DOCKET NO.: 981834-TP - Petition of Competitive Carriers for Commission action to support local competition in BellSouth's Telecommunications, Inc. service territory

DOCKET NO.: 990321-TP - Petition of ACI Corp. d/b/a Accelerated Connections, Inc. for generic investigation to ensure that BellSouth Telecommunications, Incorporated, Sprint-Florida, Incorporated, and GTE Florida, Incorporated, comply with obligation to provide alternative local exchange carriers with flexible, timely, and cost-efficient physical collocation.

WITNESS: **Rebuttal Testimony of Rowland L. Curry**
Appearing on Behalf of Staff

DATE FILED: April 18, 2003
Revised July 5, 2003

[Confidential information in this version has been redacted.]

REBUTTAL TESTIMONY OF ROWLAND L. CURRY

Q. Please state your name and business address.

A. My name is Rowland L. Curry. My business address is 1509 Mearns Meadow Blvd., Austin, Texas 78758.

Q. By whom are you employed and in what capacity?

A. I am self-employed as the Principal of Curry & Associates, an independent telecommunications consulting firm. For the purposes of this proceeding, I am working in partnership with Gabel Communications, having been retained by the staff of the Florida Public Service Commission. Dr. Gabel and I are providing expert analysis of the costs of collocation elements filed by BellSouth, Verizon, and Sprint in this proceeding.

Q. Please provide us with information regarding your relevant experience.

A. Prior to beginning my consulting career in 2001, I worked on the staff of the Public Utility Commission of Texas for almost 25 years. In total, I have over 30 years experience in the telecommunications industry, with work activities ranging from technical circuit design to national telecommunications policy. My vita is attached to this testimony as Exhibit RLC-1.

Q. Have you ever participated in proceedings before the Florida Public Service Commission or other regulatory bodies?

A. I have not previously testified before the Florida Public Service Commission. While employed on the staff of the

Texas PUC, I testified in, or was otherwise involved in hundreds of proceedings. In addition, I have been involved as a consultant in proceedings in Nevada, Texas, and Pennsylvania, as shown in my vita.

Q. Which specific issues do you intend to address in this testimony?

A. I have analyzed the cost studies filed by BellSouth Telecommunications, Inc. ("BellSouth"), Verizon Florida Inc. ("Verizon"), and Sprint-Florida, Inc. ("Sprint") in these proceedings, specifically with regard to the provision of DC power elements and related issues.

I will address the calculation and application of recurring and non-recurring power charges by the three applicants in the following sections.

Q. How does BellSouth propose to charge for DC power elements?

A. BellSouth proposes to charge a monthly recurring rate for power; they have computed a cost of $7.28 rate per fused amp.[1] The cost, designated as H.1.8 in the BellSouth study, is designed to recover the investment associated with BellSouth's DC power plant (e.g., batteries and rectifiers) and monthly commercial AC charges.[2] The costs and rates are identical for physical

[1] It should be noted that BellSouth has also developed a cost for DC power per *used* ampere, designated H.1.71.

[2] Direct Testimony of W. Bernard Shell, Exhibit WBS-3, Feb. 4, 2003.

collocation and virtual collocation; there are no discrete DC power costs for adjacent or remote applications. BellSouth does not propose to apply non-recurring charges for recovery of DC power costs.

Q. How has BellSouth calculated the cost per fused amp?

A. BellSouth begins by entering a number of inputs or assumptions into its BellSouth Cost Calculation (BSCC) Model, including the average investment per amp requested, the average monthly cost per kilowatt hour, the rectifier efficiency, and so forth. The BSCC model then establishes a cost for this rate element per ampere per month.

Q. What are your observations regarding the reasonableness of the inputs and calculations?

A. I have concerns regarding the reasonableness of BellSouth's input for "Average Investment per Fused Amp" used in the cost study for H.1.8; which is the most critical of the inputs in the cost calculations. I did not perform an in-depth review of the BSCC model. I have not discovered significant irregularities in other inputs and assumptions that go into the model.

Q. Can you be more specific about your concerns regarding the average investment per fused amp?

A. Yes, I can. BellSouth's work papers contain a Florida-specific "Sample of Power Construction for Collocation" [3]

[3] File name: "H.1.8, H.1.71 & H.2.4.xls"

spreadsheet that shows power plant construction additions, ALEC-dedicated cable costs, and DC amps requested for central offices in which ALECs ordered collocation. On a separate work sheet in the same data file, BellSouth shows "Regional Plant Construction $$$ / Amp", showing a total of $***** per amp. BellSouth's primary inputs are derived from this regional computation, by multiplying the regional construction amount per amp by the "Protection Device Adjustment" of **% for the H.1.8 study, resulting in a construction cost per fused amp of $****. The latter adjustment accounts for the fact that protective devices (fuses and circuit breakers) are normally sized at 150% of the maximum amperage requested.

BellSouth has provided no sound basis for the regional construction cost per ampere for this study. The adjacent, Florida-specific work sheet in the same data file displays the costs for power plant additions resulting from collocations in Florida central offices, along with the additional ampere capacity enabled by the construction. The construction costs vary widely, and must be assumed to reflect the cost of construction additions or augmentation of existing power facilities.

Q. Is there a clear pattern that emerges with regard to the power facility costs?

A. No, there is no clear pattern or trend. Using the BellSouth data, I calculated the construction cost per ampere for each of the central office entities shown on the worksheet. The results, shown on Exhibit RLC-2, range from zero (no construction cost of power facilities for additional collocation amps) to infinity (construction costs shown, but no collocation amps requested). Discarding those obvious outliers, the costs per ampere for 93 Florida central offices range from $** to $****** per ampere.

Q. What is the reason for the extreme variation?

A. It is impossible to know for certain without examining each of the projects and determining the specific reasons in each case. However, it is intuitive that these construction costs represent augmentation (rather than new placement) of power facilities, and that some of the projects clearly go beyond the isolated requirements for collocation. In one Miami central office, for example, BellSouth reports that they spent more than $******* for power equipment on a request for collocation involving less than ** amperes. For comparative purposes (using Verizon and Sprint data provided in this proceeding[4]), that type of power plant expenditure should produce approximately 1,000 amperes of additional power capacity. In another instance, BellSouth was able to provide a collocation request for *** amperes with no construction expenditures shown. Power plant investments are often characterized as "lumpy" investments, as are buildings and

[4] See Verizon Exhibit BKE-1, sheet "DC Power Fac3-CS", Sprint Exhibit JRD-2, sheet "DC Power Plant Investment WP".

central offices in general. Additions generally exceed the immediate, incremental need and as a result provide for future utilization.

Q. Do you have other concerns regarding this input in the BellSouth studies?

A. Yes, I do. Since BellSouth apparently developed this input based on a sample of regional office power augmentations, there is no singular relationship between specific power needs and the cost of meeting those needs. Costs for collocation elements should be established on TELRIC principles, not a sample of embedded costs. The FCC's interconnection pricing order requires that TELRIC cost estimates be obtained "by dividing the total cost associated with the element by a reasonable projection of the actual total usage of the element."[5] By basing their primary cost input for both of these studies on their augmentation sampling methodology, BellSouth has not established an appropriate TELRIC cost for actual usage.

The additional, obvious concern is that BellSouth used a regional, rather than Florida-specific, average investment per fused amp. Even if one were to accept the methodology of averaging recent power projects, the company provided no back-up data for the derivation of the regional investment.

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[5] *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996,* Report and Order, CC Docket No. 96-98, 11 FCC Rcd 15499 (1996), ¶682.

Q. What is your recommendation with respect to the BellSouth calculation?

A. The Commission should require BellSouth to recalculate their cost per fused ampere using a more accurate average investment per fused amp. I recommend that BellSouth be instructed to recalculate their average investment using an incremental, building-block-of-capacity approach, using BellSouth-specific investment data and Florida-specific weightings.[6] The result should be provided to the Commission for analysis and approval. That critical input can then be loaded into the BSCC to develop the resultant cost per fused amp.

Q. In your earlier response regarding Issue 6A, you indicated that BellSouth and Sprint should be required to allow their collocating customers the option to purchase power based on the collocator's calculation of equipment power drain. What impact will that have on BellSouth's calculations?

A. BellSouth already performed the calculation of DC power cost per *used* ampere, as shown in cost element H.1.71. The computations are identical to those used for cost element H.1.8, with the exception that the **** multiplier is not used for H.1.71. To the extent that BellSouth provides more suitable support for the investment per ampere as an input to the BSCC model, the revised cost should be easily derived.

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[6] It should be noted that Sprint uses an incremental methodology in the development of its power facility cost per amp in this proceeding.

Q. How does Verizon structure its tariff charges for DC power for collocation?

A. Verizon uses a combination of non-recurring charges and monthly recurring charges for the recovery of costs associated with DC power facilities. The non-recurring charges are designed to recover costs of engineering as well as the wire and cable to the battery distribution fuse bay (BDFB). The monthly recurring charge recovers the cost of the installed power plant infrastructure, cabling from the main power board to the BDFB, fuses and panels, and an allocated cost of commercial utility service. As previously discussed, Verizon prices its power for collocation on a per-amp-used basis, for each load amp ordered by the ALEC.

Q. How are Verizon's monthly recurring costs calculated?

A. The recurring cost element, DC Power Facility, includes the cost of materials and installation to provide DC power to the collocator's area. Costs include power cables that deliver power from the power plant to the BDFB, fuse panels, relay racks, distribution bays, and a portion of the existing power plant (batteries, rectifiers, backup generator, main fuse panel, etc.).

In its studies, Verizon used current estimates for power plant equipment investments for central offices of varying sizes. Verizon weights the cost of power plant equipment according to the distribution of exchanges, by line size, within Florida. The company also develops a cost of providing power cable from the main power distribution board to a battery distribution fuse bay (BDFB) in the collocator's area. Verizon's study is contained in standard spreadsheets, and the process is reasonably easy to follow. Many of the inputs and estimated costs of equipment and labor are provided by Verizon's GTEAMS, a company-wide accounting system.

Q. Have you reviewed Verizon's methodology and calculations for their recurring costs and rates, and have you formed general opinions regarding their study?

A. The company's methodology uses largely embedded investments and data to compute costs. Although the model is "open", in that it can be easily followed on standard spreadsheets, much of the supporting information, inputs, and assumptions are obtained from Verizon's GTEAMS system. As I discuss in this testimony, there are outputs from the GTEAMS system that do not appear reasonable, but a comprehensive examination of GTEAMS has not been possible within the scope of this project.

Q. Have you identified specific issues in Verizon's recurring cost studies that should be addressed?

A. Yes, I would highlight the following specific power cost development elements within Verizon's recurring cost studies that I have identified as being in error or overstated:

- The EF&I cost of power per ampere.
- The installation charge ratios for power cables.
- The annual cost factor for power equipment.

Q. Please discuss your concerns with respect to the EF&I cost of power per ampere.

A. The EF&I (Engineered, Furnished, & Installed) cost of power per ampere appears to be overstated, and Verizon's computations contain a number of unsubstantiated assumptions and inputs. Because of the confidential nature of these studies, I will describe my concerns in general terms, but with enough specificity that the reader may follow the description within the confidential worksheets.

- Referring to Verizon's cost calculations on Sheet DC Power Fac 4-CS, the company uses an installation ratio to calculate the cost of installing power facilities up to an office line size of approximately 20,000 lines. Rather than continue the use of the same installation ratio for larger offices, the calculation inexplicably shifts to a larger multiplier, doubling, and then tripling the installation cost of power facilities for larger offices (see cells D38 and D39). The company provides no support for the larger multiplier, but the effect is to significantly increase the installed cost of power facilities for larger offices, which should benefit from the economy of scale in providing a larger number of amperes for service to a larger number of customer lines. In addition, since the company's weighted (per line) average cost per ampere is heavily weighted toward the larger central offices, overstated costs in those larger offices will skew the overall company cost upward. Unless the company can provide persuasive arguments for the expanding installation costs, the computations should be recalculated using the same installation ratio as used for medium-sized offices.

- Referring to Verizon's cost calculations on Sheet DC Power Fac 3-CS, the company inserts amperage assumptions into cells B11 through B14 that purport to represent the amount of amperage capacity produced by the power plant investment shown. In order for the calculations to be correct, the amperage capacity must be the *highest* amount that can be produced from the power plant that costs the amount shown. Verizon has provided no information on the source of that data. The data are critical, as they are used to derive the installed cost per ampere of the power plant. By way of comparison, the amperage capacities used by Verizon are not consistent with those used by Sprint in their worksheets, and Verizon's installed cost per ampere of its larger power facilities is approximately 1.7 times the cost per ampere calculated by Sprint in its studies. The Commission should require Verizon to provide additional support for the maximum amperage capacity of the power facilities for which it has developed plant investment in this study.

Q. Can you describe what is involved in pulling power cable, and how Verizon has calculated the cost of that activity?

A. This activity basically consists of pulling a large power cable (up to approximately 1 inch in diameter) from its shipping reel up into the appropriate cable rack location, and securing it to the cable rack. Power cables are pulled in pairs or quads, as there must be two conductors for the power circuit, and there should be two power feeds for redundancy.

Verizon splits the cost of providing power cable into two components. The cost of cabling from the main power board to the BDFB is included in the recurring monthly rate for DC Power Facilities. The cost of cabling from the BDFB to the collocator's area is included in the non-recurring charge for DC Power - Cable Pull & Termination.

Verizon uses two different methods to calculate the installation labor charges for installing the power cables. For the recurring cost study, Verizon has used an installation charge ratio that is applied to the cable material cost to calculate the cost of installation. For the non-recurring cost study, Verizon proposes a labor-hour-per-foot method to calculate the cost of installing the same type of cable. As I will discuss below, I believe both methods provide erroneous results.

Q Please discuss your concerns with respect to the installation charge ratios for power cables in this study.

A. The cost of power cables from the main power board to the BDFB is included in Verizon's monthly recurring charges for DC Power Facilities, and their underlying cost studies. While the cost of the cables themselves appears reasonable, the ratios used to calculate the cost of installation are overstated. Using the company's installation ratio of ********, the cost for pulling 20 power cables for a distance of ***** feet would be $********, which - using a $50 loaded labor rate - equates to over ***** hours.

Q. How are the company's installation ratios calculated, and are they based on objective or quantitative information?

A. Verizon relies on estimates provided by subject matter experts (SMEs) who are typically requested to provide an average time estimate associated with a task. As discussed in more depth in Dr. Gabel's testimony, cost estimates by SMEs have been found to be subjective or biased by state regulators and the FCC. In my opinion, the Commission should review SME estimates closely, comparing those estimates to known, objective data sources if available, and to the basic test of reasonableness.

Q. Is there a more reasonable estimate available for the installation charge ratio?

A. By way of comparison, the RS Means database indicates that a three-person crew should be able to install 100 feet of 750 MCM power cable in 5 labor-hours, or 1.66 hours per cable.[7] Thus, to install 20 cables at *** feet in length would require approximately *** labor-hours, according to the Means data, at a cost of approximately half of the installation cost (using Verizon's loaded labor rate) estimated by Verizon.

Q. Please discuss your concerns with respect to the annual cost factor for power equipment in Verizon's cost study

A. The annual cost factor for power equipment appears high, in part as a result of the revised depreciation rates proposed by Verizon witness Mr. Sovereign. The annual cost factors should be adjusted to reflect the current plant life and salvage decisions of the Florida PSC. The annual cost factor should also be revised to reflect other adjustments, such as the cost of capital, which will be addressed in other portions of staff testimony.

Q. What non-recurring rate elements for power facilities are proposed by Verizon, and how are their costs calculated?

A. Verizon proposes three elements for non-recurring costs and rates with respect to DC power: Engineering, Cable Pulls & Terminations, and Ground Wire. According to Verizon witness Ms.

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[7] *Building Construction Cost Data, 61st Annual Edition* (2003), R.S. Means Company, ("Means 2003 Data"), p. 459, 16120-900-0900.

Ellis, the engineering time associated with the provisioning of power is based on Verizon's experience, and includes checking power requirements for available power, drafting a work order, ordering equipment and materials, updating records, and closing the work order once the work activity has been completed.

The second non-recurring cost element, Cable Pulls & Terminations, includes the material and labor involved in pulling the power cable from the Battery Distribution Fuse Bay (BDFB) to the collocator's specific location. It should be noted that the collocator may purchase the power cable from Verizon or provide the cable for Verizon to install. (Separate power cable rates are available if the cable is purchased from Verizon.) The Verizon cost study relies on GTEAMS data and estimates of work activity times by subject matter experts.

In order to terminate the power cable, a connector tap must be placed on each end of the cable. The termination cost includes the cost of the connector tap and the time to place the tap. The placement of the tap is based on the Central Office Equipment Installer's estimated hours per unit (HPUs).

The third non-recurring rate and cost calculation is for the ground wire - #6 American Wire Gauge (AWG) - that is used in grounding the relay rack or cabinet to the floor ground bar. The source of the cost per linear foot, according to Verizon witness Ms. Ellis, is the GTEAMS database.

Q. Have you reviewed the cost studies for the non-recurring power elements, and if so, what opinions have you formed with respect to those studies?

A. I have briefly reviewed the rates and costs for the engineering and ground wire elements. These charges are relatively low when compared to other Verizon non-recurring charges, and as a result, my review of these elements has been cursory. I found no significant errors in my examination of the cost calculation for these two elements.

Q. Have you reviewed the calculations involved in the third element, Cable Pulls & Terminations, and if so, what are your findings?

A. Yes, I have. In a number of instances, the costs or time estimates appear high, and should be modified. Specifically, I am concerned about the estimated time for pulling the power cables from the BDFB to the collocation area, and the cost of the fittings used to terminate or connect the cables at their ends.

Q. You have previously described cable installations, and the differences in the methodologies proposed by Verizon for calculating their installation cost. What specific concerns do you have regarding the calculation of non-recurring costs?

A. As I mentioned previously, for the purpose of calculating non-recurring costs, Verizon uses an estimate of the time required per foot to install power cable. Verizon's estimated time for an installer to pull power cable is **** minutes per foot, per cable. The company has determined that the appropriate length of a "typical" cable pull from the BDFB to the collocation area is **** feet for the purpose of calculating non-recurring costs and rates for the activity. For the two cables needed for the typical installation (**** feet) Verizon's estimates would allow the installer ****** hours, which is simply not credible. It is neither plausible nor defensible that even the slowest of workers would be allowed almost a week to pull two cables that distance.

Q. What is a more reasonable estimate of the cost or time required to install this power cable?

A. The estimate should be adjusted downward such that the installation time is 3 minutes per foot per cable. RS Means data indicate, as discussed earlier, that a crew of three installers should be able to install a 750 MCM power cable over a distance of 100 feet in 5 labor-hours. The resulting time requirement per foot is 3 minutes. The use of this lower input value will result in a more reasonable expectation that the placement of two **** foot cables would take ***** labor-hours. For a crew of three persons, then, this task should take a little over ***** hours.

Q. What are your concerns about Verizon's estimate of the cost of connector taps for the power cables?

A. The cost of a 750 MCM connector tap - used as an element to develop cable costs on worksheet DC Power Fac 5-CS - is ********, based on Verizon's GTEAMS data base. The cost of that simple piece part is clearly exaggerated, and should be reduced to a more reasonable amount. For comparative purposes, R. S. Means estimates the cost of a 500 MCM connector tap at $17.40.[8] Verizon should be instructed to obtain price quotes from at least two unaffiliated vendors for this component, and adjust their studies accordingly.

Q. Are there other non-recurring rate and cost elements that are related to the provision of DC power that you have reviewed?

A. Yes, my review of Verizon's other non-recurring cost studies reveals a number of estimates that I do not believe are reasonable. The Commission should instruct Verizon to adjust these elements and recompute the results.

- Verizon's calculation of costs for a cage grounding bar (including the mounting and cabling costs) are extremely high.
    - o As discussed in a previous section, Verizon's time estimates for placing power cable are very high, at **** minutes per foot, which results in an estimate of ******* hours to run the **** foot cable for this

[8] *Means 2003 Data*, p.457, 16120-230-3800.

activity. A more reasonable estimate would be 3 minutes per foot, as calculated previously from the RS Means data, resulting in an estimate of ****** hours to place this cable. It should be noted that Verizon elsewhere states that the R.S. Means cost of pulling ***** feet of ground cable for the floor ground bar is only $***,[9] while the amount proposed by Verizon for this component is $***.

- In another estimate within the same cage grounding bar element, Verizon estimates the time required to mount the ground bar to the cage to be ******* hours. That estimate appears excessive. The company should be required to provide additional documentation in the form of time-and-motion study on this activity; otherwise the time allocated to this operation, for the purpose of cost calculations, should be set to one hour.

Q. Do you have additional issues to address regarding Verizon's power cost calculations?

A. Yes. Because of Verizon's flat-rated non-recurring charge for DC Power-Cable Pull & Termination, the company has made certain assumptions as to the lengths of cable to be used to connect the collocator's equipment to the Verizon power plant.

[9] See worksheet "Floor Ground Bar-CS", Exhibit BKE-1, P 156 of 235.

Verizon has not addressed any separate calculations or rates to be applied in a remote office application. To the extent that Verizon uses the same assumed power cable length, and other factors, for remote office applications, the costs may not be accurate. The Commission should require Verizon to provide substantiation of costs for any rates that may be applicable in a remote office scenario.

Q. How does Sprint structure its tariff charges for DC power for collocation?

A. According to Sprint witness Mr. Davis, the DC Power category includes monthly recurring charges for use of the DC power plant along with the commercial AC power that is converted to DC power. In addition, a monthly recurring charge is assessed for "recurring expenses related to the power cable connection." Further, The DC power category also includes non-recurring charges for DC power cable connections from the main power board or BDFB to the ALEC's collocation space. The rate structure for DC power cable connections of 100 and 200-amps includes a base charge for connections up to a 110 linear feet and a per foot additive cable runs in excess of 110 feet. Power costs and charges apply to both physical and virtual collocation.

Q. How are Sprint's costs developed for the power rate elements?

A. According to Sprint Witness Mr. Davis, the cost of the DC power plant is determined on a TELRIC basis. That is, it is a forward-looking cost, determined using current technology, equipment prices, installation costs and assumes that the power plant is built all at one time. This allows for economies of scale as it relates to labor charges.

Sprint used vendor quotes to establish investment data for six sizes of power facilities. The investment per ampere was then weighted according to Sprint's Florida deployment.

For the purpose of determining the cost for non-recurring cable elements, the study indicates that the components of power cable connection cost were determined based on recent actual work activities and contractor quote data. A miscellaneous materials additive was also determined from a study of recent work activities for power installations. Standard power cable distances from the power source to the collocation arrangement were determined from a study of actual distances from a sample of central offices.

Q. Have you reviewed Sprint's cost methodology and calculations, and have you formed opinions on their study?

A. For the most part, Sprint's costing methodologies and explanations appear reasonable. As with the other carriers' studies, I am concerned primarily with specific assumptions and inputs that go into the studies. The following elements should be modified within Sprint's studies:

- The cost of company engineering is estimated at a minimum of **** hours, or almost two weeks. This estimate appears high, especially when the actual power plant engineering has already been included as a contract expense. The company should be instructed to provide additional justification for the power engineering estimate.
- Sprint has developed cost estimates for DC power connections of varying capacities. The principal concern I have with respect to all of these studies is the company's material price of power cables. In the table below, I show a comparison of power cable material costs:

Comparison of Power Cable Material Cost, per foot [10]				
Type	Sprint	R.S. Means	Verizon	Southwire
1/0 AWG	****	$0.75	-	$0.78
4/0 AWG	****	$1.43	-	$0.96
250 MCM	****	$1.72	-	$1.84
750 MCM	****	-	$4.35	$5.66

As can be seen from this table, Sprint's material costs appear to range from 60% to over 200% above comparable cable

[10] Sources of comparative data: Sprint, JRD-2, pp84-87; RS Means - *Means 2003 Data*, 16120-900; Verizon, BKE-1, Page 156 of 235, Floor Ground Bar-CS; Southwire Building Wire Products-Price Sheet, www.southwire.com, March 3, 2003.

prices. The Commission should instruct Sprint to obtain fresh material quotes from at least two unaffiliated vendors and recalculate all costs that involve power cabling.

Q. Are there other rate and cost elements that are related to the provision of electrical power that you have reviewed?

A. Yes, Sprint has included the cost of a ground bar in the worksheets for the calculation of floor space. The cost appears excessive at ********, and is not backed up with underlying support, but is presented as an input. The Commission should instruct Sprint to obtain fresh quotes from at least two unaffiliated vendors and recalculate the costs that rely on the ground bar estimate.

Q. Does this conclude your direct testimony in this proceeding?

A. Yes, it does.

Attachment RLC-1
Vita - Rowland L. Curry

Personal Information

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E-mail Address:	rcurry @ austin.rr.com

Education, Registration

Bachelor of Science in Electrical Engineering
Texas Tech University, 1969

Assorted short courses, post-graduate, management courses 1969 - 2001

Registered Professional Engineer in Texas (#37301)

Professional Experience

Rowland L. Curry Consulting (dba Curry & Associates) August 2001 – Present
Client Listing

Regulatory Commission of Alaska
Pennsylvania Office of Consumer Advocate
Rhoads & Sinon Group, Universal Service Administrative Company
Patricia Pinto (federal litigation)
City of Plano
Las Vegas Metropolitan Police Department, Clark County, Nevada

Public Utility Commission of Texas; November 1976 – July 2001

Chief Engineer; Office of Policy Development; October 1995 – July 2001
Monitored FCC proceedings; prepared filings on behalf of PUC
Served as senior advisor to PUC Commissioners on telecommunications issues
Acted as Co-Arbitrator in significant DSL interconnection proceeding, Docket No. 20226
Appointed as representative on Federal-State Joint Board on Universal Service
Elected as Chairman of NARUC Staff Subcommittee on Telecommunications

Division Director, Telephone Division; October 1988 – October 1995
Managed staff of up to 40 professional and clerical staff; accountants, engineers, economists in analysis of telecommunications issues and rate cases
Primary role on senior management team of advising Commissioners, Legislative staff
Involved in Implementation of Relay Texas program for deaf and hearing-impaired
Part of senior team in negotiation of large rate cases, including SWBell's last rate case

Division Director, Operations Review Division; October 1986 - October 1988
Managed staff of 15 professional and clerical staff
Responsibility for management audits, financial analysis, telephone service quality
Developed earnings monitoring program for regulated utilities
Appointed to Federal-State Joint Boards on Separations, Alaska Rate Integration

Assistant Director, Telephone Division; February 1983 – October 1986
Supervised staff in evaluation of telephone cases
Testified as expert witness in formal proceedings
Case coordinator on Southwestern Bell rate case in 1985

Engineer, Engineering & Enforcement Division; November 1976 – February 1983
Developed and implemented program for telephone service quality evaluation
Testified as expert witness in cases involving service quality, depreciation, costs, tariffs
Served as Chairman, NARUC Staff Subcommittee on Telephone Service Quality

General Telephone Company (now Verizon); January 1971 – October 1976

Transmission and Protection Engineer; San Angelo, Brownwood, TX
Designed EAS and toll trunk transmission systems
Designed, tested new systems and special circuits in Texas and Oklahoma
Instructor, system-wide training program on Protection Engineering
Served on two performance improvement task forces

Southwestern Bell Telephone Company; January 1970 – January 1971

PBX Engineer, Area Plug-In Equipment Coordinator; Dallas, TX
Designed PBX equipment additions and modifications
Area-wide coordination of plug-in channel equipment distribution network

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Committees and Professional Membership

- Staff Subcommittee on Telecommunications; National Association of Regulatory Utility Commissioners (NARUC); Member, 1980 – 2001; Committee Chair 1997 – 2000.
- Staff Subcommittee on Telephone Service Quality; NARUC; Member, 1978 – 2001; Committee Chair 1980 – 1988.
- Federal-State Joint Board on Separations; CC Docket No. 80-286; Staff 1984 – 1995.
- Federal-State Joint Board on Universal Service; CC Docket No. 96-45; Staff 1996 – 2001; State Staff Chair 1998 – 2001.
- National Society of Professional Engineers; Texas Society of Professional Engineers.

Attachment RLC-2 (Redacted)

BellSouth Power Construction for Collocation; Cost per Ampere

Source: BellSouth Worksheet "H.1.8, H.1.71 & H.2.4.xls"

CLLI Code	Amps	$ / Amp

CLLI Code	Amps	$ / Amp

CLLI Code	Amps	$ / Amp

CLLI Code	Amps	$ / Amp