carriers providing competitive

wireless service in the requested areas without universal service support today. Therefore, NWMC has not quantified any specific benefits, and it is doubtful that significant additional competitive choices will result from designation of NWMC as a competitive ETC.

**Q. Earlier you mentioned that another wireless carrier, US Cellular, has also requested ETC status for all of the wire centers for which NWMC has requested ETC designation. How should the Commission evaluate these competing wireless ETC applications?**

A. As I have already stated, the key element in assessing the public interest impact of any ETC designation is whether the designation of any additional ETC will produce increased public benefits that exceed the increased public costs. Stated differently – how many wireless ETCs and Carriers of Last Resort do consumers need, or can they afford?

**Q. How could the Commission proceed with analyzing multiple requests for ETC status in the same sparsely populated rural areas?**

A. In evaluating multiple requests for ETC status, the type of signal coverage data that the *ETC Designation Order* and this Commission's *ETC Designation Rules* would require, as well as details regarding the service quality improvements that each prospective ETC applicant is willing to commit to, become even more important. The Commission must seek to get the maximum public benefit from scarce public universal service funding resources. As I have mentioned previously in this testimony, having multiple carriers (wireless or wireline) serve the same sparsely populated areas necessarily means that total costs for each carrier (as well as for society as a whole) actually will increase. One possible solution that would preserve competition within the

wireless market would be to award ETC status only to the wireless carrier that offers the best cost/benefit proposition in terms of network enhancement, and have that carrier offer discounted roaming services to other carriers in the area for which it receives ETC support.

**Q. On page 25 of her testimony, Ms. Zentgraf references a decision by the FCC in the Nextel case which she claims justifies the ETC designation in areas where multiple carriers currently provide service. Do you agree with her conclusions regarding that decision?**

A. No. In the Nextel case[10], the FCC gave blanket authorization to Nextel for ETC status in seven states where the state Commission lacked the authority to make the ETC designation. Contrary to Ms. Zentgraf's belief, Nextel did not make "specific showings, comparable to those made by NWMC here"[11] in making its public interest determination. Around the same time period, the Minnesota Public Utilities Commission (which did have authority to make ETC designations) issued an order denying the application of Nextel for ETC status. In that order, the Minnesota Commission states:

> The Company presented no plan for expanding its service capabilities and simply stated that receipt of the universal service funding would change (in unspecified ways) the economic model that might (no guarantee or analysis to show reasonable likelihood) make expansion (of unspecified extent) into some (unspecified) areas possible. The extent to which the economic model would change was not specified. No guarantee of expansion or analysis was provided to demonstrate the likelihood of expansion. No areas were identified for expansion. …In these circumstances and based on this record, therefore, the Commission finds that Nextel has failed to demonstrate that it is willing and able to serve

[10] In the Matter of Federal-State Joint Board on Universal Service Petition(s) for Designation as an Eligible Telecommunications Carrier in Alabama, Florida, Georgia, New York, Pennsylvania, Tennessee and Virginia, CC Docket 96-45, *Order*, DA 04-2667, released August 25, 2004.
[11] Zentgraf testimony at page 26, line 5.

"throughout the service area for which the designation is received…" as required of an ETC by 47 U.S.C. § 214(e)(1).[12]

Nextel made no such showing in the FCC case either. As I mentioned at the outset of my testimony, the FCC's positions on ETC designation and the public interest have evolved over time, and now require specific facts and data as well as concrete plans and infrastructure investment commitments.

**Q. On page 16 Ms. Zentgraf states that designating NWMC as an ETC would have a negligible impact on the universal service fund. Do you agree with this conclusion?**

No. The ultimate impact of designating NWMC as an ETC in the state of Missouri on the USF will be significant. I have already indicated that the direct impact of NWMC's designation will be approximately $1.5 million annually, and that if all other wireless carriers in the state of Missouri request and receive ETC status, the total annual impact will be over $81 million. It has been estimated that if all wireless carriers nationwide were to be granted ETC status, then the universal service fund would grow by between $2 billion and $3 billion per year.[13] No one ETC designation, by itself, is going to break the bank, however it is the collective decisions of Commissions across the nation, including the Missouri Commission, that will determine the USF assessments that all consumers, including Missouri consumers, must pay. It is for this reason that the FCC

[12] In the matter of NPCR, Inc. d/b/a Nextel Partners for Designation as an Eligible Telecommunications Carrier Under 47 U.S.C. § 214(e)(2), Docket No. PT-6200/M-03-647, Issued December 1, 2003.
[13] See *Universal Service – Rural Infrastructure at Risk*, March, 2005 published by McLean & Brown at page 28. This paper may be obtained at www.mcleanbrown.com.

and the Joint Board have called for comprehensive and "more stringent"[14] public interest standards for ETC designations.

**HARMS TO CONSUMERS**

**Q. If NWMC is to be granted ETC status, what potential harms could occur to Missouri customers?**

A. Harms to customers from an improper ETC designation can come in several forms. First, and most easily identified, is the cost imposed upon customers, particularly if they do not receive equal or greater benefits in return. As I mentioned previously, if in return for ETC designation the applicant expands its network to areas that were previously unserved, and expands the area over which consumers can utilize mobile communications, then perhaps this could be a reasonable use of public funds. If, on the other hand, the applicant merely offers to serve outlying customers with high-powered customer premise equipment and roof-top antennas as a means of meeting minimum funding qualifications, and if the large body of its existing customers experience no tangible improvement in their service, then such funding would not be in the public interest, and the cost of the increased funding assessments would represent a harm to consumers. Another harm could occur if multiple ETCs are designated in areas that could not economically support multiple carriers.

**Q. How would designating multiple carriers in areas in sparsely populated rural areas cause harm to consumers?**

A. Earlier in my testimony I presented several charts and graphs that showed the relationship of cost to subscriber density. In very sparsely populated rural areas, the

[14] *Virginia Cellular* Order at paragraph 4.

largely fixed nature of network costs (both wireline and wireless) causes costs to increase geometrically as population density decreases. This is the phenomenon identified by FCC Chairman Martin that supporting multiple carriers in an area that is prohibitively expensive for one provider could cause "stranded investment and a ballooning universal service fund".

**Q. Does the prospect of multiple competitive ETCs impact the ability of these carriers to function as Carriers of Last Resort?**

A. Yes. It certainly raises the question of whether multiple carriers could each economically build a network that provided service throughout the study area and be prepared to function as Carriers of Last Resort, particularly in sparsely populated, high-cost portions of Missouri. As I described earlier, wireless networks exhibit the same characteristics of increasing cost with decreasing density as wireline networks. Thus, if multiple ETCs are placed in a high-cost area with a fixed amount of support, it becomes increasingly difficult for any of them to effectively serve throughout the entire study area and function as a Carrier of Last Resort. This would carry the prospect of significant harm to consumers in the most rural parts of Missouri.

**Q. How should the Commission assure that consumers in the most rural parts of Missouri are not harmed?**

A. In addition to carefully assessing the potential harms that could occur to customers of the wireline incumbent currently functioning as Carrier of Last Resort, the Commission must also assure itself that the new ETC actually will build sufficient facilities in a reasonable period of time to serve throughout the entire study area. The Joint Board made very clear that ETC applicants must be able to serve throughout the

study area, and if they did not do so at the time of application, that they provide formal build-out plans subject to annual review. The FCC formalized this requirement in the *ETC Designation Order*, and this Commission codified this requirement in the *ETC Designation Rules*. Without such a requirement, there would be no guarantee that the carrier would be able to function as Carrier of Last Resort if the incumbent was unable to continue to do so. Indeed, if carriers can obtain ETC status and "high-cost" funding without some form of enforceable commitment to actually expand their network into high-cost areas then the Commission may have created unintended consequences and negative incentives.

**Q. Why do you say that the lack of an enforceable commitment to invest universal service fund proceeds to expand service throughout the ETC service area would create negative incentives?**

A. If a carrier can gain access to high-cost funds for serving its current predominantly low-cost customer base without making any enforceable commitment to serve the entire area, then there is a significant risk that the remote facilities will never be built, and the most rural customers will remain unserved by the wireless ETC. The reason is simple, once the carrier has the funding in hand, it faces a very different set of business incentives regarding investments in remote areas. Construction of these facilities will generate substantial cost, yet yield relatively little incremental revenue. In essence, the carrier is back where it started, with no incentive to make investments that make no business sense. Unless the Commission either requires the prospective ETC applicant to serve throughout the area prior to granting ETC status, or requires specific build-out plans and firm and enforceable commitments for such investment as a pre-

condition to granting ETC status, then it is highly likely that the carrier will not build facilities to serve the remote customers, and that scarce high-cost funds will provide a windfall to carries serving predominantly low-cost markets. The losers in this scenario would be rural customers who could face the prospect of having no carrier willing or able to make the investments necessary to function as Carrier of Last Resort. It would also be difficult, if not impossible, for carries to invest to bring rural customers access to advanced services, including broadband services.

## CONCLUSIONS

**Q. Please summarize your testimony.**

A. The Commission has important obligations under the 1996 Act to approve additional ETCs only when such designation would be in the public interest. The public interest is only served when the incremental public benefits of designating an additional ETC exceed the increased public cost of supporting an additional carrier. The FCC has provided criteria and tools in its *ETC Designation Order* to assist in making this determination. This Commission also has developed rules to assure that the public interest is served, and that recipients of universal service funds have public accountability for the use of such funds. It is particularly important that these rules be uniformly applied since multiple wireless carriers have applications pending for all of the wire centers in this case. While NWMC has provided some of the facts and data necessary for the Commission to analyze its Application, it has not provided sufficient information to allow the Commission to properly evaluate the benefits and costs of its designation, and unless and until it does so, the Commission cannot approve its application.

**Q. Does this conclude your testimony at this time?**

A. Yes.

**BEFORE THE PUBLIC SERVICE COMMISSION**
**OF THE STATE OF MISSOURI**

| | | |
|---|---|---|
| In the Matter of the Application of Northwest Missouri Cellular Limited Partnership For Designation as a Telecommunications Carrier Eligible for Federal Universal Service Support Pursuant to § 254 of the Telecommunications Act of 1996 | ) ) ) ) ) ) | Case No. TO-2005-0466 |

AFFIDAVIT OF GLENN BROWN

State of Arizona )
) ss.
County of Yavapai )

Glenn Brown, being of lawful age, on his oath states: that he has participated in the preparation of the foregoing Rebuttal Testimony in question and answer form, consisting of 40 pages to be presented in the above case; that the answers in the foregoing Rebuttal Testimony were given by him; that he has knowledge of the matters set forth in such answers; and that such matters are true and correct to the best of his knowledge, information and belief.

Glenn Brown

Subscribed and sworn to before me this 9th day of May, 2006.

NANCY L. BARTELL
Notary Public - Arizona
Yavapai County
My Commission Expires
September 10, 2006

Notary Public

(seal)

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