Sprint

Lisa Creighton Hendricks
Senior Attorney

State External Affairs
6450 Sprint Parkway
Overland Park, KS 66251
KSOPHN0212-2A253
Voice 913 315 9363
Fax 913 523 9829
PCS 913 461 5765
lisa.c.creightonhendricks@mail.sprint.com

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Missouri Public
Service Commission

Secretary
Missouri Public Service Commission
200 Madison Street, Suite 650
P. O. Box 360
Jefferson City, MO 65102

Re: In the Matter of an Investigation of the Actual Costs Incurred in Providing Exchange Access Service and the Access Rates to be Charged by Competitive Local Telecommunications Companies in the State of Missouri
Case No. TR-2001-65

Dear Sir:

Enclosed are an original and eight (8) copies each of the HC and NP Rebuttal Testimony of Randy G. Farrar, and the Rebuttal Testimony of Mark D. Harper, and Dr. Brian Staihr, on behalf of Sprint. in the above-captioned matter. I would appreciate your filing the same and returning the extra filed stamped copies to me.

If you have any questions or comments, please do not hesitate to call me at 913-315-9363.

Very truly yours,

Lisa Creighton Hendricks
By mkj

Lisa Creighton Hendricks

LCH:mkj
cc: Parties of Record

EXHIBIT NO.:	
ISSUES:	ACCESS RATES
WITNESS:	RANDY G. FARRAR
SPONSORING PARTY:	SPRINT
TYPE OF EXHIBIT:	DIRECT TESTIMONY
CASE NO.:	TR-2001-65
DATE PREPARED:	AUGUST 1, 2002

BEFORE THE MISSOURI PUBLIC SERVICE COMMISSION

In the Matter of the Access Rates Charged by Competitive Local Exchange Telecommunications Companies in the State of Missouri	))))	Case No. TR-2001-65

REBUTTAL TESTIMONY OF RANDY G. FARRAR ON BEHALF OF SPRINT MISSOURI, INC.

AUGUST 1, 2002

NP

***** NON PROPRIETARY *****

I. INTRODUCTION

Q. Please state your name, occupation, and business address.

A. My name is Randy G. Farrar. I am presently employed as Senior Manager - Network Costs for Sprint/United Management Company. My business address is 6450 Sprint Parkway, Overland Park, Kansas, 66251.

Q. Did you previously provide Direct Testimony is this proceeding?

A. Yes, I did.

Q. What is the purpose of your Rebuttal Testimony?

A. I will provide comments on the Direct Testimony of Dr. Ben Johnson, of Ben Johnson and Associates (BJA), testifying on behalf of the Commission Staff.

Nothing in Dr. Johnson's Direct Testimony alleviates any of the concerns addressed in my direct testimony. Specifically,

- Of Dr. Johnson's four cost studies, three do not conform to any incremental cost standard, and the BJA TSLRIC standard does not conform to the FCC's Forward-Looking Economic Cost standard.
- In the BJA TSLRIC study

- End office switching costs are understated due to the exclusion of facilities which are variable in the long-run.
- Tandem switching costs are overstated due to the inclusion of costs associated with non-tandem switches.
- Transport costs are understated due to the exclusion of facilities which are variable in the long-run.
- Annual charge factors use overstated depreciation lives, understated cost of capital, and incorrect maintenance factors based on embedded expenses.
- Directly attributable shared expenses are improperly excluded.

- While Dr. Johnson now includes common costs, they are neither developed nor applied in a consistent or reasonable manner.

II. COST MODEL ISSUES

A. Cost Model Methodologies

Q. What is the appropriate cost methodology for this proceeding?

A. As discussed in length in my Direct Testimony, the appropriate cost standard for this proceeding is the FCC's Forward-Looking Economic Cost Standard, as defined in the FCC's Local Competition Order.

As mentioned in my Direct Testimony, it appears that the Missouri telecommunications law has directed the Commission to use a cost methodology that at a minimum considers long run incremental cost or

"LRIC." The Missouri telecommunications law directs the Commission to apply LRIC principles when it evaluates the cost of intrastate access for Price Cap companies in connection with rate re-balancing. See Section 392.245.9 RSMo.

In addition, the Commission relied on Sprint's cost study that conformed to the FCC's Forward-Looking Economic Cost standard in approving Sprint rate rebalancing (Case No. TR-2002-251). The Commission also relied on GTE's TSLRIC cost studies in approving GTE's access reduction / rate rebalancing.[1]

Finally, the Missouri telecommunications law specifically requires that the Commission ensure that all new services are priced above LRIC. See Section 392.200(4)(2)(c) RSMo.

Q. Has the Commission Staff provided any guidance as to the appropriateness of the FCC's cost standard?

A. Yes. In paragraph 2.3.1 of the Request for Proposal (RFP) sent out by the Commission Staff for a consultant to assist in this docket, the Staff specifically stated,

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[1] *Tariffs of GTE Midwest Incorporated, d/b/a Verizon Midwest, to implement rate changes under the price cap regulatory framework,* Case No TR-2002-250.

> The contractor should use a forward-looking costing method **consistent with federal costing guidelines**. (emphasis added)

Dr. Johnson was well aware of this. In its response to the Commission Staff's RFP, BJA stated:

> We note that the Commission has expressed a desire to identify the "actual costs incurred" in providing exchange access service, and that the RFP requires the contractor to "use a forward looking costing method **consistent with federal costing guidelines**". In meeting these criteria we will rely on our extensive experience in analyzing telecommunications services in other jurisdictions. (emphasis added)

Q. Do any of Dr. Johnson's four cost studies comply with the FCC's Forward-Looking Economic Cost standard as defined by the FCC's Local Competition Order?

A. No. Despite the instructions in Commission Staff's RFP, none of Dr. Johnson's cost methodologies conform with the FCC's Forward-Looking Economic Cost standard. Three of Dr. Johnson's four cost methodologies do not conform to any incremental cost standard, and the BJA TSLRIC cost study does not conform to the FCC's Forward-Looking Economic Cost standard.

In fact, I did not even see any reference to the FCC cost standard in Dr. Johnson's direct testimony.

Q. What value is there in considering four different cost methodologies?

A. In my opinion, none. Assuming the FCC's Forward-Looking Economic Cost standard is appropriate, admittedly, four different analysts could arrive at four slightly different cost estimates. However, the underlying principles in these four cost estimates will be the same, only the interpretation of these principles will differ.

A single, defined cost standard is preferable to having several cost analysts each derive four different cost estimates based upon four different cost methodologies, which reflect their own personal costing philosophies.

Q. Does the BJA TSLRIC standard produce a reasonable result for Sprint?

A. No. As the table below illustrates, the most recent version of the BJA TSLRIC result for Sprint incorrectly includes loop cost (when including common cost). Also, for end office switching, tandem switching, and transport, the BJA TSLRIC results are only about one-third the results of the Forward-Looking Economic Cost.

*** REDACTED ***

Q. Will the BJA TSLRIC cost standard allow recovery of costs?

A. No. Dr. Johnson acknowledges this beginning on page 22, line 19, where he states,

> For this very reason, a carrier that enjoys economies of scale and scope cannot recover the totality of its costs if it sets its prices equal to TSLRIC. TSLRIC estimates can approximately be used as a pricing floor, but they don't necessarily provide a valid indication of an optimal price level. To the contrary, in order to fully recover a carrier's total costs, a markup or contribution above TSLRIC is necessary when establishing at least some (perhaps all) of the carrier's rates.

The FCC Forward-Looking Economic Cost standard is a significant improvement over the BJA TSLRIC methodology, in that it includes the long-run incremental cost of all network components, includes an assignment of directly attributable shared costs, and includes a reasonable allocation of common costs.

B. Common Cost

Q. Does the FCC Order provide any guidance with respect to the allocation of common costs?

A. Yes. The FCC deemed two allocation methods to be reasonable. The two reasonable methods are, according to the FCC Order,

> One reasonable allocation method would be to allocate common costs using a fixed allocator, such as a percentage markup over the directly attributable forward-looking costs. We conclude that a second reasonable allocation method would allocate only a relatively small share of common costs to certain critical network elements, such as the local loop and collocation, that are most difficult for entrants to replicate promptly (i.e. bottleneck facilities). (Paragraph 696).

Q. On page 46, lines 10 – 19, Dr. Johnson states, "Given these complications, and the inability to achieve great precision in this area, my initial inclination was to simply exclude common costs from the Staff cost studies. ... Based upon feedback we received from the ILECs, however, I concluded that this approach was confusing, and that it would be preferable to include an estimate of common costs in the various cost studies, notwithstanding the fact that any such estimate would necessarily be less precise than the remaining portions of the study." Please comment on the difficulty of determining common costs.

A. The FCC's Forward-Looking Economic Cost standard as defined in the FCC Local Competition Order clearly includes common costs. Common cost studies are routinely performed in the telecom industry.

All USF models, including BCPM, HAI, and the FCC's HCPM, include an allowance for common costs. All ILEC cost studies for UNEs and reciprocal compensation that I have performed or reviewed include an allowance for common costs. Sprint routinely calculates an allowance for common costs for UNE, reciprocal compensation, and switched access cost studies.

While the methodologies may vary, my experience is that common costs are generally in the range of 10% – 20% of TELRIC (Total Element Long-Run Incremental Costs. Sprint has proposed a common cost factor in this proceeding of *** **REDACTED** ***. Sprint's common cost methodology is consistent with the FCC's Forward-Looking Economic Cost standard.

(Note: Sprint's Missouri Access Cost Study filed on December 4, 2001 in Case No. TR-2002-251 included calculations for common cost. Specifically, this can be found in the Excel workbook, "odc04.xls." Accompanying documentation can be found in the Word document, "Missouri Access ODC Documentation.doc.")

Q. Are Dr. Johnson's common costs reasonable?

A. No. The following table summarizes the TSLRIC for switched access as calculated by Dr. Johnson, both with and without common costs, and the percent difference attributable to common costs.

***** REDACTED *****

As can be seen, Dr. Johnson's results are inconsistent, unreasonable, and do not conform with the FCC Order. Dr. Johnson's common costs as a percent of cost range from 20.0% for tandem switching, to 1,704% for transport. Somehow, Dr. Johnson's methodology calculates a common cost for loop when the underlying loop cost is zero.

C. Stand-Alone Cost Methodology

Q. Does the BJA Stand-Alone cost standard accurately measure true stand-alone costs?

A. No. Although Dr. Johnson misuses the stand-alone methodology, as described in the rebuttal testimony of Dr. Brian Staihr, the actual result of the BJA Stand-Alone cost methodology is not reasonable.

Specifically, Dr. Johnson claims the stand-alone cost of end office switching for Sprint is $0.009661, before common costs. However, the following simple analysis demonstrates that this is severely understated. In fact, it does not even account for the cost of the central processor alone.

Specifically, Dr. Johnson agrees that the stand-alone cost must include the entire "getting started cost," which consists primarily of the central processor. Applying Sprint's annual charge factor (which includes directly attributable shared costs) to Sprint's actual SCIS-derived "getting started investment" (which was accepted by Dr. Johnson) produces a "getting started cost" (excluding any other switching costs) which is almost three times the BJA total switching stand-alone cost.

***** REDACTED**

Even using Dr. Johnson's annual charge factor still produces a result which is almost double the BJA stand-alone cost. It is clear that Dr. Johnson's stand-alone switching cost severely underestimates actual stand-alone switching costs.

D. Loop Costs

Q. Is loop cost properly included in the incremental cost of switched access?

A. No. It is incorrect to arbitrarily allocate the cost of the non-traffic-sensitive (NTS) loop to the incremental cost of switched access.

Q. Please discuss the nature of traffic-sensitive and NTS costs.

A. By definition, if a cost varies with the volume of traffic while holding the number of subscribers constant, it is traffic-sensitive. If a cost varies with the number of subscribers while holding the volume of traffic constant, it is NTS.

Q. Does the FCC consider the ILEC loop an NTS cost?

A. Yes. Paragraph 1057 of the Local Competition Order explicitly states,

> The costs of local loops and line ports associated with local switches do not vary in proportion to the number of calls terminated over these facilities. We conclude that such non-traffic sensitive costs should not be considered "additional costs" when a LEC terminates a call that originated on the network of a competing carrier.

The FCC properly considers loop an NTS investment.

Q. Should NTS loop costs be recovered on a traffic-sensitive basis?

A. No. The Local Competition Order makes it clear that NTS loop costs should be recovered on a flat-rated basis. §51.509 of the FCC Rules states,

> (a) *Local Loops*. Loop costs shall be recovered through flat-rated charges.

Q. In his original draft cost study, Dr. Johnson did not included loop costs in his TSLRIC study. Is this still the case?

A. No. His original draft TSLRIC study did not include loop costs. However, in his Direct Testimony, Dr. Johnson now applies common cost in such a manner that there are now common loop costs in his TSLRIC study. As the following table illustrates, loop is now the largest single component ********REDACTED********* , and accounts for over 35% of the BJA TSLRIC switched access costs.

***** REDACTED *****

Q. On page 119, lines 4 – 5, Dr. Johnson states, "As shown, the stand alone costs [for common line] for Sprint, Verizon and Southwestern Bell (SWBT) are similar." Is this reasonable?

A. No. While the cost of common line (loop) does not belong in any incremental cost of access, it is not reasonable that the loop cost for a rural company such as Sprint Missouri should be similar to an urban company such as Southwestern Bell.

E. FCC USF Model

Q. On page 33, line 16, Dr. Johnson states, "I will readily concede that the FCC hasn't endorsed using its model for any purpose other than administration of the federal universal service fund. That doesn't mean the model isn't capable of being used for other purposes. ... the FCC model can be adopted to provide a variety of different types of cost estimates, including estimates of the cost of providing intrastate switched access cost service." Is this a reasonable representation of the capabilities of the FCC model?

A. No. Sprint does not believe the FCC USF model is appropriate for determining the cost of switched access. The FCC USF model is concerned with the cost of basic service. Switching and transport typically account for less than 10% of the total cost of USF basic service. Accordingly, most of the complexity in the FCC USF model deals with loop

costs. As a result, for usage-sensitive services such as switched access, the FCC USF model does not provide sufficient precision for switching and transport costs.

Q. Has the FCC arrived at a similar conclusion?

A. Yes. In the FCC's Fifth Report and Order, CC Docket No. 96-45, dated October 22, 1998, Paragraph 75 states,

> In our evaluation of the switching modules in this proceeding, we note that for universal service purposes where cost differences caused by differing loop lengths are the most significant cost factor, switching costs are less significant than they would be in, for example, a cost model to determine unbundled network element switching and transport costs.

However, despite Dr. Johnson's praise of the FCC USF model, he did not use it to estimate Sprint's switching or transport costs.

Q. On page 25, line 14, Dr, Johnson refers to, "... the loop models provided by Sprint and ... ". Did Sprint, in fact, provide a loop cost model in this proceeding?

A. No. Since the incremental cost of switched access does not include loop, Sprint did not provide a loop cost study in this proceeding.

F. Fill Factors

Q. On page 110, lines 9 – 10, Dr. Johnson states, "... the fill factors in a long run cost study should always be very close to the optimal, cost minimizing

level (taking into account the unavoidable impact of lumpiness of investments)." Is this correct?

A. No. In the real world, it is often impossible for long-run fill factors to be equal to theoretical optimum levels.

Two examples can be seen in fiber optic terminals used for transport. First, an OC-3 transmission system is the smallest system regularly utilized by the industry. Forward-looking demand for many rural routes often cannot come close to the capacity of these systems. Thus many OC-3 transports routes simply cannot operate anywhere near the OC-3 capacity, yet they represent the most efficient use possible.

Second, even if forward-looking demand will exhaust the OC-3 system, utilization will initially be very low. For example, an OC-3 system has the capacity of 3 DS3s. An OC-12 system has the capacity of 12 DS3s, which is four times greater. When an OC-3 system is exhausted and must be replaced with the larger OC-12 system, its maximum utilization at the time of cut-over is only 25% (3 DS3s / 12 DS3s). In reality, since the cut-over must take place prior to absolute exhaustion, the actual utilization at the time of cut-over must be less than 25%, yet this represents the most efficient use possible.

Q. On page 111, lines 6 – 20, Dr. Johnson quotes two paragraphs in the FCC Local Competition Order to support his position on fill factors. Specifically, he states, "... the FCC expects UNE rates to be based upon the cost of an efficient network – not one with high levels of spare capacity." Do these two paragraphs, in fact, support his position?

A. No. In fact, the two paragraphs quoted by Dr. Johnson do not even mention "spare capacity."

Q. What does the FCC say about fill factors?

A. As previously stated in by Direct Testimony, Paragraph 682 of the FCC's Local Competition Order states,

> Per-unit costs shall be derived from total costs using reasonably accurate "fill factors" (estimates of the proportion of a facility that **will** be "filled" with network usage); that is, the per-unit costs associated with a particular element must be derived by dividing the total cost associated with the element by a **reasonable projection of the actual total usage** of the element. (Emphasis added)

The FCC Order clearly requires "a reasonable projection of actual total usage," not a theoretical optimum level.

IV. CONCLUSION

Dr. Johnson's estimates of Sprint's switched access costs are not reasonable for the following reasons:

- The BJA cost studies do not conform to the FCC's Forward-Looking Economic Cost standard.
- The BJA cost studies contain many flaws, as discussed in Section I and (in detail) in my Direct Testimony.
- The BJA TSLRIC study produces results that are only about one-third of those produced by the FCC's Forward-Looking Economic Cost standard.
- The BJA TSLRIC study now includes common cost, but these common costs are applied in an inconsistent and unreasonable manner.
- The BJA Stand-Alone cost study understates actual costs, and is misused.
- The BJA cost studies use fill factors that are unreasonable and do not conform to the FCC's Forward-Looking Economic Cost standard.

Q. Does this conclude your Rebuttal Testimony?

A. Yes, it does.

BEFORE THE PUBLIC SERVICE COMMISSION
STATE OF MISSOURI

In the Matter of an Investigation of the Actual Costs Incurred in Providing Exchange Access Service and the Access Rates to be Charged by Competitive Local Exchange Telecommunications Companies in the State of Missouri.	))))))	Case No. TR-2001-65

AFFIDAVIT OF RANDY G. FARRAR

STATE OF KANSAS)
) ss:
COUNTY OF JOHNSON)

I, RANDY G. FARRAR, being of lawful age and duly sworn, dispose and state on my oath the following:

1. I am presently Senior Manager – Network Costing for Sprint/United Management Company.

2. I have participated in the preparation of the attached Rebuttal Testimony in question and answer form to be presented in the above entitled case;

3. The answers in the attached Rebuttal Testimony were given by me; and,

4. I have knowledge of the matters set forth in such answers and that such matters are true and correct to the best of my knowledge and belief.

Randy G. Farrar

Subscribed and sworn to before me on this 25 day of July, 2002.

Debbie K. Draper
NOTARY PUBLIC

My Appointment Expires: June 4, 2005