

State of Florida



Public Service Commission

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-M-E-M-O-R-A-N-D-U-M-

DATE: July 22, 2004

TO: Director, Division of the Commission Clerk & Administrative Services (Bayó)

FROM: Division of Competitive Markets & Enforcement (T. Brown, S. Brown, Cater, King, Marsh)
Division of Economic Regulation (Brinkley, Gardner, Maurey)
Office of the General Counsel (Teitzman, Rojas)

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

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

AGENDA: 08/03/04 – Regular Agenda – Post-Hearing Decision – Participation is Limited to Commissioners and Staff

CRITICAL DATES: None

SPECIAL INSTRUCTIONS: None

FILE NAME AND LOCATION: S:\PSC\CMP\WP\981834.RCM.DOC

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ACRONYMS AND ABBREVIATIONS USED IN THE RECOMMENDATION

AC	Alternating Current
ACF	Annual Charge Factor
ADR	Alternative Dispute Resolution
ADSL	Asymmetrical Digital Subscriber Line
ALEC	Alternative Local Exchange Company
ASR	Access Service Request
ATCC	Account Team Collocation Coordinator
AT&T	AT&T Communications of the Southern States, LLC
BDFB	Battery Distribution Fuse Bay
BellSouth or BST	BellSouth Telecommunications, Inc.
BITS	Building Integrated Timing System
BOC	Bell Operating Company
BR	Brief
BSCC	BellSouth Cost Calculator
CCM	Circuit Capacity Management
CCXC	Co-Carrier Cross-Connects
CFR or C.F.R.	Code of Federal Regulations
CLEC	Competitive Local Exchange Carrier
CO	Central Office
Covad	DIECA Communications, Inc. d/b/a Covad Communications Company
d/b/a	Doing business as
DC	Direct Current

DLC	Digital Loop Concentrator or Digital Loop Carrier
DN	Docket Number
DSL	Digital Subscriber Line
DSLAM	Digital Subscriber Line Access Multiplexer
DSX	Digital System Cross-Connect
DTS	Dedicated Transit Service
ECC	Electronic Cross-Connects
EF&I	Engineered, Furnished, and Installed
EXH	Exhibit
F.S.	Florida Statutes
FCC	Federal Communications Commission
FDN	Florida Digital Network, Inc. d/b/a FDN Communications
FPSC	Florida Public Service Commission
GAAP	Generally Accepted Accounting Principles
Georgia PSC	Georgia Public Service Commission
GTEAMS	GTE Advanced Materials System
GTEFL	GTE Florida, Inc. (now Verizon)
HDSL	High Bit-Rate Digital Subscriber Line
HFPL	High Frequency Portion of the Loop
ICB	Individual Case Basis
ID	Identification
IDLC	Integrated Digital Loop Carrier
IDSL	ISDN Digital Subscriber Line
ILEC	Incumbent Local Exchange Company

IOF	Interoffice Facilities
IP	Interconnection Point
ISDN	Integrated Services Digital Network
LEC	Local Exchange Company
LGX	Light Guide Cross-Connect
LOF	Lack of Facilities
LSC	Local Service Confirmation
LSR	Local Service Request
MDF	Main Distribution Frame
MRC	Monthly Recurring Charge
NID	Network Interface Device
No.	Number
NPV	Net Present Value
NRC	Non-Recurring Charge
OCC	Optical Cross-Connects
OSS	Operation Support Systems
POD	Production of Documents
POI	Point of Interconnection
POT	Point of Termination
POTS	Plain Old Telephone Service
PSC	Public Service Commission
PUC	Public Utilities Commission
RT	Remote Terminal
RTU	Right-to-Use

SDSL	Symmetric Digital Subscriber Line
SMEs	Subject Matter Experts
Sprint	Sprint-Florida, Inc.
TELRIC	Total Element Long-Run Incremental Cost
TPI	Telephone Plant Index
TR	Transcript
UNE	Unbundled Network Element
Verizon	Verizon Florida Inc.
xDSL	“x” distinguishes various types of DSL

Case Background

By Proposed Agency Action Order No. PSC-99-1744-PAA-TP, issued September 7, 1999, the Commission adopted a set of procedures and guidelines for collocation. The guidelines addressed: A. initial response times to requests for collocation space; B. application fees; C. central office tours; D. petitions for waiver from the collocation requirements; E. post-tour reports; F. disposition of the petitions for waiver; G. extensions of time; and H. collocation provisioning time frames.

On September 28, 1999, BellSouth filed a Protest/Request for Clarification of Proposed Agency Action. That same day, Rhythms filed a Motion to Conform Order to Commission Decision or, in the Alternative, Petition on Proposed Agency Action. Commission staff conducted a conference call on October 6, 1999, with all of the parties to discuss the motions filed by BellSouth and Rhythms, and to formulate additional issues for the generic proceeding to address the protested portions of Order No. PSC-99-1744-PAA-TP. By Order No. PSC-99-2393-FOF-TP, issued December 7, 1999, the Commission approved proposed stipulations resulting from that call and identified the portions of the protested Order that could go into effect by operation of law.

Thereafter, the Commission conducted an administrative hearing to address collocation issues beyond the issues addressed in the approved collocation guidelines. By Order No. PSC-00-0941-FOF-TP, issued May 11, 2000, the Commission rendered its post-hearing decision on these additional issues. The 20 issues identified in that recommendation included, among other things: the ILEC response to an application for collocation; response and implementation intervals for changes to existing space; the division of responsibilities between ILECs and collocators for sharing and subleasing space between collocators and for cross-connects between collocators; equipment obligations; and the application of the FCC's "first-come, first-served" rule upon denial of waiver or modifications.

On May 26, 2000, BellSouth, Sprint, and Verizon each filed separate Motions for Reconsideration or Clarification. On June 7, 2000, numerous parties filed responses to these motions. FCCA and AT&T filed a Joint Response to the Motions for Reconsideration and a Cross-Motion for Reconsideration. On June 14, 2000, BellSouth filed its Response to FCCA and AT&T's Cross-Motion for Reconsideration. By Order No. PSC-00-2190-PCO-TP, issued November 17, 2000, the various motions for reconsideration and/or clarification were addressed by the Commission. By that Order, this Docket was left open to address pricing issues for collocation, which is one of the purposes of this current proceeding.

By Order No. PSC-02-1513-PCO-TP, issued November 4, 2002, the procedural schedule and hearing dates were established for this phase of this proceeding. Thereafter, by Order No. PSC-03-0288-PCO-TP, issued March 4, 2003, Staff's Motion to Revise Order Establishing Procedure was granted. On July 1, 2003, the procedural schedule was again modified to reflect the agreement reached between the parties and the Commission's staff. At that time, the proceeding was divided such that the Commission would address the technical issues first, and then the costing and pricing issues.

Prior to the hearing on the technical issues, the parties were able to reach stipulations on Issues 1B, 1C, and 2A through 2D. The Commission resolved a number of the other outstanding technical and policy issues in Order No. PSC-03-1358-FOF-TP, issued November 26, 2003. Moreover, due to conflicts with the Commission calendar, further modification of the procedural schedule was required. By Order No. PSC-03-1311-PCO-TP, issued November 17, 2003, the hearing date and corresponding controlling dates for the pricing phase were modified.

On December 11, 2003, Verizon, BellSouth, Covad, FDN, and Sprint each filed Motions for Reconsideration and/or Clarification of Order No. PSC-03-1358-FOF-TP. Thereafter, Verizon, AT&T and Covad (filing jointly), BellSouth, Sprint, and FDN filed their responses to the Motions. The Motions sought modification or clarification of a variety of aspects of the Commission's decisions on Issues 1A, 3, 5, 6a and b, and 7. The Commission ruled on these Motions on March 2, 2004 (Order No. PSC-04-0228-FOF-TP).

The remaining issues identified in this docket, Issues 9A, 9B, and 10, address the costs, appropriate definitions, and associated terms and conditions to provide certain collocation elements (Phase II). The hearing on these issues took place on January 28 and 29, 2004. Testimony was presented at the hearing by BellSouth, Commission Staff, Sprint, Verizon, and AT&T. Other than AT&T, no CLEC presented testimony. The hearing produced a transcript of 906 pages and 54 exhibits, 26 of which were staff's exhibits. Staff's exhibits included deposition transcripts, the parties' discovery responses to one another, and the parties' responses to numerous rounds of staff discovery. Although staff has made every effort to follow a standard format throughout this recommendation, there is some variation between the issues due to the manner in which the parties' addressed the issues.

Discussion of Issues

Issue 9A: For which collocation elements should rates be set for each ILEC?

Recommendation: Staff recommends that AT&T's single model approach should not be adopted. Therefore, rates should be set for the collocation elements identified in the individual collocation cost studies of BellSouth, Sprint, and Verizon, subject to incorporating staff's recommended changes in all other applicable issues. The collocation elements (and associated rates) are listed in Appendices B-D of staff's recommendation. (**Marsh/King**)

Position of the Parties

BST: Rates for BellSouth should be set for those elements identified in the testimony of BellSouth witness, W. Bernard Shell. The collocation elements can be grouped into the following four types: 1) Physical Collocation, 2) Virtual Collocation, 3) Adjacent Collocation, and 4) Remote Terminal Collocation.

Sprint: Rates for Sprint should be set for the collocation elements identified in Sprint's cost study. These rate elements are based on examinations of actual collocation arrangements in Sprint central office buildings, as well as FCC and FPSC requirements.

Verizon: Rates should be set for Verizon for the collocation elements proposed in Verizon's Revised Expanded Interconnection Services Cost Study (Composite Exhibit 47 (BKE-1)). Verizon takes no position on which collocation elements should be assigned rates for BellSouth or Sprint.

AT&T/Covad/FDN: Please refer to Composite Exhibit 43--Revised Exhibits SET-7, SET-8, and SET-9 attached to Steven E. Turner's Rebuttal Testimony for a comprehensive set of collocation elements for which rates should be set for BellSouth, Sprint, and Verizon, respectively.

Staff Analysis:

Although not identified as a specific issue in this proceeding, AT&T witness Turner proposes that the BellSouth Cost Calculator (BSCC) be used as a "unitary" cost model to establish collocation rates for the ILECs. (TR 530-531, 534; EXH 35; EXH 39; EXH 46) Witness Turner relies upon this approach in formulating his testimony for the other issues. Accordingly, staff addresses his proposal first because the Commission's decision on it could impact other recommendations in this proceeding. Staff addresses the specific arguments regarding the collocation elements for which rates should be set following the discussion of the AT&T proposal.

I. UNITARY MODEL

PARTIES' ARGUMENTS

AT&T witness Turner argues that it is very difficult to compare costs across the three ILECs due to the use of three different collocation cost models. (TR 530) Sprint witness Davis asserts that the Sprint CLEC routinely uses a Net Present Value (NPV) analysis to compare the cost structures that result from the use of different collocation rate structures. (TR 424, 453) He provides such an analysis in his exhibit JRD-3, utilizing responses to staff discovery that show the last five physical collocations provisioned by each ILEC. (TR 423; EXH 40, JRD-3, pp. 1-3)

Witness Turner argues that there should not be much variation in investments between incumbents. (TR 531) He contends that “[a] single collocation cost model can readily be used for all three incumbents in Florida as long as it is capable of allowing the three companies to reflect their own unique expense and common cost factors in the model.” (TR 534) He states that such a model could be run for each company with the same investment inputs for all three companies, while allowing for slight variations in cost factors that would lead to the differences in resulting rates. (TR 534)

BellSouth witness Shell states that witness Turner’s assertion that the three ILECs in this proceeding should have similar underlying investments is false. (TR 247) He argues that “the companies have unique purchasing agreements for the network components, land, and buildings required for collocation.” (TR 247) He contends that company differences in rate structure, not the choice of a model, drive the variations in the components each company includes in its cost-based rates. (TR 247) He asserts that the costs produced by the model are driven by the assumptions used and by input data. (TR 249) He adds that the FCC’s TELRIC principles do not require identical rate structures. (TR 247) Moreover, he points out that this Commission recognized in Order No. PSC-01-1181-FOF-TP¹ that inputs used in determining BellSouth UNE prices should be BellSouth-specific. (TR 247-248) Witness Shell opines that collocation rates should not be treated any differently. (TR 248)

Sprint witness Farrar states that Sprint has Commission-approved maintenance factors and other direct (shared) cost factors which drive the differences in rates. (TR 492) He opines that it is reasonable for Sprint to have different cost factors than BellSouth because BellSouth is much larger than Sprint, with greater economies of scale, and has a more urban market area than Sprint. (TR 493)

AT&T witness Turner asserts that only the BSCC allows for flexible use of different cost factor inputs. (TR 535) However, BellSouth witness Shell contends that the BSCC is not readily usable for other companies as claimed by witness Turner. (TR 248) He points out that new users of the model would have to develop new inputs that would fit with the way the model has been designed. (TR 249) Verizon witnesses Bailey/Ellis state that the use of BellSouth’s methods would require Verizon to modify its existing data and databases, thus eliminating efficiencies

¹ Docket No. 990649A-TP, Investigation into pricing of unbundled network elements, Order No. PSC-01-1181-FOF-TP, issued May 25, 2001, p.188.

and raising costs. (TR 708) Sprint witness Farrar adds that the BSCC is incompatible with Sprint's accounting system. (TR 508)

Sprint witnesses Davis and Farrar argue that if BellSouth's model were used, CLECs would still have to contend with a different model and price structure for Sprint in other states where Sprint operates as an ILEC. (TR 424, 489-490) Verizon witnesses Bailey/Ellis further explain that both BellSouth's and Verizon's collocation rates complement each company's own UNE and non-recurring cost models, thus ensuring a consistent methodology within each company. (TR 709) Staff witness Gabel opines that, regardless of the model used, it is difficult to fit one company's inputs into a model that was developed by someone else. (TR 899)

Because the model is the intellectual property of BellSouth, witness Shell contends that BellSouth should be compensated for its use. (TR 248) Further, he explains that the administration and maintenance of the model would have to be addressed. (TR 249) Witness Shell concludes that the use of the BSCC as a single model would cause the other ILECs to spend more time and money without affecting the bottom line. (TR 250)

ANALYSIS

The ILEC witnesses are unanimous in their opposition to witness Turner's proposal. (TR 246; TR 424; TR 703) The testimony shows that the adoption of a unitary model would be much more complicated than simply plugging each company's inputs into a model. A concern raised by AT&T witness Turner is that the Commission should be able to compare costs and collocation rates across all three companies. (TR 530) After a review of the NPV analysis provided by Sprint witness Davis, however, staff agrees with the witness that comparability can be achieved up to a point. However, staff also notes the exhibit shows a wide variation in the total price of a collocation arrangement *within each company*. (EXH 40, JRD-3, p.3 of 3) This leads staff to wonder how comparability can be fully achieved across all three companies when collocations are so highly customized that the price varies in such a manner.

Further, AT&T witness Turner achieves comparability by using the same *investments* for all three companies, although he does apply a different cost of capital and common cost factors for each company. (TR 534; EXH 10, p.9) Staff believes it is reasonable to expect three companies of differing size and service area characteristics to have differences in costs. AT&T was unable to produce documents to support witness Turner's allegations that the three large ILECs in Florida have ". . . the ability to purchase the underlying assets at similar prices." (Turner TR 530; EXH 10, p.37) Witness Turner's allegations that TELRIC-based collocation costs should be similar for all three ILECs appear to be based solely on his opinion. He provides no documents in support of that opinion. (EXH 10, p.35)

Staff believes the record clearly shows that the BSCC is customized for BellSouth's own purposes. The record shows that the BSCC uses various factors and codes, as well as the Shared and Common Application and the Capital Cost Calculator©, that were developed based on BellSouth's accounting system and specifications. (EXH 15, p.65)

Staff is concerned that AT&T's approach goes beyond the use of a single model. At no point does witness Turner discuss the cost variations among collocation arrangements within the same company. Further, he provides no support for his opinion that the same investment inputs should be used for all three companies, as previously noted. The ILEC witnesses provided more compelling testimony that the costs of the companies are different, and that it is appropriate to reflect those differences in the rates. Finally, witness Turner cites to no evidence that the use of a unitary model is required by an FCC order or other authority.

It appears reasonable to staff that the development of a model represents a major investment in time and money for which BellSouth should be compensated. With that in mind, staff notes that any benefit that might be attained through working with only one model would likely be outweighed by the costs incurred and the difficulty that would be experienced by the companies in reworking their data to fit the BSCC.

Staff believes that witness Turner's concern that not only CLECs, but also this Commission, be afforded ease of use is a worthwhile goal. Nevertheless, as argued by Sprint witness Farrar (TR 489), to establish complete consistency across all three companies in Florida would cause inconsistency in rates and models between Florida and other states for each company. Staff agrees with the ILEC witnesses that the result would be not only a burden to the ILECs, but also to the competitors that collocate in the various states.

In summary, it is not clear from the record that any meaningful level of consistency and comparability could be achieved through the adoption of a unitary model. Further, any level of consistency achieved by witness Turner is accomplished by disregarding the differences in the companies that drive differences in costs. Additionally, the adoption of BellSouth's model would cause the other ILECs to incur added costs in payments to BellSouth, as well as the need to restructure their cost inputs to fit the BSCC. Finally, the use of the same rate structure for all three ILECs in Florida would mean that Sprint and Verizon would have different rates and rate structures than they have in other states. It appears that any benefits that might be gained would be overshadowed by the costs and inconsistencies that would arise. Further, there is no evidence in the record that the use of a single model is required. Accordingly, staff recommends that AT&T's single model approach should not be adopted.

II. COLLOCATION ELEMENTS FOR WHICH RATES SHOULD BE SET.

As discussed above, AT&T advocates the use of a unitary model, the BellSouth Cost Calculator[®] (BSCC). By advocating the use of the BSCC by all ILECs, AT&T is thus advocating that BellSouth's list of collocation elements be adopted by the Commission for Sprint and Verizon. (Turner TR 530) AT&T witness Turner argues that the BellSouth model is the only one that develops a comprehensive set of collocation elements for all forms of collocation. (AT&T BR at 4; TR 537)

Witness Turner contends that Sprint has an extremely limited set of collocation cost elements that "simply does not begin to address all of the necessary rate elements for collocation." (AT&T BR at 4; TR 537) Not surprisingly, Sprint disagrees, and argues that:

- Sprint has provisioned more than 700 collocations system-wide over the last seven years, using the elements list that it has proposed in this proceeding. (Davis TR 426)
- CLECs have not expressed concerns that the list is insufficient, nor has this been an issue in interconnection agreement negotiations. (Fox TR 34)
- Sprint's element list differs from BellSouth and Verizon in that certain costs are included in a single element, whereas BellSouth and Verizon break out those costs into separate elements.² (Davis TR 426)
- Based on Sprint's experience, CLECs prefer simplification for collocation pricing and provisioning. (Davis TR 426)

The majority of the elements identified by AT&T as missing from Sprint's pricing list appear to be disconnect charges. (Davis TR 426-428; EXH 5, pp.20-23) Sprint witness Davis notes that while Sprint does not have a collocation element labeled as "disconnect," Sprint recovers these costs through the decommissioning process, which involves an augment application and a major or minor augment fee. (TR 427) The augment fee is based on the scope of the work to be performed. For disconnection of a single customer, Sprint uses the UNE loop disconnect rate approved by the Commission in Docket No. 990649B-TP. (TR 427) Other elements AT&T identified are similarly recovered by Sprint in different elements or involve services that Sprint has never been requested to provide. (TR 427-428) Last, Sprint notes that its pricing mechanisms have worked well in Florida and in other states where Sprint provides collocation services. (Sprint BR at 4)

With regard to Verizon's list of collocation elements, AT&T argues that although it is more comprehensive than Sprint's, Verizon nevertheless does not include the comprehensive set of collocation rate elements found in the BellSouth model. (Turner TR 537) Verizon disagrees, arguing that AT&T's proposal ignores Verizon's business practices and instead forces Verizon to adopt BellSouth's collocation provisioning, accounting, and cost recovery methods. (BR at 3) Moreover, Verizon witnesses Bailey/Ellis believe that in an effort to justify witness Turner's "complete lack of diligence in reviewing Verizon's studies, Mr. Turner makes the vague claim that Verizon's cost development is somehow 'incomplete'." (TR 720) The witnesses note that Verizon filed an extensive cost study with hundreds of pages of back-up support; however, they believe witness Turner has not made any attempt to understand that study or its inputs, and instead has focused solely on BellSouth's model and inputs. (TR 720) They argue that AT&T has conducted virtually no discovery on Verizon; as such, the Commission should not confuse witness Turner's failure to evaluate Verizon's studies with any alleged lack of completeness in Verizon's cost development. (Bailey/Ellis TR 720)

Verizon's witnesses Bailey/Ellis also provided several reasons and examples as to why the Commission should not impose the BellSouth model, and in turn the BellSouth specific collocation elements, on Verizon. These reasons include:

² For example, Sprint's floor space element includes the costs for space preparation activities, while BellSouth and Verizon list space preparation as a separate charge. (Davis TR 426)

- BellSouth uses accounting and cost input data that are not available to Verizon.
- The manner in which BellSouth recovers its costs between UNEs and collocation is inconsistent with the manner in which Verizon recovers similar costs.
- Verizon bills for the facilities and services it provides differently than BellSouth.
- The companies physically provision collocation differently, and the different activities lead to different costs, which are then recovered in different rate elements.
- BellSouth offers CLECs certain facilities and services that Verizon does not; Verizon offers CLECs certain facilities and services that BellSouth does not offer.
- The transition to the BellSouth rate structure and element list would result in significant practical difficulties, especially in those cases where Verizon currently recovers through nonrecurring charges costs that BellSouth recovers through recurring charges. (Bailey/Ellis TR 706-715)

No party has challenged BellSouth's proposed list of elements. The elements listed in BellSouth's study are the elements it believes are needed to provision the various types of collocation pursuant to FCC orders and based on customers' requests. (Shell TR 240)

CONCLUSION

As noted herein, staff does not believe a unitary model is appropriate for setting collocation rates and elements in this proceeding. As such, staff disagrees with AT&T witness Turner that BellSouth's list of collocation rate elements should be used by Sprint and Verizon. Staff believes that each individual company is in the best position to determine which offerings should be made available to its customers (i.e., the CLECs). Moreover, if there are elements which are desired by a CLEC and not on the list, the parties may negotiate the appropriate rate for that particular service. As stated by AT&T's witness Turner, cost proceedings are not a once and done event. (Turner TR 536) The Commission may revisit collocation costs in the future, and that will also provide an additional opportunity to address other desired service offerings. Therefore, staff recommends that rates should be set for the collocation elements identified in the individual collocation cost studies of BellSouth, Sprint, and Verizon, subject to incorporating staff's recommended changes in all other applicable issues. The collocation elements (and associated rates) are listed in Appendices B-D of staff's recommendation.

Issue 9B: For those collocation elements for which rates should be set, what is the proper rate and the appropriate application of those rates?

Recommendation: Due to the large number of inputs and elements contained within this issue, staff has provided a table containing staff's recommendation for each input and element. (Brinkley, S. Brown, T. Brown, Cater, Gardner, King, Maurey)

Recommendation Summary	
Non-Element Specific Inputs:	
Labor Rates	No party contested the ILECs' proposed values. Based on our review, staff recommends that the ILECs' labor rates are appropriate for this proceeding.
Tax Rates	No party in this proceeding opposed any of the ILECs' proposed tax rates. Staff believes the proposed tax rates are appropriate and are consistent with those filed in Dockets 990649A-TP and 990649B-TP, based on our analysis of the record.
Depreciation Rates	Staff recommends the adoption of the economic lives and salvage values as ordered in the Verizon UNE proceeding as shown in Tables 9B-3, "Comparison of Life Inputs," and 9B-4, "Comparison of Salvage Values." Alternatively, the Commission may wish to consider the adoption of economic lives and salvage values which are in line with the FCC-approved life and salvage ranges. For Sprint's conduit, digital circuits, and switching equipment, staff recommends depreciation lives of 55, 9, and 12 years, respectively. Additionally, staff recommends net salvage value percentages of -29% for conduit and 0% for Sprint's digital circuits and switching equipment.
Cost of Capital and Components	Based upon its analysis of the evidence in the record, staff recommends a weighted average cost of capital of 9.80% for purposes of this proceeding. This rate of return is the fall-out of staff's recommended forward-looking capital structure of 60% equity and 40% debt, a market cost of debt of 6.26%, and a market cost of equity of 12.16%. For purposes of comparison, BellSouth is using an overall cost of capital of 10.24% and Sprint is using a return of 9.86% for purposes of this proceeding.
Loadings	Staff recommends that the appropriate assumptions and inputs for various factors, loadings, and expenses are those proposed by BellSouth, Sprint, and Verizon in their respective revised cost studies. This recommendation is subject to staff's recommended changes in all other applicable issues.
Common Costs	Staff recommends that BellSouth's common cost factor be set at 6.52% as proposed by BellSouth, Sprint's common cost factor be set at 13.68% as proposed by Sprint, and consistent with its UNE order, staff recommends that Verizon's fixed allocator be set at 12.12%.
Materials Costs	Staff recommends that the appropriate methodologies for the determination of various materials costs are those proposed by the BellSouth, Sprint, and Verizon.

Recommendation Summary	
Major Categories of Elements:	
Application & Engineering Fees	The appropriate rates for the application (initial and subsequent) and engineering fees are those proposed by the ILECs in this proceeding, subject to incorporating staff's recommended changes in all other applicable issues.
DC Power	Staff recommends that BellSouth modify its rectifier efficiency factor from 85% to 90%. Staff recommends no other changes to BellSouth's DC power costs. Staff recommends that Sprint and Verizon's DC power costs be approved as filed.
Cross-Connects	For BellSouth, staff recommends that the repeaters investment be removed from DS1 cross-connects in assembly point arrangements. For the remainder of BellSouth's cross-connects and those proposed by Verizon, staff recommends that they be approved as filed in their revised filings. For Sprint, staff recommends that they be approved as filed in their revised filing, as modified in its post-hearing brief and subject to staff's recommended changes in all other applicable issues.
Security Charges	Staff recommends that BellSouth's and Sprint's security charges be approved as filed.
Cage Construction	Staff recommends that the Commission approve BellSouth's and Verizon's cage construction costs as filed. Staff also recommends approval of Sprint's policy change that allows the CLEC to contract directly with certified vendors for construction of a collocation cage.
Floor Space	Staff recommends that BellSouth's and Sprint's floor space investment be approved as filed. However, staff believes that Verizon's methodology for calculating its floor space investment is not TELRIC-compliant and should be rejected. Therefore, staff recommends that the Commission order Verizon to re-file its study for this element as outlined in staff's recommendation.
Space Prep./Building Modification	<p>Staff recommends that BellSouth's space preparation charges be approved as filed.</p> <p>Staff believes that the record supports several options for Verizon. If the Commission believes it is appropriate for Verizon to recover its building modification costs (both security access costs and site modification costs) based on the number of occupants, staff recommends that Verizon modify its occupancy level (from 4 to 5.43) to reflect the most recent data.</p> <p>If the Commission prefers that building modification costs (security costs and site modification charges) be recovered on a per square foot basis, it should order Verizon to apportion these costs on a per square foot basis, consistent with Order No. PSC-00-0941-FOF-TP.</p> <p>If the Commission believes that the costs for security access charges</p>

Recommendation Summary	
	and site preparation should be recovered differently (i.e., one based on the number of occupants and the other based on square footage), it should direct Verizon accordingly.
Space Availability Reports	The proper rate and the appropriate application of the rate as applied to space availability reports are those proposed by the ILECs in this proceeding, subject to incorporating staff's recommended changes in all other applicable issues.
Collocation Cable Records	Since there is no double recovery of CCM costs, staff recommends that BellSouth be allowed to recover its cost of collocation cable records through separate rate elements. BellSouth's proposed rates for collocation cable records are subject to staff's recommended changes in all other applicable issues.
Cabling	The proper cabling rates and the appropriate application of those rates are those proposed by the ILECs, subject to staff's recommended changes in all other applicable issues.
Minor Augments	The proper minor augment rates and the appropriate application of those rates are those proposed by Sprint and Verizon, incorporating staff's recommended changes in all other applicable issues.
Disconnects	Staff believes that the proper rates and the appropriate application of those rates for disconnects are those proposed by the ILECs in this proceeding, subject to incorporating staff's recommended changes in all other applicable issues.
Other	Staff recommends that the appropriate inputs for "Other Elements" are those filed by the ILECs, subject to staff's recommended changes in all other applicable issues.

Position of the Parties

BST: Rates should be based upon a forward looking cost study that adheres to the Total Element Long Run Incremental Cost (TELRIC) pricing rules and utilizes the cost study methodology previously approved by this Commission. Each of the rates proposed by BellSouth complies with these standards, and each should be approved.

Sprint: Sprint's rates should be the recurring and nonrecurring charges submitted by Sprint in its cost study and associated testimony. Sprint's cost study complies with TELRIC principles in that it is forward looking with no inclusion of embedded costs.

Verizon: Rates should be set and applied for Verizon's collocation elements as set forth in Verizon's Revised Expanded Interconnection Services Cost Study (Composite Exhibit 47 (BKE-1)). Verizon takes no position on the appropriate rates for BellSouth's or Sprint's collocation elements.

AT&T/Covad/FDN: Widely disparate costs for collocation are inconsistent with TELRIC. The BellSouth Cost Model, the most flexible and auditable model should be used as the single model

for costing collocation elements. It would allow the Commission to focus on inputs and accurately compare the resulting costs charged by the Florida incumbents.

Staff Analysis:

Each of the ILECs in this proceeding has proposed numerous inputs and elements relating to the proper rates and the appropriate application of those rates. Not all of the elements identified by the parties in their cost studies or proposals are addressed within this issue. Instead, staff has attempted to focus on the issues that have generated the most discussion, whether in the parties' testimony, at hearing, or in their post-hearing briefs. Although discussed in the preceding issue (Issue 9A), staff notes that AT&T's rate proposals pre-suppose acceptance of the unitary model. As such, most of AT&T's evidence and arguments were focused solely on BellSouth.

Staff has separated this issue into two groups: non-element specific inputs (i.e., cost of capital, depreciation, etc.), and major categories of elements (i.e., application fees, cabling, etc.). Non-element specific inputs are addressed first, followed by major categories of elements. Within the major categories of elements, staff has also included an issue labeled as "Other." This section serves as a depository for issues mentioned in passing by the parties, or issues that appear to be non controversial. As evidenced by the table above, each non-element specific input or major element has its own recommendation. Although staff has made every effort to follow a standard format throughout this issue, there is some variation between them due to the manner in which the parties addressed specific inputs and elements. To the extent that an element or input is not addressed here, staff recommends accepting the ILEC's rate or input as filed, subject to incorporating staff's recommendations in all other applicable issues.

Non-Element Specific Inputs :

Labor Rates (S. Brown)

ARGUMENT AND ANALYSIS

BellSouth

In developing its labor rates for this proceeding, BellSouth used the same methodology approved in its UNE proceeding, Docket No. 990649A-TP, Order No. PSC-01-1181-FOF-TP, issued May 25, 2001. BellSouth's labor rates for specific work groups are developed annually based on extracts of previous year's data from BellSouth's Financial Front End System. The extract consists of collected labor expense and hours, which when entered into a PC application, produces labor rates. During this process, the actual costs for a given work group are accumulated by expenditure type. (EXH 34, WBS-1, sec. 4, p.10) The actual costs are divided by the actual hours reported by the work group to determine the basic rates. A labor inflation factor is developed from the BellSouth Region Telephone Plant Indexes (TPIs) and is applied to adjust those base period rates to the study period. BellSouth also uses the previously mentioned methodology and principles to develop unique labor rates related to a specific level of management (Job Grade labor rates) or to a specific level of non-management (Wage Scale labor rates). (Id. at 11) BellSouth's labor rates consist of the following components:

Direct Salaries and Wages - Wage and salary costs relating to work-reporting employees for regularly scheduled times, premium hours for working beyond normal scheduled hours, incentives, annual paid absence, administration and motor vehicle salaries. (EXH 34, WBS-1, sec. 4, pp.11-12)

Other Direct - Other labor costs e.g. office, travel, benefit costs, and rent costs. (EXH 34, WBS-1, sec. 4, p.12)

Total Productive Hours - Includes classified productive hours reported to specific accounting classifications and unclassified productive hours which are not associated to accounting classifications, but are work activities that are reported as general in nature i.e., conferences, training, and travel. (EXH 34, WBS-1, sec. 4, p.13)

Based on staff's review of BellSouth's labor rates, and no challenges from the parties pertaining to BellSouth's labor rates, staff recommends that the labor rates proposed by BellSouth be approved as filed.

Verizon

In developing its labor rates for this proceeding, Verizon used the same methodology approved in its UNE proceeding, Docket No. 990649B-TP, Order No. PSC-02-1574-FOF-TP, issued November 15, 2001. Witness Ellis testified that Verizon determines its appropriate labor costs by looking at both Verizon employee labor costs and outside contractor rates. This is done because Verizon relies on both in-house and outside labor to provision collocation. Verizon's

loaded labor rates for Florida were used to determine the costs associated with collocation-related activities performed by Verizon employees. The loaded labor rates include the direct costs associated with employee work activities, e.g., benefits, overtime, support, supervision and overhead. Verizon's loaded labor rates are market based and reflect Verizon's economies of scale. (TR 664)

To determine the appropriate contract labor rates, Verizon uses a competitive bidding process known as Single Source Provider or SSP. Verizon derives its SSP labor costs from current Florida rates for laborers who possess specific job skills necessary to perform required job tasks. This competitive bidding system, repeated biannually, allows Verizon to solicit bids from various contractors. The bids are then used to develop unit rates for the labor costs used in Verizon's collocation cost study. (TR 664-665)

Based on staff's review of Verizon's labor rates and no challenges from the parties pertaining to Verizon's labor rates, staff recommends that the labor rates proposed by Verizon are appropriate.

Sprint

Witness Davis testified that Sprint's labor charges are provided in one-quarter hour increments for regular, overtime and premium rates. Labor charges are provided for central office technicians, central office engineers, outside plant technicians, and outside plant engineers. (TR 415)

During its UNE proceeding, Docket 990649B-TP, Sprint incorporated common costs in its labor rates. However, in this instant proceeding, Sprint does not incorporate common costs into its labor rates, but added the common costs to its total non-recurring costs. Sprint's allocation of common costs will be addressed in the common cost section of this recommendation.

Based on staff's review of Sprint's labor rates and no challenges from the parties pertaining to Sprint's labor rates, staff recommends that the labor rates proposed by Sprint be approved as filed.

CONCLUSIONS

No party contested the ILECs' proposed values. Based on our review, staff recommends that the ILECs' labor rates are appropriate for this proceeding.

Tax Rates (S. Brown)

ARGUMENT AND ANALYSIS

BellSouth

BellSouth's Tax Department furnishes the company's ad valorem and other tax factors. The department creates the factor by calculating the ratio of certain tax expenses to the telephone plant in service. (EXH 34, WBS-1, sec.4, p. 9)

BellSouth's gross receipts tax factor includes: gross receipts tax, regulatory assessment fees, franchise and license fees. The purpose of these taxes is to fund PSC fees, franchise taxes and license taxes. (EXH 34, WBS-1, sec.4, p. 9)

BellSouth's ad valorem, other taxes, gross receipt tax factor, and income taxes (state and federal) were previously approved in its UNE proceeding, Docket No. 990649A-TP, Order No. PSC-01-1181-FOF-TP, issued May 25, 2001. Staff verified that the tax rates BellSouth is proposing in this proceeding are the same as those previously approved by the PSC in the UNE docket, and staff has not found any reason why they should be different for this proceeding. No party in this proceeding opposed BellSouth's tax rates. As such, staff believes the proposed tax rates for ad valorem, other taxes, gross receipts tax factor, and income taxes (state and federal) are appropriate.

Verizon

Verizon's proposed tax rates are the same as those approved by the Florida Public Service Commission in the Verizon UNE docket. (Docket 990649B-TP, Order PSC-02-1574-FOF-TP, issued November 15, 2002).

In this proceeding, staff evaluated the proposed Composite Tax, Property Tax and the Sales Tax. (EXH 45, BKE-1, p.230). The Composite Income Tax and Property Tax reflect the annual state and federal income taxes and property taxes. In deriving its composite income tax rate, Verizon used a state and federal income tax. The composite tax rate is used to account for the state income taxes that are deductible for federal income tax purposes. The property tax rate is calculated by dividing the annual property tax expense by gross taxable plant. Staff verified that the tax rates Verizon is proposing in this proceeding are the same as those previously approved in by the PSC in the UNE docket, and staff is not aware of any reason they should be different for this proceeding. No parties in this proceeding opposed Verizon's tax rates. As such, staff believes the Verizon tax rates are appropriate.

Sprint

With the exception of its sales tax (EXH 19, JRD-2, p.106), Sprint's taxes are incorporated in its annual charge factor. The annual charge factor calculation includes the composite federal and state income tax, ad valorem tax, and regulatory assessment fee. (EXH 2, p.157) All of these taxes are consistent with those previously approved in Sprint's UNE

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proceeding (Docket 990649B-TP, Order No. PSC-03-0058-FOF-TP, issued January 8, 2003), and staff is not aware of any reason they should be different for this proceeding. No parties in this proceeding have opposed the Sprint proposed tax rates. As such, staff believes the proposed Sprint tax rates are appropriate and should be accepted.

CONCLUSION

No party in this proceeding opposed any of the ILEC's proposed tax rates. Staff believes that the proposed tax rates are consistent with those filed in Dockets 990649A-TP and 990649B-TP, and should be approved as filed.

Depreciation Rates (Gardner/Brinkley)

BellSouth, Sprint, and Verizon each provide different views regarding the appropriate economic lives and future net salvage values to use in developing the capital cost factors for collocation pricing. BellSouth uses the depreciation lives and salvage values approved in its most recent UNE proceeding.³ (EXH 8, p.8) On the other hand, Sprint and Verizon recommend depreciation inputs that differ from those approved in their most recent UNE proceeding.⁴ Three witnesses provided testimony regarding depreciation inputs: Verizon witness Flesch (adopting the testimony of witness Sovereign), Sprint witness Davis, and staff witness Lee. Each company's proposal is addressed below.

ANALYSIS

BellSouth

BellSouth asserted that its collocation study uses the same depreciation lives and salvage values as ordered in its last UNE proceeding. (EXH 8, p.8) BellSouth witness Shell testified that BellSouth's proposed collocation rates are TELRIC-compliant and use the cost methodology previously approved by the FSPC by Orders Nos. PSC-01-1181-FOF-TP and PSC-01-2051-FOF-TP. (TR 241) He argues that the appropriateness of the data was established by the 2000 BellSouth Florida Depreciation Study, where the depreciation study established the methodology, data, and analysis that supported the asset lives and other depreciation parameters for the asset accounts used in the cost study. The study also provided detailed analysis to support forward-looking lives significantly below those prescribed in 1995 by the FCC, particularly for the technology-sensitive accounts. (EXH 8, pp.160-161, 169) The witness explained that BellSouth incorporated all ordered adjustments from its last UNE docket, including the ordered cost of capital, depreciation rates, and income tax rate. (TR 10)

Staff reviewed the inputs to the BellSouth Cost Calculator and determined that the depreciation inputs reflect those approved by Orders Nos. PSC-01-1181-FOF-TP and PSC-01-2051-FOF-TP. These decisions were made relatively recently and there is no record evidence that a revision should be made for collocation. No party challenged BellSouth's depreciation inputs and no discovery responses refute BellSouth's depreciation inputs. Thus, staff believes these inputs are appropriate and should be used in developing BellSouth's collocation rates.

Verizon

Verizon recommends using the same economic lives and net salvage values it uses for financial reporting purposes. (Flesch TR 146) Staff witness Lee recommends use of the depreciation inputs approved in Order No. PSC-01-1181-FOF-TP which are the resulting BellSouth depreciation inputs approved in its UNE proceeding. (TR 203) Per Order No. PSC-03-0896-PCO-TP, Verizon was granted a mandatory stay, pending judicial review of its

³ Order No. PSC-01-1181-FOF-TP, issued May 25, 2001, in Docket No. 990649-TP, and Order No. PSC-01-2051-FOF-TP, issued October 18, 2001, in Docket No. 990649A-TP.

⁴ Order No. PSC-02-1574-FOF-TP, issued November 15, 2002, in Docket No. 990649B-TP for Verizon. Order No. PSC-03-0058-FOF-TP, issued January 18, 2003, in Docket No. 990649B-TP for Sprint.

approved UNE order while its case is on appeal before the Florida Supreme Court. AT&T did not sponsor testimony directly addressing depreciation inputs, but discovery responses indicate a recommendation to use lives and salvage values that are within the lives and salvage ranges prescribed by the FCC. (EXH 16, p.82) Table 9B-1 compares the different positions relating to the depreciation inputs for Verizon.

Table 9B-1, Comparison of Depreciation Life Inputs			
	Verizon	Staff	AT&T
	(yrs)	(yrs)	(yrs)
Buildings	33	45	N/A
Circuit Equipment	9	8	11-13
Digital Switching	12	13	12-18
Underground Cable - Metallic	15	23	25-30
Underground Cable - Fiber	20	20	25-30
Conduit Systems	50	55	50-60

Verizon witness Flesch supports its recommended depreciation life inputs with the following:

- They are the same lives that Verizon uses for financial reporting purposes.
- They are traditionally accepted NARUC factors, such as, physical, functional, and contingent using Verizon's expert informed judgment.
- They are in line with the lives of other competitors as reported in annual reports to stockholders.
- They are in line with the lives recommended by the cable television companies.
- They are in line with lives recommended by industry studies performed by Technology Futures, Inc (TFI). (EXH 20, p.13; TR 146)

Financial (GAAP) Reporting

Verizon witness Flesch testified that Verizon continues to advocate the use of financial reporting lives. (TR 128, 146-147) The witness asserted that these lives were developed in accordance with General Accepted Accounting Principles (GAAP) and are therefore appropriate and reasonable to use in determining collocation pricing. (TR 129) He further argued that GAAP depreciation lives provide a sound and realistic estimate of the forward-looking "anticipated economic life of assets, that is the expected period, looking forward, during which assets can be expected to produce economic benefit." (TR 131) He asserted that GAAP lives take into account the factors that shorten the useful lives of the assets used in collocation cost studies – primarily, the pace of technological innovation and the impact of competition. (TR 133-34)

Staff witness Lee asserts that GAAP provides very general guidelines and simply requires that the costs be spread in a consistent and rational manner over the expected useful life of the property. (TR 189) Witness Lee argues that Verizon's reasoning that its recommended

depreciation lives are the same as those that Verizon uses for financial reporting purposes does not lend support to the appropriateness of their use in determining collocation rates. (TR 190) The staff witness noted that the FCC's Tenth Report and Order on Universal Service declined the use of depreciation values that are used for financial reporting purposes, finding that financial depreciation values are intended to protect investors and are not compatible with estimating the cost of providing services that are supported by the federal high-cost mechanism. (TR 190) While this instant docket relates to collocation rather than universal service, the staff witness argues that the FCC's reasoning for not using depreciation input values that are used for financial reporting purposes is equally applicable here. (TR 190) Finally, staff witness Lee asserts that there are many methods of arriving at depreciation expense, each with a different point of view of net income. (TR 190)

Staff witness Lee also countered that Verizon would have the Commission believe that the lives and salvage values it uses for financial reporting purposes originated without some type of analysis within Verizon. (TR 195) She noted that BellSouth performs data analyses when determining its financial reporting depreciation lives. The staff witness further asserted that without company-specific data or analyses supporting the reasonableness of witness Flesch's allegations of shorter lives, she could not attest to the reasonableness of his recommendations. (TR 195)

In response to discovery, AT&T indicates that it believes that the depreciation lives and net salvage values that Verizon uses for financial reporting purposes should not be used as depreciation inputs in its collocation cost study. AT&T argues that Verizon should use the depreciation values established by this Commission in Order No. PSC-02-1574-FOF-TP. (EXH 10, pp.1-2) AT&T explained that the use of financial lives are inappropriate because:

- Financial books are generally governed by the principle of conservatism, which dictates that, when alternative estimates are about equally likely, the less optimistic should be used. Although conservatism is effective in protecting the interest of investors, it may not offer adequate protection to ratepayers. (EXH 10, p.2)
- The shorter depreciation lives relate to the "impact of competition." There is no competitive alternative for the provision of collocation floor space in a Verizon local serving office (LSO). All customer loops in Verizon's serving territory terminate at a Verizon LSO. In order to access those loops at their point of termination, CLECs must collocate in the Verizon LSO. (EXH 10, p.2)
- Depreciation lives and net salvage values reflected in financial reports are appropriate for firms operating in a competitive environment, such as the long distance market. However, the wholesale market is not competitive. (EXH 10, p.3)

When asked through discovery what information the Commission should consider in determining the appropriate depreciation life and salvage value inputs used to develop collocation prices, AT&T explained that the investments in a collocation study are, for the most part, also the investments in a UNE cost study. (EXH 16, p.20) Therefore, AT&T asserted that

ideally the Commission should adopt depreciation inputs that are consistent with those adopted in UNE cost studies. AT&T argued that the most recent state or federal approved economic depreciation lives and salvage values provide the best available guide for determining the appropriate depreciation values to use in a forward-looking cost study. (EXH 16, p.20) AT&T further asserted that forward-looking lives that are TELRIC-compliant should be within the FCC prescribed ranges. (EXH 16, p.82) Any deviation from these ranges should be supported by a full depreciation study. (EXH 16, p.84) AT&T believes that any departure from state or federally approved depreciation life and salvage values should be looked upon with skepticism and requires a high standard of proof. (EXH 16, p.84)

Benchmarking

Staff witness Lee asserts that benchmarking is a useful tool that may be used in determining life inputs, but not the only available tool that should be used. She asserts that when benchmarking, one must be very careful to ensure:

- That the benchmarked companies' reported life comparison is apples-to-apples.
- There is an understanding of the underlying assumptions of the lives used, that is, the basis of the lives as it relates to technological obsolescence, wear and tear, tax considerations or any other basis.
- The methodology, measurement, and plant is the same. (TR 196-197)

Verizon witness Flesch testified that the depreciation lives used by Verizon's competitors and those in the industry confirm the reasonableness of the GAAP lives used. (TR 146) Witness Flesch claims that since competitors' lives are not subject to regulatory approval, it is likely that they are objective lives determined solely by competitive market forces. He surmised that this independent formulation makes competitors' depreciation lives a highly relevant basis for comparison. (EXH 4, p.92)

In response to discovery, AT&T asserted that Verizon's comparison of its recommended depreciation lives and salvage values with AT&T's 2001 annual report does not validate Verizon's proposed lives. (EXH 16, p.15) AT&T argues that the expected economic life of plant depends in large part upon its use. AT&T explained that it currently operates within an intensely competitive interexchange long distance market. In addition to its national intercity network, there are several other firms providing ubiquitous interexchange long distance networks. The expected life for interexchange plant is much shorter than that of ILEC local loops and end office switches. AT&T asserted that Verizon will be facing limited retail competition in its Florida territory and there are no competitive ubiquitous local distribution networks in its Florida territory. For these reasons, any comparison to AT&T is not valid. (EXH 10, pp.3-4)

Verizon witness Flesch testified that Verizon's recommendations are in line with Technology Futures, Inc.(TFI) recommended economic life ranges. (TR 142-143) He explained that TFI forecasts the remaining lives for certain assets when technological change is shortening

their useful lives. (TR 142) To quantify technological change, TFI uses a model based on technological substitution. (TR 142)

Staff witness Lee states that the TFI reports are another tool to use, but she has reservations about the results. She explains that the TFI industry studies are commissioned by the Telecommunications Technology Forecasting Group (TTFG), an industry consortium founded in 1984; also, the member companies are Verizon, Sprint, SBC Communications, Bell Canada, Bell Telecommunications, and Qwest. (TR 198) The TFI studies' of life estimates are for the industry; some companies may have higher or lower lives, and the results are average remaining lives. Witness Lee states that the TFI projection life (that is, the life for new additions) is computed from the remaining life and depends on the particular age distribution of plant for a given company. (TR 200)

In response to discovery, AT&T asserts reservations regarding use of the TFI studies that are similar to those of staff witness Lee. AT&T stated that TFI's generated lives are only as correct as the input assumptions to the model. AT&T agreed with staff witness Lee that substitution is not relevant unless it is known that a new technology will replace, not supplement, an older technology. (EXH 16, p.127)

Verizon witness Ellis asserts that the cost study assumes that collocation will be requested in central offices that are currently in Florida. The same central office buildings that once supported mechanical and electronic switching equipment are updated to support digital technology that is currently being deployed by Verizon. (TR 670)

AT&T agrees with staff witness Lee that it is reasonable to assume that similar plant equipment exposed to similar factors of obsolescence such as technology, market competition, and physical wear and tear would be expected to experience similar life patterns. (EXH 16, p.22) In a forward-looking environment, large ILECs will deploy similar technology. (EXH 16, p.23) AT&T contends that Verizon's plant is exposed to similar wear and tear, market competition, and technological changes as BellSouth. Moreover, there is no reason to expect that technological changes would affect the two companies' plant differently, nor is there any showing that wear and tear should be substantially different in various parts of the state. As for market competition, AT&T argues that both companies are exposed to the same competitive regime. (EXH 16, p.24)

Witness Flesch asserts that Verizon's depreciation lives are estimates of the future periods of time over which Verizon's assets will produce economic value and the impact of future competition is highly relevant to determining appropriate depreciation lives. He believes that increased or significant competition and developments in new technology will shorten asset lives. In a competitive marketplace, the witness asserts that Verizon is forced to either invest in new technology or lose customers to carriers who offer the newest technology. (EXH 4, p.91)

In response to discovery, AT&T argues that in a recession or a substantial reduction in economic growth, companies often defer deployment of new technology until demand picks up and increased investment becomes more economic. (EXH 16, p.27) AT&T asserts that if depreciation inputs are overly aggressive, the rates charged for collocation arrangements will be

too high. This could seriously affect the future of local service competition in Florida. CLECs would be forced to charge end users higher rates, thus allowing the ILECs to charge end users higher rates. ILECs would thus be able to overcharge both their wholesale and retail customers. At worst, excessive collocation prices could force CLECs to abandon their plans to compete in Florida altogether. (EXH 16, p.85) AT&T believes that use of accelerated depreciation will not provide an incentive to the ILECs to invest in new technology. Competition provides the single most effective incentive for the ILECs to invest in new technology, according to AT&T. As an example, AT&T notes that DSL technology was not deployed by ILECs until after the threat of competition from cable TV companies became a reality. Excessive depreciation rates and attendant higher prices for collocation, will chill competition and enrich ILEC stockholders, but it will not spur innovation. Only competition can provide incentives to the ILECs great enough to cause them to invest in new technology. (EXH 16, p.87)

Salvage Values

Staff witness Lee asserts that Verizon witness Flesch's recommended salvage values for building and conduit systems are the same as those adopted in Order No. PSC-02-1574-FOF-TP, issued in Docket No. 990649B-TP. She further states that witness Flesch's testimony is devoid of any support or justification for the recommended salvage values. (TR 202)

Verizon's response asserts that in accordance with the Statement of Financial Accounting Standards (SFAS) 143, Accounting for Asset Retirement obligations, for financial reporting purposes, cost of removal in excess of the salvage value is expensed for financial reporting. For regulatory accounting purposes, cost of removal will continue to be charged to the depreciation reserve. Verizon adopted SFAS 143 for financial reporting purposes on January 1, 2003. (EXH 26) Therefore, staff contends that any salvage values previously submitted by Verizon for financial reporting purposes used in developing its collocation rates presented as a negative salvage value should be zero, since it is an expensed item based upon SFAS 143.

Account	Verizon Proposed	Verizon/SFAS 143	Staff Witness Lee
	(%)	(%)	(%)
Buildings	0	0	0
Circuit	2	2	0
Switching	2	2	0
Underground- Cable-Metallic	(10)	0	(8)
Underground- Cable-Fiber	(5)	0	(8)
Conduit	(10)	0	(10)

(Source: AES-2; EXH 26; Order No. PSC-02-1574-FOF-TP)

Staff witness Lee requested from Verizon additional documentation to support its depreciation lives and salvage values, including studies, data, description of specific procedures or analyses performed for financial reporting purposes which was used in the collocation study.

(EXH 3, pp.400-401) Verizon was asked to provide (1) all studies, reports, e-mails, analyses, and any other data and materials used in the determination of its financial depreciation lives; (2) all materials that specifically show that Verizon's financial depreciation lives "reflect competitive and technological advancements in the marketplace"; and (3) provide all materials that supported a 12-year and 33-year life for digital switching and buildings, respectively. Verizon's response to all requests was "no such documents exist" and referred staff to previous responses to interrogatories which some included the results of UNE hearings in other states, and Witness Flesch's direct testimony. The information Verizon provided related to Florida's historical salvage and cost of removal values for the period of 1995 through 2002 included additions, retirements, and plant balances, excerpts from AT&T annual reports, and cable television range orders. (EXH 3, p.401) Witness Flesch asserts that the responses provided to requested discovery was enough justification for Verizon's depreciation lives and salvage values. (TR 147) Staff disagrees with witness Flesch's statements since the majority of the responses included further explanations and descriptions of previously provided information without any data analyses supporting its depreciation lives and salvage values for financial supporting purposes.

Sprint

Sprint witness Davis asserted that Sprint's "Annual Charge Factors (ACF) were determined based on the capital structure, debt and equity costs and tax rates ordered for Sprint by the Florida Public Service Commission on January 8, 2003 in Docket No. 990649B-TP. The common cost factor applied to collocation rate elements is also consistent with the Commission's order in Docket No. 990649B-TP." (TR 419) Sprint did not directly address the depreciation lives and net salvage values used to create its ACFs. As AT&T witness Turner noted, "all that is loaded into Sprint's collocation cost study is a single hard-coded number." (TR 540)

In discovery, staff requested that Sprint list any depreciation inputs that differed from what the Commission approved for Sprint in Docket No. 990649B-TP. In response, Sprint indicated that in fact it used different depreciation lives and net salvage values for three asset groups: digital circuit, switching, and conduit. For the collocation study, depreciation lives were reduced from 9 to 8 for digital circuit equipment, 13 to 11 for switches, and 55 to 47 years for conduit. Sprint indicated that it reduced depreciation lives for digital circuit and switches to reflect the current lives supported by Sprint Capital Recovery. Sprint elected to use 47 years for conduit because it was approved in Nevada. (EXH 1, pp.18-19, 51-52)

Also through discovery, Sprint indicated that net salvage was raised from 0% to 1% for switching and reduced from -10% to -29% for conduit to reflect the most current rates supported by Sprint Capital Recovery. Net salvage was decreased from 0% to -25% for digital circuit equipment to reflect removal costs for collocation cross-connect cables. (EXH 1, pp.18-19; TR 430)

AT&T witness Turner noted that Sprint and BellSouth took similar approaches in that both carried over similar cost factors to price collocation services as were used to price UNEs:

In general, BellSouth has utilized the same cost factors for collocation that this Commission already approved for unbundled elements generally. This is appropriate in that collocation is simply the vehicle for obtaining access to unbundled elements as well as for interconnecting with BellSouth's network. It is only reasonable that the same cost factors that are used to establish the costs for unbundled elements should be used to establish the costs for collocation as well. (TR 538)

[Further] while BellSouth and Sprint both acknowledge that the use of the existing approved factors are the appropriate route to take for collocation costs. . . (TR 540)

Sprint witness Davis explained that the risks involved with collocation are different than for the provision of UNEs:

Collocation arrangements are uniquely designed and built to meet a particular ALEC's specific needs. Conversely, UNE loops are not built for the ALEC at all; rather, they are built by the ILEC in the normal course of business for the purpose of serving an end user. Should an ALEC discontinue service, the ILEC can use the same loop to serve the end customer. Collocation arrangements, on the other hand, are of no use to Sprint in serving the end customer. Once an ALEC has discontinued use of its collocation arrangement, if not sold to another ALEC, it will likely have to be decommissioned or redesigned and re-built. In any scenario, collocation arrangements are of no use to the ILEC. (TR 429)

However reasonable the argument that collocation is riskier than the provision of UNEs in general, staff is not persuaded that the three specific asset groups whose depreciation lives were changed—digital circuit, switches, and conduit—fit into the category of assets that would no longer be useful to the ILEC. Staff agrees with AT&T witness Turner that it is appropriate that the cost factors used to establish the costs for unbundled network elements should also be used to establish the costs for collocation.

In response to other staff discovery to assess why depreciation lives and net salvage values changed from what was approved in Docket No. 990649B-TP, Sprint asserted that it made a concession and adopted the lives ordered for BellSouth in Sprint's UNE docket, but has since decided to rely on its own cost studies in the determination of collocation ACFs. Sprint believes that its economic life studies conformed to the forward-looking economic lives as supported by ¶703 of the FCC's 1st Report and Order. (EXH 1, p.51) At that time, Sprint did not make the argument that the change in depreciation lives was due to differences in risk between the provisioning of UNEs and collocation.

In response to staff discovery, AT&T asserted that pursuant to the FCC's 1998 Biennial Review Order, FCC 99-397, carriers proposing depreciation parameters within the FCC's prescribed ranges are only required to file four summary exhibits, while full studies as described in the FCC's Depreciation Study Guide are required if the parameters fall outside the FCC's range. (EXH 1, p.84) Sprint's lives fall below the FCC's prescribed range and depart from the

lives approved by the Commission in the UNE docket, and therefore require a sufficient explanation to be approved.

When asked to provide all documentation used to derive or support the depreciation lives obtained from Sprint Capital Recovery that were used in the collocation cost study, Sprint provided little more than a description of the digital circuit and switching equipment accounts and a cursory explanation of the forces that affect replacements, economic estimates, and a comparison to the financial lives based on Generally Accepted Accounting Principles (GAAP). Sprint did not provide an analysis for conduit because it relied on the life approved in a recent proceeding in Nevada. (EXH 2, pp.788-798) The 47-year life approved in Nevada and requested in Florida is shorter than the shortest life in the FCC's range for conduit, which is 50 years.

Sprint's analysis of the estimated economic life of circuit equipment was limited to "Sprint recommends an economic life of 8 years for Circuit Equipment." (EXH 2, p.795) Sprint's proposed economic life is shorter than the 9-year GAAP life it uses for financial reporting. (EXH 2, p.796) The low end of the FCC's range for circuit equipment is 11 years.

Sprint's analysis of the estimated economic life of switching equipment is based on historical mortality data of 17 years, reduced to 12 years on the belief that line interface equipment, the longest-lived portion of the switching asset group, will survive multiple generations of other switch equipment. No data was provided to back up this belief. The life was further reduced to 10.6 years based on 1 million lines out of 8 million being converted to packet switching after a one year life. (EXH 2, p.791) Sprint's recommended 11-year (10.6 years) economic life is much shorter than the 15-year GAAP life it uses for financial reporting. (EXH 2, p.792) The low end of the FCC's range for switching equipment is 12 years.

Staff also requested all studies, analysis, data, et cetera, used to derive or support the net salvage values obtained from Sprint Capital Recovery and used in the collocation study. Sprint's economic life study states that "Sprint recommends a net salvage of 0% for Digital Electronic Switching." Sprint did not offer further support for this statement. (EXH 2, p.792) Similarly, "Sprint recommends a net salvage of 0% for Circuit Equipment." Sprint offered only limited support for its recommended circuit equipment by way of a reference to expected salvage values by Technology Futures, Inc. and FNS publications. (EXH 2, p.796) Sprint initially offered no analysis to support conduit salvage values. (EXH 2, p.797)

Sprint's economic life study supports the net salvage inputs for switching and digital circuit equipment that were approved in the UNE proceeding, not what Sprint requests for the collocation inputs in this proceeding. Staff requested further information to support the values stated in the economic life study. Sprint provided Florida-specific data and analyses which indicate a recent drop in net salvage values for both switching and digital circuit equipment. Sprint believes this indicates a trend away from a historic 10% net salvage for switching and circuit equipment, to 0%. (EXH 1, pp. 90-91) With regard to conduit, Sprint provided its Florida conduit salvage history which offered some support to its requested salvage value of -29%. (EXH 1, pp.92-93)

CONCLUSION

BellSouth

Staff believes that the depreciation lives and salvage values ordered for BellSouth in Docket 990649A-TP, (Order No. PSC-01-1181-FOF-TP) are appropriate, reasonable, based upon a previously approved methodology, and are in compliance with TELRIC standards. BellSouth witness Shell asserted that BellSouth incorporated all ordered adjustments from the last UNE docket, including cost of capital, depreciation rates, and the income tax rate. Moreover, no party has challenged BellSouth's depreciation inputs and no discovery was proffered refuting BellSouth's depreciation inputs. As such, staff believes BellSouth's inputs are appropriate to use in developing its collocation rates.

Verizon

Staff believes that the depreciation lives and salvage values ordered for Verizon in Docket 990649B-TP (Order No. PSC-02-1574-FOF-TP) are appropriate, reasonable, and are in compliance with TELRIC standards. Witness Flesch asserted that there was enough justification for Verizon's proposed depreciation lives and salvage values in this proceed, but staff is not persuaded due to a lack of support in the record. (TR 147, 400-401) As for Verizon's financial reporting purposes, consideration would have to be given to the impact of SFAS 143 resulting salvage values, which are significantly different than the FCC prescribed range and the currently approved values for some accounts. (EXH 26) The recommendations and positions of the witnesses are summarized in the tables below and staff recommends the adoption of the depreciation lives and salvage values ordered in the UNE proceeding as reflected by staff witness Lee. The record in this proceeding does not indicate a need to deviate from the previously approved depreciation lives and salvage values, nor has a basis for any change been established. An alternative recommendation is for this Commission to adopt the use of the lower end of the prescribed FCC range. Witness Flesch asserts that the FCC ranges are not forward-looking; however, the FCC's 1998 review of depreciation requirements for ILECs states "[t]he ranges can be relied upon by federal and state regulatory commissions for determining the appropriate depreciation factors for use in establishing high cost support and interconnection and UNE prices." The FCC further affirmed that "in adopting a forward-looking mechanism for high support, they found that depreciation expense calculations based upon the Commission's prescribed projection lives and salvage factors represent the best forward-looking estimates of depreciation lives and net salvage percentages." (TR 204)

Table 9B-3, Comparison of Life Inputs				
Account	Verizon*	FCC Ranges#	Witness Lee@	Staff Recommendation
	(Yrs)	(Yrs)	(Yrs)	(Yrs)
Buildings	33.0	N/A	45.0	45.0
Circuit	9.0	11-13	8.0	8.0
Switching	12.0	12-18	13.0	13.0
Underground Cable - Metallic	15.0	25-30	23.0	23.0
Underground Cable - Fiber	20.0	25-30	20.0	20.0
Conduit Systems	50.0	50-60	55.0	55.0

*Witness Sovereign Exhibit AES-1

#Second Report and Order, FCC 94-174, Simplification of Depreciation Prescription Process, released June 28, 1994, Appendix B; Third Report and Order. FCC 95-181. Simplification of Depreciation Prescription Process. Released May 4, 1995. Appendix B: Report and Order.

FCC 99-397. 1998 Biennial Regulatory Review-Review of Depreciation Requirements for Incumbent Local Exchange Carriers. Appendix B

@Order No. PSC-02-1574-FOF-TP Issued November 15, 2002, Docket No. 990649B-TP

Table 9B-4, Comparison of Salvage Values				
Account	Verizon*	FCC Ranges#	Witness Lee@	Staff Recommendation
	(%)	(%)	(%)	(%)
Buildings	0	N/A	0	0
Circuit	2	0-5	0	0
Switching	0	0-5	0	0
Underground Cable - Metallic	(10)	(30) –(5)	(8)	(8)
Underground- Cable - Fiber	(5)	(20)-(5)	(8)	(8)
Conduit	(10)	(10)-0	(10)	(10)

*Witness Sovereign Exhibit AES-1

#Second Report and Order, FCC 94-174, Simplification of Depreciation Prescription Process, released June 28, 1994, Appendix B; Third Report and Order. FCC 95-181. Simplification of Depreciation Prescription Process. Released May 4, 1995. Appendix B: Report and Order.

FCC 99-397. 1998 Biennial Regulatory Review-Review of Depreciation Requirements for Incumbent Local Exchange Carriers. Appendix B

@Order No. PSC-02-1574-FOF-TP Issued November 15, 2002, Docket No. 990649B-TP

Sprint

In its Triennial Review Order, the FCC declined to mandate the use of financial lives as a means to achieve economic depreciation and recognized that it is not clear that financial lives are necessarily more consistent with TELRIC than regulatory lives. (FCC 03-36, ¶688) Further, in

its Tenth Report and Order on Universal Service, the FCC recognized that one goal of financial lives is to protect investors by preferring a conservative understatement of net assets, partially achieving this goal by erring on the side of over-depreciation. (FCC Tenth Report and Order on Universal Service, ¶429)

Staff agrees with the FCC that financial lives and forecasts of salvage values are set conservatively from the shareholder's perspective by way of over-depreciating and understating assets. Staff believes that when Sprint's recommended depreciation lives and salvage values fall outside of the FCC range, Sprint has an obligation to file full depreciation studies to justify a deviation from prior Commission-approved values. Where Sprint provided limited support—but not full depreciation studies—to support a reduction in a depreciable life, staff believes that the Commission could reduce the life downward within the FCC range if it believes that the support is otherwise adequate.

For conduit, staff does not believe Sprint provided sufficient support to justify a change to the life that the Commission approved in Docket No. 990649B-TP. Therefore, staff recommends a 55-year life for conduit. This is within the FCC prescribed range. However, in staff's opinion, Sprint did adequately support a change to the net salvage values by way of long range data showing a consistent pattern of negative net salvage values. Therefore, staff recommends a -29% net salvage for conduit, which is below the low end of the FCC prescribed range at -10%.

For circuit equipment, Sprint offers no data to support reducing the service life from 9 to 8 years. Sprint uses a 9-year financial life which is already below the FCC range and a further reduction is not adequately supported. Staff therefore recommends a 9-year life for digital circuit equipment. Staff believes Sprint adequately supported the use of a 0% net salvage which is at the low end, but within the FCC prescribed range.

For switching equipment, Sprint offers some support for reducing the depreciable life below what was approved in Docket No. 990649B-TP; however, in staff's view, it does not meet the standard necessary to reduce it below the bottom of the FCC range of 12 years. Staff believes there is sufficient evidence to warrant a reduction in the life from 13 to 12 years, which is the low end of the FCC prescribed range. In the alternative, Sprint's use of a 15-year financial life may be viewed as conservative and would warrant no change to the depreciable life since Sprint's currently approved 13-year life is already shorter than what Sprint conservatively uses for financial reporting purposes. Staff believes Sprint's support of a 0% salvage is sufficient in that it is at the low end, but within the FCC prescribed range.

Cost of Capital and Components (Maurey)

INTRODUCTION

In the Local Competition First Report and Order, the FCC stated that the objective of a TELRIC pricing methodology is to set prices equal to those a firm would charge in a competitive market. (FCC 96-325, ¶679) It was also determined that the TELRIC methodology includes a normal profit equal to the cost of capital. (FCC 96-325, ¶699-700) In its decision affirming the FCC's TELRIC rules, the US Supreme Court upheld the FCC's treatment of cost of capital. (Verizon v. FCC, 535 U.S. ____ (2002), pp.50-52)

In the Triennial Review Order, the FCC clarified two aspects of the appropriate determination of the cost of capital for purposes of TELRIC pricing. First, the FCC stated that the cost of capital used in a TELRIC proceeding should be based on the same assumptions regarding technology and competition that are used to determine network investment. In other words, since TELRIC is intended to produce rates a firm would charge in a competitive market, the cost of capital should reflect the risk of losing customers to and gaining customers from other competitors. Second, the FCC clarified that the cost of capital in a TELRIC proceeding should reflect any unique risks associated with the potential for providing new services over various types of facilities. (FCC 03-36, ¶680-683)

Three witnesses filed testimony in this proceeding regarding the appropriate forward-looking cost of capital of Verizon for the provision of collocation service. Witness Vander Weide, appearing on behalf of Verizon, initially recommended an overall cost of capital of 18.36% for purposes of this proceeding. (TR 45) He later revised his recommendation to the return of 16.85% referenced in Verizon's Brief. (TR 101; Verizon BR at 17) Witness Lester, appearing on behalf of Commission staff, recommended an overall cost of capital of 11.12%. (TR 222) Witness Murray, appearing on behalf of AT&T, recommended the Commission use the 9.63% weighted average cost of capital approved in Verizon's most recent UNE proceeding. Witness Murray testified that the 9.63% is a conservatively high estimate of the current forward-looking cost of capital compared to the return she would recommend if she were to "recalculate the cost of capital on a blank slate." (TR 183)

Witness Turner, also appearing on behalf of AT&T, did not file testimony regarding the determination of a specific cost of capital per se, but instead recommended that the Commission recognize a cost of capital for purposes of this proceeding no greater than the cost of capital approved in Verizon's most recent UNE proceeding of 9.63%. (TR 540) No testimony was filed in this proceeding on behalf of Sprint or BellSouth regarding the cost of capital. Witness Turner noted that Sprint and BellSouth each used the weighted average cost of capital, 9.86% and 10.24%, respectively, approved in their most recent UNE proceedings for purposes of the instant collocation proceeding. (TR 539-540) Sprint's cost of capital was approved in Order No. PSC-03-0058-FOF-TP, issued January 8, 2003, in Docket No. 990649B-TP, In Re: Investigation into Pricing of Unbundled Network Elements (Sprint/Verizon Track). The 9.86% rate of return was based on a capital structure of 60% equity and 40% debt, a cost of debt of 7.43%, and a cost of equity of 11.49%. BellSouth's cost of capital was approved in Order No. PSC-01-1181-FOF-TP, issued May 25, 2001, in Docket No. 990649-TP, In Re: Investigation into Pricing of Unbundled

Network Elements. The 10.24% rate of return was based on a capital structure of 60% equity and 40% debt, a cost of debt of 7.30%, and a cost of equity of 12.20%. The determination of the cost of capital in each of these proceedings was based on the relative level of capital costs at the time the record was established in each case. None of the parties to this proceeding took exception to Sprint and BellSouth using the same cost of capital inputs approved in their respective UNE proceedings in the instant case.

To determine the appropriate forward-looking cost of capital to be included in the rates for collocation service, it is necessary to estimate the forward-looking cost of debt and equity. In addition, it is necessary to determine the appropriate mix of debt and equity in the capital structure. Combining these components produces the weighted average cost of capital estimates endorsed by the respective witnesses. (Vander Weide TR 54; Murray TR 156)

PARTIES' ARGUMENTS

Capital Structure

In his recommendation, Verizon witness Vander Weide used a capital structure of 75% equity and 25% debt. Witness Vander Weide referenced passages from the FCC Local Competition Order that he believed indicated that embedded or historical costs could not be relied on in a TELRIC proceeding. For this reason, he testified it was necessary to use market value capital structure ratios instead of book value ratios in the determination of the overall weighted average cost of capital. (TR 91)

To determine his recommended ratios, witness Vander Weide examined the capital structure data for his proxy group of industrial companies followed by Standard & Poor's (S&P) and a group of telecommunications companies that have local exchange subsidiaries. He examined the market value capital structure data for the period 1997 - 2001. Based on his analysis, he concluded that an average market value capital structure of 75% equity and 25% debt was appropriate for purposes of this proceeding. (TR 88-90)

In his recommendation, staff witness Lester used a capital structure of 71% equity and 29% debt. Witness Lester testified that financial theory supported the use of market value capital structure ratios. He further noted that the goal of a firm in a competitive market is to maximize shareholder wealth and that a cost of capital based on a market value capital structure is consistent with this goal. (TR 220)

To determine his recommended ratios, witness Lester examined the capital structure data for BellSouth Corporation, SBC Communications, and Verizon Communications. For debt, he considered the book value of short-term and long-term debt as of December 2002. He noted that "market values for investment-grade debt will be close to book value." (Lester TR 221) For equity, he considered the market values as of February 2003. He also considered the market value capital structure of his proxy group of companies followed by Value Line Investment Survey (Value Line) as of December 2001. Based on his analysis, he concluded that the average market value capital structure for the three Regional Bell Holding Companies of 71% equity and 29% debt was appropriate for purposes of this proceeding. (TR 220-221)

AT&T witness Murray recommended the Commission recognize a forward-looking target capital structure of 60% equity and 40% debt. She testified that “the relevant capital structure for determining the cost of capital at which investors will provide an efficient amount of funds for the firm’s investment projects is the firm’s target capital structure, not its market-based capital structure.” (Murray TR 179) Witness Murray also noted that market value capital structures can fluctuate dramatically over a short period of time. These dramatic shifts would not necessarily have anything to do with investors’ expectations regarding the long-run or optimal capital structure for a hypothetical efficient provider of collocation service. (TR 176-179)

Witness Murray testified that staff witness Lester’s recommendation shares many of the methodological flaws of Verizon witness Vander Weide’s analysis. (TR 157) Witness Lester conceded that market value capital structures have not been generally accepted in TELRIC proceedings. He also noted that market values for equity can vary considerably, can result in very high equity ratios, and imply unreasonably high interest coverage ratios. Moreover, an examination of the actual capital structures of the incumbent local exchange companies demonstrates that these companies rely on significant amounts of debt to finance the construction of their networks. (TR 221)

The volatility of market value capital structures is borne out by Verizon Communications’ actual experience. During 2002, Verizon Communications’ stock price varied from a high of \$51 to a low of \$26. (EXH 3, p.65) Due to this volatility in stock price, the company’s market value capitalization ratios varied significantly over the course of the year. This type of volatility confirms witness Murray’s position that market value capitalization ratios can fluctuate dramatically and do not provide a reasonable guide to investors’ expectations regarding a firm’s long-run capitalization. (TR 177-178)

While the FCC prohibited the use of traditional, rate base – rate of return proceedings to set rates in a TELRIC proceeding, contrary to the assertions of witness Vander Weide and witness Lester, the FCC did not require the use of market value capitalization ratios in the determination of the weighted average cost of capital for purposes of these proceedings. (FCC 96-325, ¶704-705) What the FCC did specify was that the cost of capital be based on forward-looking costs. (FCC 96-325, ¶690-691) Witness Murray testified that a target capital structure is forward-looking. (TR 177-179)

For purposes of comparison, Verizon’s actual equity ratio as of December 31, 2002 was 46.7%. (EXH 18, p.683) The actual equity ratio for Verizon’s parent, Verizon Communications, for the same period was significantly less. (EXH 25, p.207) Verizon’s actual equity ratio as of September 30, 2003, the most recent information available in the record, was 46.6%. (EXH 18, p.686)

Based on the record in this proceeding, staff recommends the Commission recognize forward-looking capitalization ratios of 60% equity and 40% debt in the determination of the weighted average cost of capital for purposes of this proceeding. As noted in the testimony of witness Murray, a 60% equity ratio is a reasonable long-run capitalization ratio for an efficient provider of collocation service. (TR 178) Comparing staff’s recommended forward-looking

equity ratio of 60% to the book value equity ratio of Verizon of approximately 47%, it is readily apparent that staff's recommendation is not based on Verizon's book value capital structure but instead represents a reasonable proxy of the long-run or optimal capital structure for a hypothetical efficient provider of collocation service.

Cost of Debt

In his initial recommendation, Verizon witness Vander Weide used a cost of debt of 7.40%. This rate was based on the average yield to maturity on Moody's A-rated industrial bonds as of April 2002. (TR 92) Witness Vander Weide later revised his cost of debt to 6.26%. (EXH 29, JWV-1) This rate was based on the average yield to maturity on Moody's A-rated industrial bonds as of May 2003. (EXH 21, pp.72-73)

In his recommendation, staff witness Lester adopted the 7.40% cost of debt proposed by Verizon witness Vander Weide in his initial testimony. (TR 222)

AT&T witness Murray recommended a cost of debt of 4.97%. This rate is based on the weighted average yield to maturity for the Verizon companies' publicly traded bonds as of September 22, 2003. (TR 175-176)

Witness Murray testified that the cost rate for debt proposed by both witness Vander Weide and witness Lester overstated the true cost of debt for purposes of this proceeding because both witnesses relied exclusively on long-term debt and ignored short-term debt in the determination of the cost rate. She noted that Verizon's cost of short-term debt was 1.285% as of March 31, 2003. Because of the significant difference in cost rates between long-term and short-term debt, she testified that the reliance on the yield to maturity of long-term debt is a conservatively high estimate of the overall cost rate for debt. (TR 175-176)

Verizon witness Vander Weide testified that there are economic arguments for excluding short-term debt in the determination of the weighted average cost of capital in a TELRIC proceeding. He stated that companies such as Verizon do not rely on short-term debt to finance investments in long-term assets such as telecommunications facilities. (TR 117) In addition, he stated that he did not include short-term debt because short-term debt is used to finance working capital, and working capital is not included in TELRIC cost studies. (EXH 21, p.73)

Staff does not agree with witness Vander Weide's argument that short-term debt is exclusively used to finance working capital. Staff notes that funds are fungible. Witness Vander Weide has no way of knowing if a dollar used for capital investment came from the issuance of short-term debt, long-term debt, or cash flow from depreciation. It is a common practice of most companies, Verizon included, to use short-term debt to fund operations. (EXH 25, pp.138, 150) Witness Vander Weide conceded Verizon does have short-term debt in its capital structure. (EXH 21, pp.73-74) Moreover, if a company is operating in a truly competitive market, it will attempt to minimize its cost of operations. Witness Vander Weide's claim that a company operating in the competitive telecommunications industry would not rely on short-term debt to at least some extent to minimize its overall cost of capital is not persuasive.

This said, staff does not believe the record can support an adjustment to specifically recognize the cost advantage of short-term debt in the determination of the overall cost rate of debt. Specifically, there is no evidence in the record regarding the relative percentages of short-term and long-term debt on a forward-looking basis. For this reason, staff recommends the Commission recognize a cost rate of 6.26% for debt for purposes of this proceeding. To the extent this cost rate is based exclusively on long-term debt, staff agrees with witness Murray that it represents a conservatively high estimate of the cost of debt. (TR 176)

Cost of Equity

In his initial recommendation, Verizon witness Vander Weide recommended a cost of equity of 14.13%. He arrived at this estimate by applying a single stage, quarterly compounded discounted cash flow (DCF) model to a proxy group of companies. For his proxy group, he relied on the S&P industrial companies that paid a dividend and had a positive earnings growth rate. For the stock price, he used the average of the monthly high and low stock prices for April 2002. For the growth rate, he used I/B/E/S estimates of earnings growth as of April 2002. The average growth rate for his proxy group was 12.2%. His analysis incorporated a 5% adjustment for the recovery of flotation costs. Finally, he eliminated the results of the 25% of companies with the highest and lowest DCF results in calculating his average DCF estimate. After eliminations, his proxy group consisted of 108 companies. The elimination of the results of the first and fourth quartiles reduced the indicated cost of equity from 14.34% to his recommended return of 14.13%. (TR 92-93; EXH 28, JWV-1)

In his subsequent recommendation, witness Vander Weide recommended a cost of equity of 13.95%. He arrived at this estimate in essentially the same manner as he did in his initial analysis. He used the same DCF model with the same assumptions regarding quarterly compounding and a 5% flotation cost adjustment but updated the inputs for more current information regarding stock prices and growth rates. The stock prices were the average of the monthly high and low prices for April 2003. The growth rates were earnings growth rates from I/B/E/S as of April 2003. The average growth rate in this analysis was 11.3%. As with his initial analysis, he eliminated the results of the 25% of companies with the highest and lowest DCF returns in calculating his average DCF estimate. After eliminations, his proxy group consisted of 104 companies. The elimination of the results of the first and fourth quartiles reduced the indicated cost of equity from 14.18% to his recommended return of 13.95%. (TR 101; EXH 29, JWV-3; EXH 21)

Staff witness Lester recommended a cost of equity of 12.64%. He arrived at this estimate by applying a single stage, quarterly compounded DCF model to a proxy group of companies. His proxy group consisted of the companies followed by Value Line that paid a dividend and had positive projected dividend and earnings growth rates. While he relied on the same DCF formula used by witness Vander Weide, there were a few differences in their respective assumptions. Witness Lester's calculation recognized a flotation cost adjustment of 4%. For the growth component, he relied on an average of dividend and earnings growth rates as projected by Value Line. The average growth rate in his analysis was 9.4%. His stock prices were as of February 2003. Finally, he eliminated the DCF results of the companies with indicated returns less than the Blue Chip Financial Forecast of the BBB-rated bond yield as of February 2003 and

the results of companies with indicated returns that were more than 3 standard deviations above the mean return. After eliminations, his proxy group consisted of 571 companies. The elimination of the aforementioned results increased the indicated cost of equity from 12.16% to his recommended return of 12.64%. (TR 218-219; EXH 33, PL-1)

AT&T witness Murray recommended a cost of equity of 10.70%. She arrived at this estimate by averaging the results of her application of the Capital Asset Pricing Model (CAPM) over a long-term and short-term horizon. The CAPM requires an estimate of the risk-free rate, the market risk premium, and the beta for the subject company or industry. Witness Murray relied on the yield on 20-year Treasury bonds for the long-term risk-free rate and the yield on 30-day Treasury bills for the short-term risk-free rate. She relied on Ibbotson Associates for estimates of the long-term and short-term market risk premiums. By definition, the market as a whole has a beta of 1. Because she was estimating a market return, she used a beta of 1 in her analyses. The short-term CAPM result of 9.28% is based on a risk-free rate of .88%, a market risk premium of 8.40%, and a beta of 1. The long-term CAPM result of 12.12% is based on a risk-free rate of 5.12%, a market risk premium of 7.00%, and a beta of 1. She averaged the results of these two analyses to arrive at an average CAPM cost of equity of 10.70%. (TR 170; EXH 31, TLM-3)

In addition to the analysis described above, witness Murray also conducted a "best estimate" CAPM approach that produced an estimated cost of equity of 8.77%. She testified that based on recent academic research, the historic market risk premium data published by Ibbotson Associates overstates investors' current expectations. Based on her review of the research, she believes the forward-looking market risk premium is around 4%. Averaging the CAPM results produced over a range of market risk premiums of 2.70% to 4.32% based on recent academic research with the CAPM results discussed above produced the 8.77% return she characterized as her best estimate approach. (TR 171-174; EXH 31, TLM-3)

Witness Vander Weide disagreed with witness Lester's decision to use the average of dividend and earnings growth rates as the growth rate in his DCF analysis. Witness Vander Weide testified that because the dividend growth rates were less than the earnings growth rates, it was more appropriate to use earnings growth rates. Witness Vander Weide also noted that had he relied on earnings growth rates exclusively, witness Lester's recommended DCF result would be virtually the same as his DCF recommendation. (TR 111-113)

Witness Lester testified that he used the average of dividend and earnings growth rates in his DCF analysis because the exclusive use of earnings growth rates in a DCF analysis could overstate the cost of equity. He noted that the DCF model is a dividend discounting model and the growth component is intended to estimate the growth in dividends. Year-to-year changes in earnings per share are more volatile than year-to-year changes in dividends per share. For this reason, he believed it was more appropriate to give weight to dividend growth than to rely exclusively on earnings growth. (TR 217-218)

AT&T witness Murray disagreed with the DCF analyses of both witness Vander Weide and witness Lester. She testified that since both witnesses used the single stage, or constant growth, version of the DCF model, their results overstate the true required return on equity

because of their unrealistic assumption that the companies in their proxy groups will experience high growth rates indefinitely into the future. (TR 160-161) Witness Murray also disagreed with the proxy groups selected by both witnesses. She testified that neither group of companies is linked in any reasonable fashion to the risks of a telecommunications provider subject to facilities-based competition. In her opinion, the mere fact that the respective proxy groups consist of a group of competitive companies is not sufficient to justify basing the cost of equity for a hypothetical efficient collocation provider on the simple average of this highly diversified group of firms. (TR 164-165) Finally, she disagreed with witness Lester's method of excluding the results of certain companies from his analysis. She testified that the asymmetrical elimination of companies from his sample is biased and systematically increased the average result. (TR 167-168)

Witness Vander Weide testified that it is common for analysts to use generally accepted market models such as the DCF model to estimate a company's cost of equity. (TR 55; Verizon BR at 18) However, witness Murray testified that the single stage DCF model could overstate the true cost of equity when the assumed growth rate is significantly greater than the projected growth rate of the economy in general. (TR 160-161) Staff believes witness Lester's decision to use a growth rate based on the average of the projected growth in dividends and earnings in his DCF model is a more reasonable approach than relying on growth in earnings alone.

Witness Murray raised the valid point that for a DCF analysis to be meaningful, the group of proxy companies on average must be of comparable risk to the subject company. It is also true that neither witness Vander Weide nor witness Lester made any demonstration that their respective proxy groups were of comparable risk to telecommunications companies. (TR 164-166) However, in the Triennial Review Order, the FCC clarified that the cost of capital used in a TELRIC proceeding should reflect the risks of operating in a competitive market. (FCC 03-36, ¶680-681) For this reason, both witness Vander Weide and witness Lester performed their respective DCF analyses on large groups of firms that operate in competitive markets. (Vander Weide TR 92; Lester TR 218)

Witness Murray took exception with witness Lester's methodology for eliminating certain DCF results from his sample. (Murray TR 167-168) Unlike witness Vander Weide, who eliminated an equal number of results from both the high-end and low-end of his analysis to arrive at his final sample, witness Lester's protocol for eliminating companies was asymmetrical. While he removed the results of 75 companies from the low-end of his analysis, he only eliminated the results of 11 companies from the high-end of this analysis. (Lester 219-220) If no eliminations are made, the average cost of equity is 12.16%. (Murray TR 168) If the results of the 25% of the companies with the highest and lowest DCF returns were eliminated from his sample, as was done in witness Vander Weide's analysis, the indicated average cost of equity is 11.51%. (EXH 6, p.39)

Staff agrees with witness Murray that the results of DCF analyses based on high growth rates can overstate the required cost of equity. Since the DCF model is based on the growth in dividends, it is reasonable to assign weight to the growth in dividends in the determination of the growth rate to be used in the model. Staff agrees with witness Vander Weide and witness Lester that, based on the clarification in the FCC's Triennial Review Order, the cost of capital in a

TELRIC proceeding should be based on the risk of a company operating in a competitive market. For this reason, staff believes it is reasonable to apply generally accepted market models to a proxy group of competitive companies. Finally, staff agrees with witness Murray that witness Lester's asymmetrical treatment for eliminating certain companies from his sample had the unintended affect of skewing the average DCF result.

Staff recommends the Commission recognize the average DCF result for witness Lester's entire sample of 12.16% as the cost of equity for purposes of this proceeding. Using the average for the entire sample avoids the additional subjectivity of unilaterally deciding if the returns of 11 companies, 75 companies, or the first and fourth quartiles should be eliminated. In addition, staff notes that 12.16% is very similar to the long-term CAPM result of 12.12% calculated by witness Murray. (EXH 31, TLM-3)

Risk Premium

In prior testimony before the Florida Public Service Commission, as well as other state regulatory commissions in similar TELRIC proceedings, this is the point at which Verizon witness Vander Weide concluded his recommendation. (EXH 4, pp.67-68) However, in the instant case, as well as recent cases in California and New Hampshire, witness Vander Weide has modified his testimony to include an additional return component in his recommended overall rate of return. (EXH 21, pp.9-10)

Verizon witness Vander Weide initially recommended an overall cost of capital of 18.36%. This rate of return was comprised of a "competitive market cost of capital" of 12.45% and a "risk premium" component of 5.92%. (TR 45) In his revised testimony, witness Vander Weide recommended an overall cost of capital of 16.85%. This rate of return was comprised of a market cost of capital of 12.03% and a risk premium of 4.82%. (TR 101) He testified that, because CLECs have the option to cancel their leases on a monthly basis, the Commission must set rates in this proceeding based on his recommended cost of capital of 16.85% in order for Verizon to have an opportunity to earn a market rate of return of 12.03%. (TR 120) He gave the following reasons why he believed the risk of providing collocation service under the TELRIC standard is greater than the risk of investing in the average competitive company.

- (1) TELRIC rates are initially set to recover investments over a long time frame, but rates are re-set every few years in order to reflect supposedly lower costs;
- (2) TELRIC rates are based on idealized economic assumptions that are often unachievable in the real world;
- (3) TELRIC rates are based on the unrealistic assumption that the telecommunications network can be reconstructed each time a new technology appears and companies incur no costs in transitioning to new technologies;
- (4) TELRIC rates do not reflect the higher costs and risks of making large sunk investments in network facilities when customers have the option to cancel their lease of network facilities one month at a time; and
- (5) under the FCC's rules, ILECs are unable to achieve a competitive advantage by investing in new technologies because they must immediately share the benefits of new technologies with competitors. (Vander Weide TR 71)

To quantify the additional return necessary to compensate for the risk above and beyond the normal risk faced by a competitive firm, witness Vander Weide relied on the binomial option pricing methodology described in an article by Copeland and Weston, "A Note on the Evaluation of Cancelable Operating Leases," published in the Summer 1982 issue of Financial Management. (TR 94; EXH 3, pp.178-185) Based on the information in this article, he made a number of assumptions, solved several equations, and estimated the risk premium he added to his recommended market cost of capital to compensate Verizon for the additional risk it faced because collocation is provided on a month-to-month lease. (TR 94-98)

Both AT&T witness Murray and staff witness Lester testified that the risk premium proposed by witness Vander Weide is unreasonable and should be rejected by the Commission. (Murray TR 182; Lester TR 225) Witness Lester refuted witness Vander Weide's contention that TELRIC rates are reset every few years to take advantage of "supposedly lower costs" and that collocation rates are affected by new technologies. He noted that since Verizon's cost study assumes that collocation will be requested in central offices that exist in Florida today, TELRIC rates will not be based on the assumption that the telecommunications network will be reconstructed each time rates are set. (TR 223-224) Witness Lester also noted that witness Vander Weide overstated the risks associated with technological advances with respect to the provision of collocation services. In her testimony, Verizon witness Ellis stated,

The use of current materials and labor costs and activity times is appropriate in estimating future collocation costs in Florida because the provisioning of collocation services is labor and materials (and not technology) intensive. Thus, general technological advances are not likely to lead to "future efficiency gains" in the provisioning of collocation services. (Ellis TR 667)

Finally, witness Lester refuted the claim by witness Vander Weide that Verizon is exposed to greater risk in the provision of collocation service than other companies that operate in competitive markets. He testified that, according to Rule 51.321 (e) and (f), CFR, an incumbent LEC is not required to provide physical collocation if it demonstrates that the physical collocation is not practical because of space limitations. Since an LEC is not required to construct additional building space solely to provide collocation service, he noted that the incumbent LECs are in a similar position as companies in competitive markets that have a choice about adding building space to meet additional demand. Moreover, witness Lester noted that because TELRIC allows incumbent LECs like Verizon to collect up-front, non-recurring charges in addition to future recurring revenue while fully competitive companies must recover all set-up costs to serve additional customers through future revenues, the investment risk for the LECs may be less than the average competitive company. (TR 224-225)

Witness Murray testified that witness Vander Weide's attempt to distinguish the risk of providing collocation services from "the risk associated with UNEs in general is misguided." She noted that capital costs associated with collocation are shared with other UNEs and therefore constitute no unique risk for collocation. Moreover, she testified that the risk of collocation is lower than the risk for competitive firms in general because Verizon need only rent spare space to CLECs and is not required to add building space to meet additional demand. (TR 182-183) Finally, it was noted that witness Vander Weide's theory for the risk premium, that CLECs will

cancel their leases and other CLECs will not fill the void, does not reflect reality. By focusing on historic evidence of contracts that have been cancelled, witness Vander Weide failed to make any corresponding analysis of new or expanded contracts to fill the space. (AT&T Brief at 30)

In addition to the numerous reasons advanced by witness Murray and witness Lester for why Verizon's proposed adjustment to its market cost of capital is inappropriate from a theoretical perspective, there are also several inconsistencies in witness Vander Weide's analysis that make his recommendation problematic from a practical standpoint as well. The Copeland and Weston (C&W) article, while presumably sound for the purpose it was intended, has not been shown to be appropriate for purposes of this proceeding. The C&W article witness Vander Weide relied on as the basis for the calculation of his risk premium is predicated on several assumptions. Even if one were to assume that the C&W article was in some way relevant to this proceeding, witness Vander Weide subjectively altered a number of the C&W assumptions in his own calculations. Before the calculation of the lease payments under an operating lease can be determined, the lease payments under a financial lease must first be calculated. The C&W article specified that the relevant cost of capital in this calculation is the before-tax cost of debt. (EXH 3, p.179) Instead of the cost of debt, witness Vander Weide used his own subjective estimate of Verizon's overall cost of capital in this calculation. (TR 95) The C&W article expressly assumed that if the original lease is cancelled, the lessor places the equipment on lease again. (EXH 3, p.181) Witness Vander Weide specifically ignored the possibility that some other entity could lease the space after the initial lease ended. (EXH 21, pp.35-36) The C&W article required the estimation of the present value of an American put option with an exercise price that declines at the same rate as the expected decline in the market value of the leased asset. (EXH 3, p.183) Instead of using a measure of the change in the value of the underlying asset as specified in the article, witness Vander Weide used a measure of the volatility of Verizon Communications' stock price. (EXH 21, p.18) As noted earlier, the volatility of Verizon Communications' stock price can be significant. During 2002, the stock traded anywhere from a high of \$51 to a low of \$26. Witness Vander Weide made no demonstration that the assumed decline in the market value of Verizon's collocation facilities and the volatility of its parent company's stock price have anything in common.

There are other critical departures from reality that seriously erode the credibility of witness Vander Weide's proposed adjustment to Verizon's market cost of capital. Witness Vander Weide conceded that he never reviewed the terms and conditions of any actual collocation contracts. (EXH 21, p.32) He also conceded that the lease terms are the result of negotiations between Verizon and the CLECs. (EXH 21, pp.34-35) Verizon is complicit in the decision to make the lease terms run month-to-month. As such, Verizon has made the business decision to enter into monthly contracts instead of offering longer term, non-cancelable leases. Finally, witness Vander Weide expressly excluded all non-recurring charges collected by Verizon from CLECs for the provision of collocation services in the determination of his proposed risk premium. (EXH 21, pp.37-38) Exhibit BKE-1 to Verizon witness Ellis' testimony shows that Verizon has proposed numerous up-front, non-recurring charges be collected from CLECs that lease collocation space from Verizon. (EXH 47, BKE-1, pp.38-43) The C&W article requires that all payments from the lessee (in this case the CLECs) to the lessor (in this case Verizon) must be reflected in the calculation. (EXH 3, p.183) Staff believes the numerous omissions and altered assumptions raise serious doubts over the reliability of the derivation of

witness Vander Weide's proposed adjustment. These reservations regarding the practical application of the C&W article in this proceeding are in addition to the numerous theoretical arguments proffered by witness Murray and witness Lester explaining why the adjustment is not warranted to begin with.

In summary, witness Vander Weide has recommended the Commission recognize a risk premium of approximately 500 to 600 basis points over and above the determination of Verizon's market cost of capital to compensate for the alleged risk arising from Verizon and the various CLECs' decision to enter into month-to-month lease terms for collocation service. The reality is, except for certain long-term contracts or special tariffs, no Verizon customer, wholesale or retail, is required to remain with Verizon. As is true for all the companies in his and witness Lester's proxy groups of competitive firms, all customers have freedom of choice in where to go to for service. Both witness Murray and witness Lester testified there is nothing unique about incumbent LECs to warrant awarding them a significant premium over their respective market cost of capital. (Murray TR 182; Lester TR 225) On the contrary, the FCC specifically prohibits the awarding of a "supranormal" profit in TELRIC proceedings.

Section 252(d)(1) states that rates for interconnection and access to unbundled elements "may include a reasonable profit." We find that the TELRIC pricing methodology we are adopting provides for such a reasonable profit and thus no additional profit is justified under the statutory language. (FCC 96-325, ¶699)

The concept of normal profit is embodied in forward-looking costs because the forward-looking cost of capital, i.e., the cost of obtaining debt and equity financing, is one of the forward-looking costs of providing the network elements. This forward-looking cost of capital is equal to a normal profit. ... Thus, contrary to the arguments put forth by several incumbent LECs, we find that adding an additional measure of profit to the risk-adjusted cost of capital in setting the prices for interconnection and access to unbundled elements would violate the requirements of Sections 251 (c) and 252 (d)(1) of the 1996 Act. (FCC 96-325, ¶700)

For all the reasons outlined above, staff recommends the Commission reject Verizon's proposal to artificially inflate its forward-looking cost of capital by the amount of witness Vander Weide's risk premium adjustment.

CONCLUSION

Based upon its analysis of the evidence in the record, staff recommends a weighted average cost of capital of 9.80% for Verizon for purposes of this proceeding. This rate of return is the fall-out of staff's recommended forward-looking capital structure of 60% equity and 40% debt, a market cost of debt of 6.26%, and a market cost of equity of 12.16%. Table 9B-5 presents the positions of each of the witnesses and staff's recommendation.

Table 9B-5, Cost of Capital Recommendations				
	Verizon Vander Weide	Staff Lester	AT&T Murray	Staff Recommendation
Capital Structure	75% equity 25% Debt	71% Equity 29% Debt	60% Equity 40% Debt	60% Equity 40% Debt
Cost of Debt	7.40% 6.26%	7.40%	4.97%	6.26%
Cost of Equity	14.13% 13.95%	12.64%	10.70% 8.77%	12.16%
Market Cost of Capital	12.45% 12.03%	11.12%	9.63% 7.25%	9.80%
Risk Premium	5.92% 4.82%	N/A	N/A	N/A
Overall Cost of Capital	18.36% 16.85%	11.12%	9.63% 7.25%	9.80%

The recommended forward-looking equity ratio of 60% is significantly greater than both Verizon's actual equity ratio of approximately 47% or its parent company's equity ratio of approximately 38%. (EXH 18, pp.98-99, 686) The recommended cost rate for the debt component of 6.26% is conservatively high because it specifically excluded any recognition of the cost advantage of short-term debt instruments commonly used by competitive companies. (Murray TR 176) Finally, the recommended cost of equity of 12.16% is conservatively high because it is based on the application of a single stage DCF model that assumes the most recent five-year projected growth rate of dividends and earnings will remain constant indefinitely. Witness Murray testified that this assumption is questionable under current financial market conditions. (TR 160-161) For these reasons, staff believes its recommended return is a conservatively high estimate of Verizon's true forward-looking cost of capital for the provision of collocation services.

Staff believes the recommended 9.80% market cost of capital is supported by competent, substantial evidence in the record. For purposes of comparison, BellSouth is using an overall cost of capital of 10.24% and Sprint is using a return of 9.86% for purposes of this proceeding. (Turner TR 539)

Loadings (Cater)

Each of the ILEC's cost studies contain various loadings and factors. Additionally, BellSouth's cost study contains inputs for operating expenses, which are discussed in this section of the recommendation.

ANALYSIS

BellSouth

BellSouth utilizes various loadings in the development of its monthly recurring costs. (EXH 34, WBS-1, sec.2, p.1, sec. 3) BellSouth witness Shell testifies that BellSouth used the same cost methodology in this proceeding as that ordered in the Commission's UNE proceeding,⁵ but since this was a new proceeding, BellSouth used a study period of 2003 through 2005 and updated its factors and loadings with the latest available inputs. (TR 241-242) In discovery, BellSouth explains that due to the time sensitivity of such items as inflation, tax rates, and the ratio of historical to book cost, BellSouth routinely updates these factors to reflect the most current information available. (EXH 8, p.11)

AT&T witness Turner agrees with witness Shell that it is appropriate for BellSouth to use the same cost methodology that was approved in the Commission's UNE proceeding since collocation is used for accessing network elements and interconnecting with BellSouth's network. (TR 538) In various discovery responses, AT&T indicated that to the extent that BellSouth's factors and loadings were consistent with previous Commission orders, it did not recommend modifying these factors. (EXH 10, pp.110-127)

In its cost study documentation, BellSouth also provided an explanation of its monthly recurring operating expenses. (EXH 34, WBS-1, Appendix C)

BELLSOUTH CONCLUSION

BellSouth used the same methodology in this proceeding that was approved in Docket No. 990649A-TP. AT&T agrees with BellSouth that it is appropriate to use the same cost methodology that was ordered in that docket. Staff has analyzed the documentation for these various loadings and believes that they are reasonable. (EXH 34, WBS-1, Appendix C) Therefore, staff recommends that the appropriate loadings, factors, and expenses for BellSouth are those filed in its study, subject to staff's recommended changes in all other applicable issues.

Sprint

When investment is recovered through monthly recurring charges, Sprint utilizes Annual Charge Factors (ACFs) to recover the costs associated with the underlying investment. The ACFs provide for the recovery of expenses such as maintenance, taxes, network and plant operations, depreciation, administration, engineering, expenses of support assets, and customer

⁵ Order Nos. PSC-01-1181-FOF-TP, issued May 25, 2001, and PSC-01-2051-FOF-TP, issued October 18, 2001, Docket No. 990649A-TP, In re: Investigation into pricing of unbundled network elements.

service. Additionally, the cost of money and net salvage value of network and support assets are considered in computing ACFs. (Davis TR 419-421; EXH 1, pp. 18-19; EXH 39, Revised JRD-2, p. 2)

Sprint witness Davis testifies that in its collocation cost study, Sprint uses the same capital structure, costs of debt and equity, and tax rates ordered in the Commission's UNE proceeding⁶ to determine its ACFs. (TR 419) He states that for rate elements that are expressed as monthly recurring charges (MRCs), Sprint applied the appropriate annual charge factor to the total cost of investment. The total cost of investment is calculated by adding the labor, materials, sales tax and freight costs. After these costs are added together, the appropriate annual charge factor is applied to determine the total cost of investment. (TR 420-421; EXH 39, Revised JRD-2, pp. 62-105)

In response to discovery, Sprint explains that its proposed digital circuit, switching, and conduit ACFs actually differ from those approved in its UNE proceeding. In this proceeding, the digital circuit ACF increases from 26.54 percent to 28.44 percent; the switching factor decreases from 30.05 percent to 29.03 percent; and the conduit factor increases from 15.64 percent to 15.83 percent. Sprint explains that these changes reflect current depreciation rates and salvage values. Additionally, Sprint eliminated AC power costs from the digital circuit and switching ACFs since AC power costs are separately stated as a component of DC power. Testing expenses were also removed from the ACF calculation since they do not apply to collocation. (EXH 1, pp.100-101)

In its brief, Sprint revised its cost study to reflect this Commission's decisions in the policy phase of this proceeding. In doing so, Sprint reduced the DC Power Maintenance factor and the Digital Circuit ACF for some elements to reflect only the cost of removal. (Sprint BR at 7-11) Staff believes that this reduction is reasonable since it removes the installation costs Sprint avoids by allowing CLECs to install their own collocation arrangements.

In his rebuttal testimony, AT&T witness Turner testifies that while Sprint claims to use the ACFs approved in the Commission's UNE proceeding, he has not been able to determine whether or not this is accurate. He observes that while Sprint refers to its ACF model as the source of these factors, the numbers in Sprint's collocation model are hard-coded. He testifies that since the ACF Model has not been provided, the Commission is left to trust that the ACFs are accurate. (TR 538-539) Under cross-examination, he did not know whether or not Sprint, in response to staff discovery, had provided a copy of its ACF model to staff. He stated that as of the date he filed his testimony, April 18, 2003, he had not had the opportunity to review Sprint's ACF model.⁷ (TR 640)

AT&T witness Turner believes that on the surface, Sprint's cost factors do not appear to be reasonable. (TR 539) Since he is confident that BellSouth's proposed factors accurately reflect this Commission's prior orders, he used BellSouth's factors as a baseline. As an example,

⁶ Order No. PSC-03-0058-FOF-TP, issued January 8, 2003, Docket No. 990649B-TP, In re: Investigation into pricing of unbundled network elements (Sprint/Verizon Track).

⁷ Staff notes that Sprint provided its ACF model in response to staff discovery. This response was dated April 2, 2003. (EXH 2, pp. 326-491)

he points out that Sprint's proposed DC power factors are 37.6 percent higher than those utilized by BellSouth. He cannot think of a reason that Sprint's DC power factors should be this much higher, especially considering that Sprint's approved cost of capital is actually lower than BellSouth's. (TR 539) While he cannot confirm whether or not Sprint's proposed factors accurately reflect prior Commission orders, he concedes that the cost of capital is only one, but the most influential, input in determining cost factors. This leads him to believe that Sprint's cost factors do not appear to be reasonable in light of the Commission's apparent attempt to set cost factors at a relatively similar level. (TR 539-540)

Sprint witness Farrar testifies that with two exceptions, he was able to confirm that Sprint's proposed cost factors are identical to those ordered by the Commission in Docket No. 990649B-TP. Those exceptions are changes to the depreciation inputs that were discussed above and a reduction to the Other Direct Expense Factor. (TR 502) Staff notes that based on tracing the inputs, it does not appear that the Other Direct Expense Factor was applied in Sprint's cost study. (EXH 39, Revised JRD-2)

SPRINT CONCLUSION

While AT&T witness Turner does have some concerns over the reasonableness of Sprint's ACF inputs, Sprint utilized the same ACF model as it did in the UNE proceeding and made the appropriate adjustments reflected in this Commission's order. Additionally, some of Sprint's factors and loadings were revised to account for updated depreciation rates and salvage values and the differences in assumptions between UNEs and collocation. Staff believes that since they are consistent with this Commission's UNE Order, Sprint's proposed factors and loadings are appropriate, subject to staff's recommended changes in all other applicable issues.

Verizon

Engineer, Furnish and Install (EF&I) Factors

Verizon witness Ellis provides the following explanation of EF&I Factors:

EF&I Factors translate base year, materials-only investment into installed investment by accounting for items such as vendor engineering, Verizon FL engineering, transportation, warehousing, hoisting, vendor installation, Verizon FL installation (including acceptance testing and/or other plant labor), and interest during construction. (TR 667)

Witness Ellis explains that Verizon uses these factors to develop the full installed costs associated with digital circuit and power equipment. The witness also testifies that in order to develop the full installed cost of interduct, facility terminations, and building integrated timing system (BITS) equipment, the digital circuit equipment EF&I Factor is used. In developing the monthly recurring cost for DC power, the EF&I factor for power installation is utilized. (TR 668)

Witness Ellis notes that in developing its EF&I factors, Verizon uses its continuing property records and central office equipment property databases. These factors are calculated

by taking the total installed investment for hardwired and plug-in equipment and dividing it by the total material-only investment for the same time frame. The years used in the study were 1999 and 2000. To minimize abnormalities, Verizon used company-wide data from 1999 and 2000, which witness Ellis contends is forward-looking since the relationship between installed investment and materials investment should not change in the foreseeable future. (TR 668-669)

In a discovery response, Verizon indicates that the EF&I factors used in this study are not the same ones used in the Commission's UNE proceeding since it has updated its methodology for calculating these factors. (EXH 4, pp.82-83) In another discovery response, Verizon explains that in its UNE filing in Docket No. 990649B-TP,⁸ the factors for digital switching and digital circuit equipment were developed by switch type and size. In this instant proceeding, the EF&I factors were based on the total digital switching and operator system accounts, and the digital circuit and other terminal equipment accounts. Verizon goes on to explain that the reason for changing the methodology is to use consistent methodologies throughout the company. (EXH 18, p.40) In addition, Verizon points out that in revised Exhibit BKE-1, it does not use EF&I factors in determining power labor costs, and the factors contained in the revised exhibit are not analogous to those it filed in its UNE proceeding. (EXH 18, p.40)

Pool Factor

Verizon describes its pool factor as the same thing as a maintenance/repair and expense factor. "It is used in assigning maintenance and repair expenses to equipment investment. It is derived by comparing the investment in an equipment account with the maintenance and repair expenses associated with the equipment." (EXH 4, pp.97-98)

Materials Loading

In discovery, Verizon explained that its materials loading factor recovers costs such as freight, sales tax, provisioning, and minor materials. This loading is applied to materials investments. (EXH 18, p.37-38)

VERIZON CONCLUSION

Staff reviewed the factors and loadings proposed by Verizon. Staff believes that Verizon's approach to calculating its factors and loadings is reasonable and supported by the record. Staff notes that no party filed any testimony challenging Verizon's proposed loadings and factors. Therefore, staff recommends that Verizon's factors and loadings be approved as filed, subject to staff's recommended changes in all other applicable issues.

CONCLUSION

Based on the record concerning this issue, staff recommends that the appropriate assumptions and inputs for various factors, loadings, and expenses are those proposed by

⁸ Docket No. 990649B-TP, In re: Investigation into pricing of unbundled network elements (Sprint/Verizon Track).

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Date: July 22, 2004

BellSouth, Sprint, and Verizon in their respective revised cost studies. This recommendation is subject to incorporating staff's recommended changes in all other applicable issues.

Common Costs (Cater)

In its pricing rules, the FCC specifies that the forward-looking cost of a rate element is equal to the TELRIC cost of the element plus a reasonable estimate of common costs. Specifically, 47 C.F.R. 51.505 (c) reads:

Forward-looking common costs are economic costs efficiently incurred in providing a group of elements or services (which may include all elements or services provided by the incumbent LEC) that cannot be attributed directly to individual elements or services. (47.C.F.R. 51.505 (c) (1))

The FCC has set regulations concerning recoverable common costs:

The sum of the allocation of forward-looking common costs for all elements and services shall equal the total forward looking common costs, exclusive of retail costs, attributable to operating the incumbent LEC's total network, so as to provide all the elements and services offered. (47 C.F.R. 51.505 (c) (ii))

In the BellSouth UNE Order, this Commission defined common costs as:

. . . Those costs that generally span the activities of the business, and the products and services it produces. These costs are not directly assignable to one product or service, but are necessary for the operation of the business as a whole. Examples -- accounting and finance costs, executive costs. (Order No. PSC-01-1181-FOF-TP, issued May 25, 2001, Docket No. 990649-TP, In re: Investigation into pricing of unbundled network elements., p.318)

PARTIES' ARGUMENTS AND ANALYSIS

BellSouth

In its cost study, BellSouth uses both shared and common cost factors. BellSouth's proposed shared cost factors were previously discussed in the loadings and factors section of this recommendation. BellSouth's proposed common cost factor is 6.52 percent. This factor is calculated by taking the total BellSouth wholesale common costs and dividing this amount by the total BellSouth costs directly assigned and directly attributable to wholesale services. (EXH 34, Appendix C) BellSouth is not utilizing the same common cost factor that was ordered in the Commission's UNE proceeding,⁹ but is using a common cost factor that BellSouth asserts reflects the most current data it had available at the time of its filing in this proceeding. (EXH 8, pp.254-255) This factor is applied to both BellSouth's recurring and non-recurring rate

⁹ In Order No. PSC-01-1181-FOF-TP, this Commission approved BellSouth's proposed common cost factor of 6.24 percent, with the only adjustment being to eliminate inflation. (Order No. PSC-01-1181-FOF-TP, pp. 329-331) On reconsideration, this Commission, on its own motion, ordered staff to re-run the cost model to reflect this Commission's decisions concerning cost of capital and depreciation. (Order No. PSC-01-2051-FOF-TP, issued October 18, 2001, Docket No. 990649-TP, In re: Investigation into pricing of unbundled network elements, pp. 29-31)

elements. (EXH 34, Appendix G) Staff notes that this is how the Common Cost Factor was applied in BellSouth's UNE proceeding.

BELLSOUTH CONCLUSION

While BellSouth did not use a common cost factor identical in value to the one ordered in this Commission's UNE Order, it used a common cost factor developed based upon the same methodology utilized in that proceeding. Staff believes that it is reasonable for BellSouth to update its common cost factors to reflect more current data. AT&T also agrees that BellSouth's proposed common cost factor is appropriate. (Turner TR 538, 541) Moreover, staff believes that the use of updated information better reflects BellSouth's actual common costs. Therefore, staff recommends that the appropriate common cost factor is that filed by BellSouth.

Sprint

Sprint witness Davis testifies that in Sprint's collocation cost study, Sprint applied a common cost factor consistent with that required by this Commission in Order No. PSC-03-0058-FOF-TP.¹⁰ (TR 419) For non-recurring charges (NRCs), Sprint applied the common cost factors to the sum of labor, materials, sales tax, and freight for the element. For monthly recurring charges (MRCs), Sprint applied the common cost factor for BellSouth to the sum of the annual cost for the investment in that particular element. (TR 420-421)

Sprint explains that its proposed common cost factor of 13.68 percent differs from the common cost factor of 12.03 percent ordered in this Commission's UNE proceeding, because Order No. PSC-03-0058-FOF-TP reduced its rate of return to 9.86 percent. The lower rate of return reduced direct costs, which serve as the denominator in the common cost factor calculation. A reduced denominator causes the common cost factor to increase. While the factor is not the same, it was calculated in the same manner as in the UNE proceeding. (EXH 1, p. 63) Sprint witness Farrar points out that changing the cost of capital, while leaving the other inputs constant, mathematically increased the common cost factor from 12.03 percent to 13.68 percent. The actual common costs remained constant. (TR 503-504)

AT&T witness Turner recommends that the Commission-approved common cost factor be utilized for Sprint. He used a common cost factor of 13.68 percent when he restated Sprint's rates using the BSCC. (TR 541; EXH 10, p.56)

SPRINT CONCLUSION

No party challenged Sprint's use of the 13.68 percent common cost factor, which is the fall-out factor from Sprint's UNE Order. Staff agrees that Sprint's common cost factor should be set at 13.68 percent as proposed by Sprint. Staff notes that in the Commission's UNE proceeding, Sprint applied its common cost factor to its labor rates to determine the common costs for MRCs. However, the different methods yield similar results.

¹⁰ Order No. PSC-03-0058-FOF-TP, issued January 8, 2003, Docket No. 990649B-TP, In re: Investigation into pricing of unbundled network elements (Sprint/Verizon Track).

Verizon

Verizon witness Ellis testifies that in order to assign a share of wholesale-related costs to its monthly recurring collocation rates, Verizon uses the 14.09 percent fixed allocator it proposed in its UNE filings in Docket No. 990649B-TP, which is on appeal.¹¹ (TR 663)

On cross-examination, witness Ellis acknowledged that the 14.09 percent fixed allocator Verizon proposes in this proceeding was not the one ordered by this Commission in its UNE proceeding, but is the one it proposed in that proceeding. She agreed, subject to check, that this Commission approved a 12.12 percent common cost factor in Verizon's UNE proceeding. (TR 777) The witness was handed an exhibit which compared select monthly recurring collocation rates as filed by Verizon with the 14.09 percent fixed allocator, and using the 12.12 percent fixed allocator ordered by this Commission in Verizon's UNE proceeding. In the scenarios provided, witness Ellis agreed that utilizing the Commission-ordered fixed allocator reduced the recurring collocation rates. (TR 777-780; EXH 50, pp.1-2)

AT&T witness Turner recommends that the Commission-approved common cost factor be utilized for Verizon;¹² however, when he used the BSCC to compute his proposed rates for Verizon, he used a 14.09 percent common cost factor. (TR 541; EXH 10, p.56)

In its brief, Verizon argued that while staff cross-examined Verizon witnesses on the use of the 12.12 percent fixed allocator ordered in its UNE proceeding, no evidence was presented to suggest that the 12.12 percent would be more appropriate than its proposed 14.09 percent fixed allocator. Verizon points out that it is currently appealing the fixed allocator ordered in its UNE proceeding “. . .because the ordered allocator is inconsistent with the Commission's own adjustments to Verizon's proposed model inputs and assumptions.” Verizon states that once the Florida Supreme Court orders a fixed allocator, it will file a compliance study incorporating the ordered fixed allocator into its collocation rates. (Verizon BR at 33)

VERIZON CONCLUSION

While staff recognizes that Order No. PSC-02-1574-FOF-TP is on appeal, the rationale supporting the 12.12 percent factor is still valid until otherwise determined by the court. Consistent with its recommendations for BellSouth and Sprint, staff believes it is appropriate for Verizon's fixed allocator in this instant proceeding to be consistent with that ordered in its UNE proceeding. Therefore, staff recommends that Verizon's fixed allocator be set at 12.12 percent.

¹¹Order No. PSC-02-1574-FOF-TP, issued November 15, 2002, Docket No. 990649B-TP, In re: Investigation into pricing of unbundled network elements (Sprint/Verizon Track) is currently on appeal at the Florida Supreme Court, Case No. SC02-2647, Verizon Florida, Inc. vs. Lila A. Jaber, et al. Additionally, staff notes that Order No. PSC-03-0896-PCO-TP, issued August 5, 2003, Docket No. 990649B-TP, In re: Investigation into pricing of unbundled network elements (Sprint/Verizon Track), granted Verizon's Motion for Mandatory Stay Pending Judicial Review.

¹² Staff notes that while AT&T witness Turner's testimony did not provide a specific Commission-approved common cost factor for Verizon, the record shows that the Commission-approved common cost factor for Verizon is 12.12 percent. (Turner TR 541; Ellis TR 777-780; EXH 50, pp.1-2)

Materials Costs (Cater)

The discussion below provides background information of how the costs of various materials were determined in the ILEC cost studies. The individual materials costs required for various collocation elements are discussed in other sections of this recommendation.

PARTIES' ARGUMENTS

BellSouth

BellSouth's cost study documentation explains that to develop the most efficient network design, one must know the appropriate prices and capacities for materials. To set materials prices to the base study period, BellSouth uses account-specific Telephone Plant Indexes (TPIs), which are used to project the percent change in various costs. (EXH 34, WBS-1, Appendix C) If multiple vendors are used, BellSouth averages the price of the material based on the probability of it being used. BellSouth also applies inflation factors to the materials costs in order to trend the base year material price over the three-year planning horizon. To obtain the installed investment, in-plant loading factors are applied to the prices of the materials. These loadings include such items as labor, exempt materials, and sales tax. (EXH 34, WBS-1) These were previously discussed in the loadings and factors section of this recommendation.

BellSouth points out that it obtains its materials prices from its contracts with various vendors. These contracts are reflective of BellSouth's current discounts for various materials. (EXH 34, WBS-1)

Staff notes that no party challenged BellSouth's proposed materials costs. Based on staff's review of the information available, staff believes that BellSouth's approach to determining its materials costs is reasonable; therefore, staff recommends that BellSouth's approach be used in determining its collocation rates.

Sprint

Sprint provided a list of materials prices used in its collocation study. (EXH 39, Revised JRD-2, p.107) In a confidential discovery response, Sprint provided support for its various proposed materials costs. This support consists of vendor price quotes and the current price lists for various materials used in collocation. (EXH 24)

Staff believes the costs identified in a confidential discovery response of vendor prices provide reasonable support for Sprint's materials costs. Moreover, no party challenged these inputs. Therefore, staff recommends that the appropriate inputs are those proposed in Sprint's collocation cost study.

Verizon

Verizon witness Ellis explains that Verizon's materials costs are based on invoiced costs for items Verizon currently has in inventory, and current price quotes for materials that are not

currently in inventory. These costs include shipping and handling charges, sales tax, minor materials, and other provisioning costs. Witness Ellis notes that Verizon's economies of scale are reflected in the materials costs, and the process for developing material inputs and installation costs are consistent with those utilized for estimating the costs for internal Verizon projects and retail product offerings. (TR 666-667) In addition, witness Ellis testifies that it is appropriate to use current materials and labor costs and activity times to estimate future collocation costs since the provisioning of collocation services is material and labor intensive; therefore, technological advances will not likely lead to efficiency gains in provisioning collocation. (TR 667)

Discussing Verizon's power costs, staff witness Curry proposed the use of R.S. Means data to develop costs for a connector tap. (TR 820-821) While R.S. Means data may be a good starting point in estimating costs, staff believes that Verizon's costs contained in its GTEAMs database reflect a more accurate cost of Verizon's materials since the GTEAMs database reflects Verizon's actual costs. Staff also believes that witness Curry's comparison of costs for the connector tap is an "apples to oranges" comparison since he is using the estimated cost of one size connector to contend that Verizon's costs for another size connector tap is exaggerated. Therefore, staff recommends that the appropriate inputs for Verizon's material costs are those proposed by Verizon.

CONCLUSION

Staff recommends that the appropriate materials costs are those proposed by BellSouth, Sprint, and Verizon.

Major Categories of Elements:

Application and Engineering Fees (King)

BellSouth, Sprint, and Verizon have each proposed non-recurring charges (NRC) for their various application and engineering fees.¹³ BellSouth's application fees are intended to recover the costs associated with a CLEC submitting an initial application or service inquiry requesting a specific type of collocation arrangement. (EXH 35, WBS-3, pp.1-7) As noted in Exhibit 35, BellSouth's costs are based on the various work groups' activities, such as: reviewing applications for accuracy, discussing application with applicant, processing application, reviewing application with different BellSouth departments, and compiling responses.

Sprint's application and augment fees (minor and major) cover the costs to administer and evaluate initial and subsequent applications for collocation services. The rates cover administration of the application form, engineering evaluation of the feasibility of providing service, and preparing a price quote. Several different work groups are involved in new collocation applications and augment applications. (EXH 39¹⁴, p.6)

Verizon's engineering/major augment costs include time spent by Verizon personnel planning and engineering a specific collocator's initial project or major augment. Major augments are those requests that require power, add equipment that generates more BTUs of heat, or require an increase in the caged or cageless floor space dedicated to the CLEC. Various engineering personnel are involved in the process. Verizon also has a minor augment element. Minor augments are those requests that require Verizon to perform a service or function on behalf of the CLEC that does not require additional power infrastructure. (EXH 46, pp.1-2)

Staff witness Gabel expressed several concerns with the application fees proposed by BellSouth and Sprint. (TR 872) Specifically, he noted:

- The activities and work time estimates proffered by each ILEC for processing collocation applications had significant variation in both the number of work activities and the estimated work times each ILEC assumed.
- The magnitude of the variations observed indicates that BellSouth and Sprint expect to be far less efficient than Verizon when completing this task.
- Both BellSouth and Sprint have included too many tasks in their project descriptions and/or grossly overstated the time necessary to accept a CLEC's application and determine if it is technically feasible at the location requested. (Gabel TR 872)

¹³ All application and engineering fees not specifically addressed in this portion of staff's recommendation will be addressed in the "other" section of this recommendation.

¹⁴ While Exhibit 39 was identified as a proprietary exhibit, the information in staff's recommendation was taken from the redacted version of the exhibit.

In order to correct the noted deficiencies, witness Gabel recommends that the FPSC approve the activities and work times proposed by Verizon for BellSouth and Sprint. (TR 873; EXH 54) In addition, witness Gabel recommends that the FPSC establish application rate elements that mirror the way in which Verizon calculated its proposed costs. Specifically, the witness believes that CLECs submitting collocation applications should first be charged a fee that would be designed to allow the ILEC to recover the cost it incurs determining, among other things: (1) the ILEC's future needs for the office space in question; (2) if sufficient space is available; (3) if building modifications are needed; and (4) if sufficient DC power facilities exist (i.e., a "pre-application fee"). (TR 873) Then, only after the CLEC has decided to follow through with its application would it be charged a "Post Acceptance Fee" or "Firm Order Commitment Fee." The post acceptance fee would allow the ILEC to recover the costs it incurs to engineer the CLEC's collocation arrangement. (Gabel TR 873) Witness Gabel believes his recommendations are appropriate because they would allow the ILEC to recover costs in the way in which they are incurred. (TR 874)

Witness Gabel next takes issue with the significant variation in the number of work activities and the estimated work times each ILEC assumed are necessary to complete collocation-related engineering work. (TR 874) As with the application fees, he believes that BellSouth and Sprint have included too many tasks in their project descriptions and/or grossly overstated the time necessary to engineer a CLEC's collocation arrangement. (TR 874) However, witness Gabel acknowledges that, unlike his previous recommendation regarding the application fee, he is less certain that his comparison of the ILECs' "Post Acceptance" engineering and project management activities are analogous. (TR 874-875)

BellSouth and Sprint believe their work times, activities, and rate structures for application costs are appropriate. Staff will present BellSouth's arguments first. BellSouth witness Shell argues that staff witness Gabel has reached an erroneous conclusion: that each ILEC providing collocation will have the same expected work activities and work times. (TR 270) He notes that the work activities and work times are based on each company's processes and procedures, which in turn are based on the current network infrastructure, network planning, and network forecasts. Witness Shell states that he is unable to address why Verizon can perform functions in less time, but believes that it is not appropriate to simply assume that Verizon is more efficient. (TR 270) The witness argues that a more reasonable assumption is that the work times are different because the actual work that is necessary differs from one company to the next. (Shell TR 270)

Witness Shell next argues that BellSouth's current rate structure is similar to that recommended by the staff witness (i.e., to include a pre-acceptance fee and a post-acceptance fee). (TR 271-272) He notes that BellSouth has application fees (initial and subsequent) that apply for work associated with a CLEC submitting an application to request a specific collocation arrangement. As noted above, the application fee recovers costs associated with various activities, such as reviewing the application for accuracy, processing the application, reviewing the application with different departments, and compiling responses on the specific application. Thus, witness Shell contends that these rate elements correspond to witness Gabel's "pre-acceptance fee" element. (TR 272) BellSouth also has a cost element called Space Preparation - Firm Order Processing. The Firm Order Processing element recovers costs

associated with receiving, reviewing, and processing a collocation firm order. A CLEC submits a firm order to notify BellSouth to move forward with the collocation installation work after reviewing the application response. Therefore, witness Shell reiterates that BellSouth's current rate structure agrees with witness Gabel's recommendation. (TR 272)

Sprint witness Davis began by noting that although witness Gabel acknowledged that Sprint has substantially supported its rates through actual cost or vendor quotes, he still expressed a preference towards Verizon's lower work times. The Sprint witness alleges that throughout his analysis witness Gabel simply "picks the lowest number without regard as to whether or not the low number is accurate."¹⁵ (Davis TR 451-453) Moreover, although Sprint and BellSouth's collocation application fees are similar (\$2,758 and \$2,785 respectively), witness Gabel recommends that both Sprint and BellSouth use Verizon's work times for developing their Application Fees. Witness Davis argues that in this situation Verizon is clearly the outlier, but witness Gabel disregards the possibility that Verizon has omitted some costs they are entitled to or is recovering some of their application-related costs in some other way. (TR 452) In addition, the Sprint witness notes that Sprint's Application, Engineering, and Project Management Fees properly reflect pre and post acceptance costs consistent with witness Gabel's recommendation. (TR 455)

Although witness Gabel supports Verizon's rate structure and times for this particular element, the Verizon witnesses believe that witness Gabel improperly ignores a number of fundamental differences among the ILECs. (TR 727) Verizon witnesses Bailey/Ellis note that "Dr. Gabel completely ignores the fact that Verizon recovers the majority of its costs associated with the application process (e.g., engineering time) in other rate elements, and not in its application fees." (Bailey/Ellis TR 727)

While witness Gabel addressed application fees in general, AT&T witness Turner focused his analysis on BellSouth's subsequent application fee. Specifically, witness Turner believes there are at least three problems with BellSouth's non-recurring charge (NRC) for the subsequent application. First, he argues that BellSouth has included too much time for the Account Team Collocation Coordinator (ATCC). Specifically, 6.5 labor hours are included for the initial application and 7.5 hours are included for the subsequent application. (TR 567) The witness contends that a subsequent application generally requires less labor or at most the same amount of labor as the initial application (not more). (TR 567; EXH 10, p.21) Moreover, he argues that BellSouth has failed to provide sufficient detail as to why it should take 7.5 hours to handle a subsequent application. (TR 567; AT&T BR at 26) As such, witness Turner believes the Commission should allow at most 6.5 hours of ATCC functions for handling a subsequent collocation application. (TR 567)

Second, the AT&T witness believes that there is no basis for charging a half hour for Outside Plant Engineering (OSPE) in a subsequent application because multiple fibers (normally 24) are installed with the initial installation for collocation. (Turner TR 567; EXH 10, p.20). He

¹⁵ Witness Davis believes that witness Gabel is inconsistent in his treatment of outliers. For example, witness Gabel criticizes Verizon's higher work time for its Space Availability Report, seemingly treating Verizon as the outlier as compared to Sprint and BellSouth who have similar but much lower costs. Witness Davis asserts the lowest number always gets picked by witness Gabel. (Davis TR 453)

argues that it is highly unlikely that this function will be utilized in a subsequent collocation activity since the extra fibers provided with the entrance fiber could simply be utilized for growth. (EXH 10, p.20) Therefore, he believes that the Commission should disallow the 0.5 hours for Outside Plant Engineering in a subsequent application.

Third, witness Turner contends that BellSouth has overstated the level of involvement by Parsons Engineering. The witness states: “. . . the level of Parsons Engineering that BellSouth has assumed for an initial application and a subsequent application for collocation are the same, which is wrong.” (TR 568) He argues that there is always a significantly greater amount of work involved with an initial application for collocation than there is with a subsequent application. (EXH 10, p.21) Witness Turner contends that BellSouth has provided no information substantiating the level of Parsons Engineering that has been included in its cost study. Thus, the witness recommends reducing the fee for this function by half. (Turner TR 568) He believes this adjustment is supported by BellSouth making similar reductions for work activities associated with subsequent applications as compared to the initial application. Specifically, he notes that BellSouth reduced the times for some functions by half and several others were reduced by approximately one-third. (TR 568)

In response to witness Turner’s first allegation (6.5 hours for the initial application and 7.5 hours for subsequent applications), BellSouth witness Shell argues he is incorrect. (Shell TR 267) Two of the functions performed by the ATCC are: 1) to gather response data from the various interdepartmental network and real estate coordinators and review these responses for compliance with the Agreement or Regulatory requirements, and 2) to respond to the interdepartmental coordinators’ questions. (TR 267; EXH 8, pp.173, 180) For the first function listed, the ATCC is gathering information to respond to the CLEC’s request for collocation (e.g., information on space, alternative arrangements, power, entrance facility duct space, and building related requirements). For the second function, the ATCC responds to questions from the interdepartmental team on issues relating to the Agreement. An additional hour is shown for the subsequent application because it takes longer, on average, to perform these two functions on subsequent applications than the initial one. This is primarily due to CLECs typically having new Agreements or amendments to Agreements, or regulatory requirements changes, since the initial collocation space was established. The ATCC would spend more time to ensure the interdepartmental team is aware of differences so they can properly respond to the augment request. The ATCC would also spend more time reviewing the responses from the interdepartmental team. For example, witness Shell notes that while a prior Agreement may have allowed for Point of Termination (POT) Bays or POT Bay connections, the current one may not. This will require the ATCC to verify whether that arrangement can be provided as requested. There are simply opportunities for more conflicts to occur when augmenting an arrangement. (TR 268)

The second alleged problem AT&T witness Turner identified with the development of the subsequent application cost concerns the time shown for the OSPE. Witness Turner contends that no time should be included because, he claims, engineering is almost never required for subsequent applications. However, BellSouth witness Shell contends that the OSPE must review every application, both initial and subsequent, and determine whether work is required. (Shell TR 268-269) The amount of time included for OSPE for a subsequent application is only 30

minutes, which is based on an average. He notes there are situations when this review could take less time, and there are situations when this review could take more time. In either case, a response is required by the OSPE on all applications, including subsequent applications. (TR Shell 269)

As to the third concern regarding the level of work required by Parsons Engineering, BellSouth witness Shell explains that witness Turner is not totally correct. He argues that while the Parsons Engineering fee input for the initial and subsequent application is the same, the actual amount of engineering work would not be the same. (Shell TR 269) The Parson's engineering fee input is based on the average amount of work performed on both initial and subsequent applications. As such, there would likely be more engineering work associated with the initial applications than subsequent applications, as a general rule; however, the fee is based on an average of both. (TR 269; EXH 8, p.19) Thus, the Parsons Engineering fee, as included in BellSouth's cost study, should apply on both the initial application and subsequent application. If the fee were reduced on the subsequent applications, as witness Turner proposes, then witness Shell contends it would have to be correspondingly raised for initial applications. (Shell TR 269)

ANALYSIS

Staff witness Gabel made two recommendations regarding application and engineering fees. First, he believes that the Commission should approve for BellSouth and Sprint the same work times and activities proposed by Verizon. Second, witness Gabel recommends that the Commission establish application rate elements that mirror the way in which Verizon calculated its proposed costs (i.e., a pre-application fee and a post-acceptance fee). (TR 873)

Staff agrees with witness Gabel's recommendation that a "pre-application fee" and a "post acceptance fee" are reasonable. Based on the testimony of BellSouth witness Shell and Sprint witness Davis, it appears that the companies already have such a rate structure in place. (Shell TR 271-272; Davis TR 455) Therefore, staff recommends that the Commission need not take formal action on this matter.

Staff disagrees, however, that the Verizon work times and activities for application fees and engineering should be imposed upon BellSouth and Sprint. As addressed throughout this recommendation, it is very difficult to compare rate element make-up across companies.¹⁶ (EXH 1, pp.76-83; EXH 4, pp.163-169; 201-202; EXH 8, pp.276-297) Staff is not confident that applying Verizon's work times and activities to BellSouth and Sprint will produce accurate results because of the differences in the companies' operations, procedures, and rate structure. Unfortunately, witness Gabel's recommendations were not detailed. In particular, it is unclear to staff if BellSouth and Sprint will be recouping all their legitimate costs or if there is an opportunity for over-recovery if they used the Verizon work times and activities. In addition,

¹⁶ For example, in response to discovery, Sprint identified the 12 Sprint-specific rate elements it used to provision a recent cageless collocation arrangement. When staff asked Verizon to identify the Verizon-specific elements that would be needed to provision the same cageless arrangement, they identified 24 separate elements. (Verizon acknowledged that it did not have a complete understanding of Sprint's collocation provisioning, accounting, or cost recovery procedures, but made its best effort to provision an equivalent arrangement.) (EXH 4, pp. 160-169; 201-202; EXH 1, pp. 75-84) Similar discovery was sent to BellSouth. (EXH 8, pp.276-296)

witness Gabel has not specifically addressed which costs, if any, BellSouth and Sprint should eliminate if Verizon's work times and activities are used. There is significant support in the record that comparisons across companies are not generally "apples-to-apples;" therefore, staff believes witness Gabel's recommendation is inappropriate.

Staff has reviewed the cost filings of BellSouth, Verizon, and Sprint as they relate to application and engineering fees and has found nothing troubling.¹⁷ As such, staff recommends that the appropriate rates for the initial application fee and engineering fees are those proposed by the ILECs in this proceeding, subject to incorporating staff's recommended changes in all other applicable issues.

AT&T witness Turner made three recommendations regarding BellSouth's subsequent application fees. First, the witness recommends that, at most, 6.5 hours should be allowed for ATCC functions instead of 7.5 as proposed by BellSouth. Second, BellSouth should not be allowed to include the 0.5 hours for OSPE. Last, witness Turner recommends reducing the Parsons Engineering fee by half.

Staff disagrees with each of witness Turner's recommendations because they are not supported by the record. With regard to reducing the time for ATCC functions, witness Turner does not provide any detail as to why "a subsequent application generally requires less labor or at most the same amount of labor as the initial application." (TR 567) On the other hand, BellSouth witness Shell provides a detailed breakdown of the ATCC functions, including the time allocated for each of the six steps involved in the subsequent application process. (TR 267-268; EXH 8, p. 180) Staff believes witness Shell's breakdown of the functions is reasonable and appears credible.

Witness Turner next argued that the time for OSPE should be eliminated because there is no basis for charging a half hour for OSPE in a subsequent application. (TR 567) BellSouth, on the other hand, contends that the OSPE must review every application (initial and subsequent) and determine whether work is required. (Shell TR 268-269) It seems reasonable to staff that an OSPE would evaluate all subsequent applications because they may involve modifications or augments to existing collocation arrangements. Therefore, staff believes inclusion of a half hour of labor seems reasonable.

Last, staff believes witness Turner's recommendation to reduce the Parsons Engineering fee by half is also unsupported. While witness Turner's premise is generally correct (there is less engineering time involved with the subsequent application), staff believes his recommendation to reduce the fee by half may not be correct. It is unclear to staff if the witness understood that the input for this activity is based on the average amount of work performed on initial and subsequent applications. As explained by BellSouth witness Shell, if the engineering fee on the subsequent application were reduced, as witness Turner recommends, the fee for the initial application would need to be increased. Because witness Turner's testimony on this point was not detailed, staff does not believe that reducing the Parsons Engineering fee by half just because BellSouth made similar reductions for other work activities associated with subsequent

¹⁷ Staff also reviewed all discovery regarding these elements.

applications, as compared to the initial application, is appropriate. Accordingly, staff believes witness Turner's recommendation on this point should be rejected.

CONCLUSION

The appropriate rates for the application (initial and subsequent) and engineering fees are those proposed by the ILECs in this proceeding, subject to incorporating staff's recommended changes in all other applicable issues.

DC Power (King)

In Phase I of this proceeding the Commission determined how the rate for DC power should be assessed.

An ILEC's per ampere (amp) rate for DC power provided to a CLEC's collocation space shall be based on amps used, not fused. Charges for DC power shall be calculated and applied based on the amount of power that the CLEC requests it be allowed to draw at a given time. An ILEC shall also allow a CLEC, at the CLEC's option, to order a power feed that is capable of delivering a higher DC power level but to fuse this power feed so as to allow a power level less than the feed's maximum to be drawn by the CLEC; the CLEC must specify the power level it wishes to be able to draw. (Order No. PSC-03-1358-FOF-TP, p.40)

In Phase II the Commission is to determine the appropriate rate per amp. In general, there are two key cost components that make up the DC power rate: first, the costs associated with the power plant (e.g., batteries and rectifiers); and second, the costs of the AC power to be converted to DC power. Staff will address the companies' power plant costs individually, beginning with BellSouth, and will later discuss the AC component of this rate for all three ILECs together.

BellSouth

BellSouth's cost model documentation states that its Power Per Used Amp charge is the recurring cost to provide DC power for telecommunications equipment in a collocation arrangement on a per used ampere basis per month. The cost recovers the investments associated with BellSouth's DC power plant and monthly commercial AC charges. (EXH 35, p.4) BellSouth witness Shell states that BellSouth makes DC power available for a CLEC's physical collocation space at a BellSouth Power Board or a BellSouth Battery Distribution Fuse Bay (BDFB), at the CLEC's option, within the premises. (TR 250) The CLEC's certified vendor must engineer and install fuses and power cables from the collocation space to the BDFB and must also engineer and install power cables from the collocation space to the Power Board, if this option is chosen. (Shell TR 250-251)

BellSouth's cost study used data from actual collocation projects throughout the nine-state region to determine the expected regional forward-looking investment per DC amp. Data was taken from 711 projects and costs that would not apply on a forward-looking basis, such as power cabling, were backed out. An average of all the data was taken to produce the forward-looking investment per amp. (Shell TR 251-252)

AT&T witness Turner and staff witness Curry both testified regarding the power plant costs associated with this element.¹⁸ Staff will address witness Turner's testimony first.

¹⁸ At the hearing there was a great deal of discussion regarding an exhibit proffered by Covad (Exhibit 38) specifically related to the issue of power. Staff believes this exhibit should be given minimal weight because it was not sponsored by any witness and staff was otherwise unable to determine the basis for or accuracy of the information in the exhibit. In fact, when the AT&T witness was questioned regarding this exhibit he stated: "So what I don't know right now is it's possible that whoever constructed this chart may have properly done an apples to

AT&T witness Turner believes that BellSouth developed its investment per amp exclusively based on augments for power for collocators and not based on the total demand for DC power placed on the power plant by all users (including BellSouth). (TR 546) The witness argues that this violates TELRIC principles. (TR 542; 546-547) Specifically, he believes that TELRIC principles require that the costs for unbundled elements or interconnection utilize total demand to develop cost. He argues that BellSouth's study relies only on small power augments, and augments do not provide the scale economies that BellSouth benefits from based on its installation of a comprehensive DC power plant. (TR 546-548)

Witness Turner also argues that “. . . there are many unusual aspects to BellSouth's DC power investments that cause the use of its data to be unwarranted.” (TR 548) He believes that the data provided by BellSouth does not support its proposed per amp investment of \$429.00. (TR 548) Specifically, the witness states:

I know from participation in the collocation proceeding in Georgia that BellSouth proposed the same investment there as in Florida. However, when NewSouth - an ALEC participating the (sic) in the cost proceeding - filed discovery with BellSouth, BellSouth provided supporting documentation that led to the \$429.00 investment. (TR 548)

According to witness Turner, BellSouth has been asked for the same support in Florida, but at the time he filed his testimony, the documentation had not yet been produced. (TR 548-549)

While witness Turner did not have all the information regarding BellSouth's investment, he did analyze the data he had. The witness found that in Florida there were DC power augment projects conducted in 99 central offices, of which 57 of those projects were at an investment per amp that is more than double the BellSouth proposed average. (TR 549-550) In addition, 46 of the projects resulted in investments per amp that were greater than \$1,000. The witness contends that the investments per amp for many of BellSouth's central offices are simply outside any reasonable estimate of the forward-looking investment for DC power.

The AT&T witness makes note of a previous collocation cost proceeding in Florida in which BellSouth proposed an investment of \$248.70 (on a load or used amp basis). He believes that this investment is much more reasonable. (Turner TR 550) In addition, in a collocation cost proceeding in Texas that the witness participated in, Southwestern Bell determined that its investment for installing a 2,500 amp DC power plant is \$677,706.61 and for a 4,000 amp DC power plant is \$952,381.61. The two Southwestern Bell data points lead to an investment of \$250.81 per amp. The witness notes that these values were the investments that Southwestern Bell *proposed* in Texas and the Texas Commission actually awarded lower investments. (emphasis in original)(Turner TR 551) Witness Turner believes that these examples demonstrate just how outrageous BellSouth's proposed investments are for Florida. (TR 550-551)

apples comparison.” (Turner TR 627) In addition, he noted “Well, again, this is weird. I'm testifying about an exhibit that was presented to me by Covad that I didn't prepare.” (Turner TR 630)

Witness Turner believes that there is no way to correct BellSouth's analysis in total because in addition to the error BellSouth made in not accounting for the total demand required in a TELRIC study, the witness believes that BellSouth also made a calculation error in developing its investment per amp. (TR 551) Witness Turner believes that BellSouth has taken the investment for an augment to its power plant and divided by only the DC power amperage requested by the CLEC. The witness maintains that this does not provide an accurate representation of the investment per amp because BellSouth routinely placed more power capacity than the CLEC requested. The witness believes that BellSouth distorts its analysis in that instead of dividing the investment in the power plant by the capacity of the power plant, BellSouth only divides the investment by the amount of power that the CLEC orders. Witness Turner argues that the Commission should reject BellSouth's approach because it does not represent the scale economies appropriate with TELRIC and is calculated across an artificially defined capacity that does not reflect the total demand inherent in a TELRIC analysis. (TR 552-553)

Given all of the foregoing problems, witness Turner recommends that the Commission retain the investment per amp of \$248.70 that was used by BellSouth in setting the previous DC power rate in Florida. (TR 553) In addition, he notes that the Georgia Public Service Commission recently concluded its re-evaluation of the costs for UNEs and collocation and determined that \$165.80 per fused amp or \$248.70 per used amp are the appropriate investments to be utilized for establishing the TELRIC cost for DC power. (See Georgia PSC Docket No. 14361-U) (TR 553-554)

Like AT&T witness Turner, staff witness Curry also has concerns regarding BellSouth's investment for DC power. (TR 806-808) Witness Curry believes that since BellSouth apparently developed this input based on a sample of regional power augments, there is not a relationship between specific power needs and the cost of meeting those needs. (TR 809) He argues that costs for collocation elements should be established based 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."¹⁹ (TR 809) By basing its primary cost input for the study on an augmentation sampling methodology, BellSouth has not established an appropriate TELRIC cost for actual usage. (Curry TR 809) An additional concern is that BellSouth used a regional, rather than a Florida-specific, average investment. He argues that 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. (TR 809)

Witness Curry is also concerned that BellSouth's construction costs vary widely. (TR 806-807) He explains that he reviewed the BellSouth data, and there is no clear pattern or trend regarding the power facility costs. Using the BellSouth data, the witness calculated the construction cost per ampere for each of the central office entities shown on the worksheet in BellSouth's study. The results range from zero (no construction cost of power facilities for additional collocation amps) to infinity (construction costs shown, but no collocation amps)

¹⁹ Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, Report and Order, CC Docket No. 96-98, 11 FCC Rcd 15499, ¶682.

requested). Witness Curry acknowledges that it is impossible to know for certain why there are extreme variations without examining each of the projects. (TR 808) However, he believes that 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. (TR 808) The witness notes that power plant investments are often characterized as “lumpy” investments, as are buildings and central offices in general. Additions generally exceed the immediate, incremental need and as a result provide for future utilization. (TR 808-809)

Witness Curry believes that the Commission should require BellSouth to recalculate its cost per fused ampere using a more accurate average investment per fused amp.²⁰ Specifically, BellSouth should be instructed to recalculate its average investment using an incremental, building-block-of-capacity approach, using BellSouth-specific investment data and Florida-specific weightings. 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. (Curry TR 810)

BellSouth witness Shell rebuts the arguments of witnesses Curry and Turner. The BellSouth witness argues that witness Turner’s assertion that the power augment jobs for collocation are priced differently than how a total power plant job would be priced is incorrect. (TR 251) He explains that BellSouth’s cost study is based on BellSouth operating under a standard regional contract with its vendor for the DC power plant components, regardless of the size of the power job. Also, the same vendor that installs BellSouth’s day-to-day power equipment also installs BellSouth’s power equipment to serve the CLECs desiring to collocate in the central office. Pursuant to the vendor contract and regardless of the size of the central office or the size of the power needs, the same price that applies for a comprehensive DC power plant also applies for a smaller augment. (Shell TR 251) As noted earlier, BellSouth’s cost studies used data from actual collocation projects throughout the region to determine the expected regional forward-looking investment per DC amp. Data was taken from 711 projects and costs that would not apply on a forward-looking basis, such as power cabling, were backed out. An average of all the data was taken to produce the forward-looking investment per amp. Witness Shell reiterates that the standard regional contract pricing would apply to the augments. (TR 251-252)

Witness Shell also disagrees with witness Turner’s statement that using augments “contradicts the requirements of a TELRIC cost study.” Specifically, he argues that the FCC has allowed ILECs to recover the cost of central office modifications, including power upgrades/augments, required to meet a collocater’s needs. He notes that the FCC’s Advanced Services Order (Order FCC 99-48), paragraph 51, states:

We conclude, based on the record, that incumbent LECs must allocate space preparation, security measures, and other collocation charges on a pro-rated basis

²⁰ Witness Curry notes that the computations for BellSouth’s power costs per fused amp (H.1.8) and per used amp (H.1.71) are identical except for the .67 multiplier which is not used in calculating the per used amp costs.. The witness believes that to the extent BellSouth provides more suitable support for its investment per amp as an input to the BSCC model, the revised cost should be easily derived. (Curry TR 810)

so the first collocator in a particular incumbent premises will not be responsible for the entire cost of site preparation. For example, if an incumbent LEC implements cageless collocation arrangements in a particular central office that requires air conditioning and power upgrades, the incumbent may not require the first collocating party to pay the entire cost of site preparation. (Shell TR 252)

The BellSouth witness maintains that this language clearly allows ILECs to recover the costs of preparing collocation space including power upgrades (augments). Moreover, he believes that since the FCC established the TELRIC principles, it presumably would not have allowed the ILECs to recover site preparation costs if doing so conflicted with those principles. Site preparation includes the cost of power upgrades or augments. Therefore, BellSouth's methodology for developing the investment per DC amp is compliant with TELRIC principles. Witness Shell argues that it is simply a way of prorating the cost of collocation power requirements among CLECs on a reasonable and nondiscriminatory basis. (TR 252-253)

Verizon witnesses Bailey/Ellis also disagree with witness Turner's claims that BellSouth's examination of augments rather than complete power jobs led to an overstatement of power costs because of the loss of economies of scale. However, the Verizon witnesses assert that any alleged economies of scale missing from BellSouth's study clearly do not outweigh the significant generator costs they believe are missing from BellSouth's power study.²¹ (TR 721) The witnesses explain that the primary purpose of the emergency generator is to provide AC power to the batteries and rectifiers in the event of a commercial power outage. (TR 722) A back-up generator is necessary to avoid major interruptions to telecommunications services (provided by ILEC and CLECs alike) during an outage. They argue that an emergency generator thus is a necessary component of every central office power plant. In addition, the witnesses contend that providing emergency power is extremely costly. The generators themselves are expensive, and their considerable mass makes them very expensive to install as well. In fact, the materials and installation costs of the emergency generator and associated fuel tank typically represent the largest investment in the central office power plant. (Bailey/Ellis TR 722)

The Verizon witnesses believe that the structure of BellSouth's DC power cost study led it to omit appropriate emergency back-up generator costs. They explain that although emergency generators are required for all central offices, power augments almost never require them to be upgraded or replaced. Accordingly, in 710 of the 711 augment jobs, there appear to be absolutely no materials or installation costs associated with the back-up generator. (TR 723) Many of the jobs required the placement of additional rectifiers and batteries, and a fair number required cabling between the power board and a BDFB, but only one appears to have required upgrading or replacing the generator. (TR 723)

In an attempt to quantify the impact of overlooking these emergency generator costs the Verizon witnesses offered the following information. In the revised power study that Verizon submitted in conjunction with discovery, costs associated with the back-up generator amount to \$342 of Verizon's \$604 investment per load amp, or 131% of the non-emergency generator costs

²¹ Verizon witnesses Bailey/Ellis also provided a general description of their understanding of BellSouth's power study. (TR 721-722)

(which total \$262). Increasing BellSouth's proposed investment per load amp of \$429 by 131% to account for the missing back-up generator materials and installation costs would bring that figure to \$991, which is higher than Verizon's proposed \$604. (Bailey/Ellis TR 723)

Witness Shell also disagrees with witness Turner's assertion that BellSouth has made a calculation error in determining the power investment per amp. Specifically, he claims that dividing the incremental investment in the Gainesville-Main central office power plant by the total rectifier capacity (amps) added to the office, as noted on page 25 of witness Turner's testimony, does not produce a number that represents BellSouth's total forward-looking investment per amp. (TR 257-258) He explains that this is because additional equipment investment is required. To produce these additional rectifier amps of power would require use of other power equipment for which investments are not shown in the analysis; thus, this number would understate the true forward-looking investment per amp. For example, there could be additional investment associated with batteries, power cabling, and fuse bays. The true investment associated with providing the total capacity (amps) of the rectifiers would be greater. Further, witness Shell believes that witness Turner is:

. . . obviously targeting an extreme example of the actual power projects. What he does not mention are the many cases where the data shows CLECs being provided power without triggering a power project. In those cases, BellSouth obviously is showing no construction costs even though power is being provided and zero cost (sic) are shown in the study. Again, while there are extreme cases at either end of the distribution of projects, the average across the 711 projects accurately pro-rates the real-world cost to provision an amp of power capacity. (TR 258)

The Verizon witnesses also addressed witness Turner's claim that BellSouth placed too few amps in its investment per amp formula; while acknowledging that BellSouth's denominator is comprised of amps ordered rather than amps built, they assert that tells only half the story. (TR 724) While the Verizon witnesses agree that BellSouth sometimes built more amps than the CLEC ordered, they contend that it also is true that BellSouth sometimes built no amps in response to CLEC orders. In either case, it was the total amps ordered that went into BellSouth's denominator. The witnesses provided the following example:

. . . if an ALEC ordered 50 amps and BellSouth decided to build 100 amps, 50 amps went into the cost study denominator; and if an ALEC ordered 50 amps and BellSouth built zero amps, 50 amps went into the cost study denominator. Thus, contrary to Mr. Turner's claims, BellSouth's methodology understates, not overstates, power costs. (TR 724)

Regarding the Southwestern Bell investment numbers for Texas, BellSouth witness Shell stated that it is not relevant to determining BellSouth's costs in Florida. He argues that the numbers are based on Southwestern Bell's approach to constructing a DC power plant, its supplier costs, its assumptions on quantity of items and cable distances, etc. (TR 256) Witness Shell believes that it is unreasonable for AT&T to argue, based on cost support presented by another company in another state, that BellSouth's costs in Florida are too high. He argues that

the two companies may have different operating procedures and different supplier costs, and these different procedures and supplier costs have a real impact on projected investment per amp.

Verizon's witnesses Bailey/Ellis also commented on the Texas numbers witness Turner presented. They stated:

Mr. Turner has repeatedly pointed to that Texas PUC collocation order in other collocation proceedings to support his claim that ILECs' power costs, no matter how well supported, should be lower. As far as we are aware, though, no state commission has ever followed that Texas decision. In addition, Mr. Turner misleadingly suggests that SBC itself proposed the low power costs adopted in Texas. Following telephone conversations with an SBC collocation witness, however, it is our understanding that SBC "proposed" those costs only after it had lost several crucial cost modeling questions. Thus, SBC does not believe that the figures presented in that proceeding properly recover its power costs. (Bailey/Ellis TR 743-744)

Last, BellSouth witness Shell argues that witness Turner's recommendation that BellSouth be required to use the investment figure from a cost study filed in Florida in 1997 in Docket Numbers 960846-TP, 960757-TP, and 971140-TP should be rejected. He notes that the collocation power cost study in that docket was the very first power cost study performed by BellSouth, and actually underestimated the cost for BellSouth to provision an amp of -48V DC power. Moreover, the first study was based on a long list of assumptions and performed before any significant activity with collocation had occurred in BellSouth's central offices. By contrast, the current cost study is more reliable because it is based on actual power construction projects associated with actual collocation power requests, and is more reflective of the power investment that BellSouth expects to incur on a going-forward basis. (TR 259) The witness believes the approach taken by BellSouth meets the FCC TELRIC requirements and allows BellSouth to recover the costs it expects to incur. (TR 259)

Witness Shell next expressed his disagreement with staff witness Curry's statement that BellSouth has not established an appropriate TELRIC investment for DC power. (TR 254) Specifically, witness Shell again notes the FCC established the TELRIC principles, and it presumably would not have allowed the ILECs to recover site preparation costs if doing so conflicted with TELRIC principles. He states that the FCC addressed collocation in the Local Competition Docket where it established rules to implement the collocation requirements of the 1996 Telecommunication Act. The FCC reviewed collocation again in the Advanced Services Docket (CC Docket No. 98-147, order released March 31, 1999) and after this additional review of collocation, the FCC stated that the ILECs can recover the costs for site preparation. The only proviso contained in the FCC order was that the total costs of site preparation would be pro-rated so that the first collocator in a particular central office would not be responsible for the entire cost. Consistent with this directive, BellSouth has developed a way of pro-rating the cost of collocation power requirements among CLECs on a reasonable and nondiscriminatory basis. Witness Shell contends that this same cost methodology has been used in all BellSouth states. (TR 254) Moreover, in approving BellSouth's applications for in-region interLATA authority in Georgia and Louisiana on May 15, 2002 (FCC Order 02-174, ¶210 and ¶211), in Alabama,

Kentucky, Mississippi, North Carolina, and South Carolina on September 18, 2002 (FCC Order 02-260, ¶231 and appendix H, ¶21), and in Florida and Tennessee on December 19, 2002 (FCC Order 02-331, appendix D, ¶21), the FCC concluded that BellSouth provides collocation based on TELRIC principles. (TR 254-255)

Witness Shell also responded to witness Curry's comments regarding BellSouth's varying power construction costs. (TR 257) The witness argues that each power job could trigger different power equipment needs and that there are different power components that may be at or near exhaust in various central offices at the time a CLEC requests power. (TR 257) Moreover, some of the components can only be purchased in "chunks" of capacity. As such, witness Shell agrees with witness Curry's statement that "[p]ower plant investments are often characterized as 'lumpy' investments." (TR 257) Some examples of the power capacity components are: rectifiers, battery distribution fuse bays (BDFB), and standby AC plants. The witness believes that any combination of these items, as well as others, may be exhausted by an individual power demand request. For that reason, he argues it would be misleading to analyze each individual central office project power construction cost per amp. (TR 257) Thus, as noted above, BellSouth chose to develop a regional number using 711 actual projects to ensure that a sufficient number of jobs were used to develop a reliable forward-looking investment per DC amp.

Attached to witness Shell's testimony was a copy of the results of the 711 projects. The witness explains that while there are extreme cases at either end of the distribution of projects, the average across the 711 projects accurately prorates the real-world costs to provision an amp of power capacity based on collocators' requests or projected needs. (TR 257) In addition, in some cases, BellSouth had to pre-provision power to ensure that sufficient power capacity existed to meet the ordered collocation provisioning intervals because a power job could take up to 26 weeks to complete and if power capacity were not available, the provisioning interval would be missed. (Shell TR 257)

ANALYSIS

The record in this proceeding offers three options regarding how to estimate the forward-looking investment to use in developing a per ampere rate for DC power for BellSouth. First, AT&T witness Turner advocates the use of an investment value of \$248.70, which was used in a collocation cost study submitted to this Commission in a Florida arbitration proceeding in the 1996-1997 time frame. (TR 553) Second, staff witness Curry recommends that the Commission order BellSouth to "recalculate their average investment using an incremental building-block-of-capacity approach, using BellSouth-specific investment data and Florida-specific weighting." (TR 810) Third, BellSouth proposes to using a per ampere investment amount derived from data pertaining to power plant augments made throughout the nine-state BellSouth region. (Shell TR 251-252)

Staff does not recommend that the first option be adopted for this proceeding. According to BellSouth witness Shell, the value used in the arbitration proceeding was based on a series of assumptions, and the analysis was conducted at a time when there had been little or no experience with collocation arrangements. (TR 259) Although this value was accepted by this

Commission, staff believes that where more current collocation-specific data is available, it should be used. Moreover, AT&T witness Turner provided no independent support or analysis as to why this \$248.70 value is reasonable and applicable to current conditions. Accordingly, we do not believe that this dated estimate should be used.

The second option, essentially conducting a “bottoms-up” analysis of the current and prospective cost to construct a typical DC power plant and dividing by the capacity of the power plant to derive the per amp investment, has great merit, and staff believes this is likely the preferred option. (Curry TR 810) However, the record does not contain sufficient BellSouth-specific data to perform such an analysis; the only BellSouth data available pertain to augments. Thus, to implement this option the Commission would need to order BellSouth to make a compliance filing consisting of the desired cost analysis and supporting documentation. Upon receipt of this filing staff would need to analyze and evaluate the filing and present a recommendation to the Commission as to whether it should be the basis for the company’s DC power rate. This option would result in a fairly significant delay in establishing a DC power rate for BellSouth.

Staff believes that option three, which uses data on BellSouth augments, can also yield a reasonable DC power investment estimate for the purposes of this proceeding. Instead of dividing total power plant investment by total power plant capacity, BellSouth’s approach identified CLEC requests throughout the nine-state region for DC power and determined what investment was made to fulfill the request, aggregated the data for 711 such requests, and divided the total costs expended by the total capacity requested. (Shell TR 251-252) A review of BellSouth’s supporting materials indicates that in some instances there were significant capital additions, while in other cases investment additions were minor and often zero.²² (EXH 37, WBS-4) There are numerous projects included where the numerator (plant additions) is zero but the denominator (capacity ordered) is positive. Thus, staff disagrees with AT&T witness Turner that this approach overstates investment per amp because it understates the denominator. While we believe that this is not the most straightforward approach, staff notes that Verizon witnesses Bailey/Ellis agree it yields a reasonable result.²³ On balance, staff agrees.

Staff believes the methodology employed by BellSouth based on augments yields, on balance, a reasonable input value for use in the company’s DC power cost study. While we acknowledge that the “bottoms-up” approach of option two is generally preferable, staff does not believe it is essential here, because the data presented by BellSouth appears reflective of the costs it has and will incur in providing DC power to CLECs. Moreover, staff has no assurance whether or not a “bottoms-up” analysis would yield a meaningfully different value. Furthermore, to order such a study would engender delay. However, if the Commission chooses to adopt the “bottoms-up” approach supported by staff witness Curry and requires BellSouth to

²² For example, in a Jacksonville, Florida office (CLLI Code JCVLFLBW) there were eleven CLEC requests for additional DC power amps (totaling 587 additional amps requested). For one of the requests (35.44 amps), there were power plant construction costs of \$21,000 included in the study. There were no additional costs assessed for the 552.00 additional DC power amps requested. (EXH 37, WBS-4, p. 7)

²³ Staff notes that Verizon witnesses Bailey/Ellis argue that BellSouth’s rate is understated because it does not include costs for back-up generators. This testimony was undisputed.

refile its power study, staff recommends that the Commission establish an interim rate, not subject to true-up, based on staff's recommended approach.

BELLSOUTH CONCLUSION

Staff believes the methodology employed by BellSouth based on augments yields, on balance, a reasonable input value for use in the company's DC power cost study. Therefore, this method should be approved, subject to incorporating staff's recommended changes in all other applicable issues.

Sprint

Sprint's DC Power rate includes charges for use of the DC power plant along with the commercial AC power that is converted to DC power. (Davis TR 414) The DC power category also includes separate charges for the CLEC's DC power cable connections from the main power board or BDFB to its collocation space. The rate structure for DC power cable connections of 100 and 200 amps includes a base charge for connections up to 110 linear feet and a per foot additive for cable runs in excess of 110 feet. (Davis TR 414)

In contrast to the BellSouth model, Sprint's collocation cost model starts with equipment costs for the individual components of a DC power plant and builds the cost of each size of plant based on design criteria provided by a Sprint DC power engineer. (Davis TR 431-432) Engineering and installation labor is added to provide a complete investment cost per amp for the various sizes of DC power plants used in Sprint's ILEC territory. Finally, a weighted average investment per amp is developed using actual DC power plant sizes for each central office in Sprint's Florida operations. Thus, Sprint's collocation cost model does "develop the investment for the particular component including any installation cost and related support investments," which is the structure AT&T witness Turner believes all cost models should have. (TR 431-432)

Witness Davis notes that larger switching centers lead to larger DC power plants, which can be constructed at a much lower cost per amp than smaller DC power plants. Even though many of the components (rectifiers, batteries, etc.) used to build the various sizes of DC power plants cost the same, combining these components into larger DC power plants lowers the cost per amp. (Davis TR 433) In addition, larger central office switching centers require larger central office buildings, which can also be built at a lower cost per square foot than smaller central office buildings. (TR 433-434)

Sprint's collocation cost model develops an investment per amp using the DC power plant's capacity to supply power. (TR 437) A DC power plant's capacity is defined by the number and size of rectifiers, batteries, power boards, generators, etc., which make up the DC power plant's infrastructure. By ordering DC power, the CLEC is telling Sprint how much of the DC power plant's capacity it wants to serve its collocated equipment. Although Sprint incurs the cost of building the DC power plant up front, the investment per amp determined by Sprint's collocation cost model is used to develop a monthly recurring charge rather than a non-recurring charge per amp of DC power ordered by the CLEC. (Davis TR 437-438) This gives the CLEC

the advantage of having no up front costs when placing an order for DC power amps. (TR 437-438)

Staff witness Curry was the only witness to address Sprint's cost methodology and calculations for the DC power elements.²⁴ (TR 823-825) Witness Curry found that for the most part, Sprint's costing methodologies and explanations appear reasonable. However, witness Curry believes that Sprint's engineering estimate "appears high" especially when the actual power plant engineering has already been included as a contract expense. (TR 825) Therefore, witness Curry argues that Sprint should be instructed to provide additional justification for its power engineering estimate. (TR 825)

Witness Curry also took issue with the cost Sprint included in its study for its cage ground bar.²⁵ The staff witness believes that the cost appears excessive at \$3,000.00, and is not backed up with underlying support, but is presented as an input. Witness Curry argues that the FPSC should instruct Sprint to obtain quotes from at least two unaffiliated vendors and recalculate the costs (i.e., floor space rate) that rely on the ground bar estimate. (TR 826)

In response to witness Curry's concerns, Sprint did provide additional detail regarding its engineering estimate (both in the surrebuttal testimony of witness Davis and in response to discovery) and ground bar costs. (EXH 12, pp.108-112) Specifically, in response to discovery Sprint identified the activities of its Power Engineer with respect to provisioning the engineered, furnished, and installed (EF&I) cost of a power plant project. (EXH 12, pp.104-106) Listed among the activities is "determine exact specifications for power plant components and write request for proposal for submission to contractor." (EXH 1, p.61; TR 457) In addition, the engineer reviews contractor proposals, including communication with the contractor about questions or changes to the proposal. Witness Davis believes that these work steps demonstrate that the Power Engineer is integral in the process for DC power plant design.

Sprint witness Davis also believes it is important for a Sprint Power Engineer to be involved in DC power plant design because a DC power plant is a major investment. (TR 457) He contends that it is in Sprint's (and the CLEC's) best interest to ensure that a vendor does not oversize expensive components of a DC power plant like rectifiers and batteries. Furthermore, as noted in response to discovery, the Sprint DC Power Engineer is also responsible for creating a "power demand forecast" and determining the "current and future capacity and space requirements based on demand forecasts." (EXH 1, p.61; TR 457) Time for site visits to check the progress of the project is also included. As represented in the cost study, the cost of the Sprint DC Power Engineer on average is only 1% of the overall DC Power Plant Investment. Sprint believes this expenditure is well worth it. (TR 457)

Regarding the cage ground bar cost, witness Davis believes that staff witness Curry missed the footnote on Sprint's work paper 4.4 which notes that the ground bar investment cost is intended to serve 400 square feet. (EXH 12, p.107) Sprint's ground bar cost plus engineering divided by 400 square feet results in an average investment of \$10 per square foot of floor space.

²⁴ AT&T witness Turner addressed this element for Sprint but only as it relates to adoption of the unitary model.

²⁵ While the cage ground bar is needed in the provisioning of power, Sprint recovers this costs as part of its floor space rate element.

(TR 460) Witness Davis notes that the portion of Sprint's proposed floor space MRC represented by the ground bar is \$.23 per square foot per month ($\$10 * \text{building ACF of } 24.31\% \text{ divided by } 12 \text{ plus common cost of } 13.68\%$). Given that the current average size of a collocation in Sprint central offices is 58.9 square feet, CLECs on average would bear a \$589 investment for access to a ground bar through an incremental MRC of \$13.55 per month. Moreover, Sprint sees a strong trend towards cageless collocation. Since an equipment bay takes up 10 square feet, CLECs bear only a \$100 investment for access to a ground bar for each bay of equipment. Therefore for cageless collocation, CLECs would be paying \$2.30 per month per equipment bay for access to a ground bar. (TR 260)

In addition, Sprint obtained additional cost quotes on ground bar installations as suggested by witness Curry. These cost quotes, which were attached to the surrebuttal testimony of witness Davis, are comparable to the costs included in Sprint's floor space rate calculation.

Last, witness Davis notes that Sprint has the responsibility and the economic incentive to design its own DC power plants and to purchase goods and services as cost efficiently as possible. He believes that the cost savings attributed to Sprint's own operations as a result of its actions are far more significant than the cost Sprint incurs and recovers from CLECs. (TR 462)

SPRINT CONCLUSION

Staff agrees with witness Curry that Sprint's cost methodology and explanations for its power plant investment appear reasonable and are well supported. In addition, staff believes that the explanation provided by Sprint in testimony and discovery responses regarding its proposed engineering times are rational. Moreover, as noted by witness Davis, power engineering is on average only 1% of the overall cost of the power plant. Therefore, staff recommends that Sprint's power plant investment be approved as filed, subject to incorporating staff's recommended changes in all other applicable issues.

Verizon

Verizon has both recurring and non-recurring cost elements associated with providing DC power to a collocator's arrangement. (Bailey/Ellis TR 678) The non-recurring costs are incurred in the initial provisioning of power to the collocator and include the engineering time associated with planning the power arrangement, the costs associated with performing the power cable pull and termination, and the cost of the ground wire.²⁶ The monthly recurring rate element recovers the costs of distributing DC power to the CLECs from Verizon's power plant. (TR 679) For example, this element includes such materials as batteries, rectifiers, emergency generators, main fuse panels, and electrical connections to the main power source. It also captures the costs of extending power from the power plant to the collocation area battery

²⁶ The engineering time for provisioning power for a CLEC's collocation arrangement 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 engineer's labor rate is applied to this time estimate. The cost estimate also includes travel time. Activity times are provided by the SMEs who are involved in the process.

distribution fuse bay (BDFB), including materials and labor costs associated with the required power cable, fuse panels, relay racks, and distribution bays. The monthly recurring rate also includes electric utility costs associated with the AC power that is converted to DC power in the power plant. (TR 679)

More specifically, the DC Power cost element includes the materials and installation costs required to provide DC power to the battery distribution fuse bay (BDFB). Costs include power cable to extend power from the power plant to the BDFB, fuse panels, relay racks, distribution bays, and a portion of the existing power plant. (EXH 46, p.22) This cost element also includes the utility costs of AC power acquisition. Power cable costs include the cost of 125 feet of 750-mcm power cable and two connector taps, as well as the cost of pulling the power cable. The cost per amp is calculated by summing the power cable related costs and dividing by the engineering capacity of the BDFB (480 amps). Materials costs are derived from GTEAMS. Installation costs are based on SME estimates of activity times and applicable Verizon labor rates. Development of this cost element begins with the cost of a 600 amp BDFB, which also includes the cost of the relay rack, common equipment, and fuse panels. The model BDFB is provisioned for both "A" and "B" power feeds. Costs are then calculated on a per amp basis, assuming the maximum engineering capacity (80% or 480 amps) of the BDFB. The use of the net capacity of 480 amps puts the cost per amp on a per load amp basis. (EXH 46, p.22) The BDFB equipment investment per amp is then multiplied by the power installation factor to come up with a total installed investment cost for a BDFB on a per amp basis. An annual cost factor is then applied to calculate an annual cost and divided by twelve to yield the monthly recurring cost. The power plant consists of batteries, rectifiers, main fuse panels, electrical connections, and backup generators to the main power source. The cost is expressed on a per amp basis.

The monthly recurring charge for DC power is applied on a per load amp basis according to the power loads requested by the CLEC. The per-amp costs associated with the items included in this rate element are added to a contribution for common costs to arrive at the final per amp rate for DC power. (EXH 46, p.23) The recurring cost element, DC Power Facility, includes the cost of materials and installation to provide DC power to the collocator's area. (EXH 47, p.27) 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. (EXH 47, pp.22-23)

Staff witness Curry highlighted power cost development elements within Verizon's recurring cost studies that he believed were in error or overstated. (TR 812) Specifically, he notes:

- The EF&I cost of power per ampere.

- The installation charge ratios for power cables.
- The annual cost factor for power equipment. (Curry TR 812-813)

He explains that the EF&I cost of power per ampere appears to be overstated, and Verizon's computations contain a number of unsubstantiated assumptions and inputs. (Curry TR 813) Because of the confidential nature of these studies, witness Curry described his concerns in general terms. (TR 813) Verizon appears to use 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. (Curry TR 813) Witness Curry argues that 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 Verizon's weighted (per line) average cost per ampere is heavily influenced by the larger central offices, overstating costs in those larger offices will skew the overall company cost upward. (Curry TR 813-814) The witness believes that unless the company can provide persuasive arguments for the escalating installation costs, the computations should be recalculated using the same installation ratio as used for medium-sized offices.

The next item witness Curry takes issue with is that Verizon makes various amperage assumptions that purport to represent the amount of amperage capacity produced by the power plant investment shown. (TR 814) In order for the calculations to be correct, he believes that the amperage capacity must be the highest amount that can be produced from the power plant. Witness Curry argues that Verizon has provided no information on the source of the data. The data are critical, as they are used to derive the installed cost per ampere of the power plant. Witness Curry recommends that the Commission 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. (TR 814-815)

Verizon witnesses Bailey/Ellis address witness Curry's concerns with respect to Verizon's power EF&I factor. First, the witnesses note that Verizon updated its DC power study. The updated study does not use an EF&I factor for calculating installation costs, so they argue that witness Curry's criticism is no longer relevant. (TR 742) Next, the witnesses contend that witness Curry is incorrect in asserting that the amperage capacity reflected in Verizon's power study should represent the maximum amount of power that can be produced by the corresponding power plant investment figures. (TR 742-743) They believe that the amperage capacity figures used in calculating the cost per amp should reflect the useable power plant capacity. Power equipment may not run at 100% capacity; thus, Verizon engineers have estimated that only 80% of the plant is available to meet load requirements. (Bailey/Ellis TR 743) The witnesses assert that running power equipment at 100% of its rated capacity would leave Verizon without the surge capacity necessary to handle short-term increases in power demands. Moreover, the witnesses note that Sprint makes a similar adjustment for the expected operating capacity of its power plant. (TR 743) Specifically, they note that Sprint makes the adjustment to its costs rather than the amperage associated with the power plant. The Verizon

witnesses testify that while the application differs between the companies, the end result is the same. Witnesses Bailey/Ellis provided the following example:

Assume that the gross amperage of a \$483,200 power plant is 1000 amps, of which 80% is deemed usable. Verizon FL would develop its investment per amp of \$604 by dividing the \$483,200 cost by 800 amps. Sprint, on the other hand, would arrive at its investment per amp of \$604 by dividing the \$483,200 investment by 80%, and dividing that \$604,000 "investment" by 1000 amps. The two different methods thus produce identical results and serve identical functions.

As stated in Verizon's brief ". . . Verizon's revised power study incorporated all of the specific recommendations for improvement made by the other parties to this proceeding." (Verizon BR at 16) Staff would agree in part. While Verizon did update its study and remedy most of witness Curry's concerns, it did not change its amperage capacity factor as suggested by the staff witness. However, Verizon did provide additional information as to why an 80% capacity factor was used in the power study. Specifically, as stated above, the Verizon witnesses believe that "[t]he amperage capacity figures used in calculating the cost per amp should reflect the *usable* power plant capacity." (emphasis in original) (TR743) Moreover, it appears that Verizon and Sprint, while applying different methods, reach the same result. Staff witness Curry stated that he found Sprint's costing methodologies and explanations reasonable. (TR 825) As such, staff believes it would be difficult to argue that the approach undertaken by Sprint is reasonable, and the approach taken by Verizon is suspect when the end result is the same. Accordingly, staff recommends that Verizon's DC power plant investment be approved as filed in its revised power study subject to incorporating staff's recommended changes in all other applicable issues.

VERIZON CONCLUSION

Staff recommends that Verizon's DC power plant investment be approved as filed in its revised power study subject to incorporating staff's recommended changes in all other applicable issues.

AC POWER COMPONENT OF THE DC POWER RATE & RECTIFIER EFFICIENCY FACTOR²⁷

Part of the DC power rate is the AC power component that is purchased from the electric utility that is then converted into DC power. This part of the DC Power rate element is a smaller part of the overall DC power cost. (Turner TR 554-555) As noted above, staff will address the AC component for all three ILECs here.

Witness Turner argues that there are two problems with BellSouth's AC component of its DC power rate:

²⁷ Staff will address the AC power component for each of the three ILECs; however, only BellSouth's rectifier efficiency factor is specifically addressed because no party objected to the efficiency factor of Verizon. Sprint's methodology does not use a rectifier efficiency factor.

- First, BellSouth is imposing a higher cost on CLECs for AC power than what BellSouth itself incurs from the electric utility. (TR 555)
- Second, BellSouth has used a rectifier efficiency that is too low. (TR 543; 556)

BellSouth has indicated in its DC power cost study that it pays \$0.07 per kilowatt hour for AC electricity. (TR 555) Witness Turner argues that based on discovery responses that BellSouth provided in a Georgia proceeding, it actually incurs costs that are much lower than the \$0.07 per kilowatt hour. In this proceeding the AT&T witness relied upon the “US Department of Energy Estimated U.S. Electric Utility Average Revenue per Kilowatt Hour to Ultimate Consumers by Sector, Census Division, and State, Year-to-Date” (November 2002 and 2001). He explains that this report provides the average AC kilowatt hour rate for residential, commercial, and industrial power users for every state in the country. (Turner TR 555)

The AT&T witness argues that the appropriate category to use for BellSouth is the industrial user category. The witness states “I am confident of this selection for at least two reasons.” (TR 543, 555) First, he argues that based on his experience he knows that the ILECs tend to have AC power rates that closely approximate the rates for industrial users. Second, he believes ILECs normally have load-sharing arrangements with the AC power provider. Moreover, ILECs often have agreements that allow them to place AC power back onto the power grid, if needed by the electric utility. (Turner TR 556) In conclusion, witness Turner believes that the industrial category is the appropriate AC kilowatt hour rate for BellSouth and the other incumbents.²⁸ (TR 555-556)

Witness Turner next addresses the rectifier efficiency factor. The witness explains that rectifiers are used to convert AC power from the electric utility into DC power that is used by telecommunications equipment. (TR 556) Whenever this conversion is done, the amount of AC power that is brought into the rectifier does not come through completely as DC power. (Turner TR 556) The inverse of this loss is expressed as the efficiency of the rectifier and BellSouth has recommended the use of 85 percent efficiency on its rectifiers. Witness Turner argues that based on the rectifiers used in AT&T’s network, which are similar to those used in incumbent networks, the efficiency of rectifiers is at least 90 percent. (TR 556) The witness contends that there is no reason to believe that BellSouth’s rectifiers should operate less efficiently than AT&T’s. Moreover, in a TELRIC environment, the most efficient, least-cost technology should be used in developing the forward-looking cost. (TR 556)

Witness Turner recommends that the Commission should reduce BellSouth’s cost for AC electricity to \$0.053 per kilowatt hour. Further, the Commission should order the use of a rectifier efficiency factor of 90%. (TR 556)

²⁸ At the hearing the witness stated that the \$.07 per KWH proposed by BellSouth is neither the current commercial rate or the industrial rate. The \$.07 rate was the commercial rate for 2001 and the more current commercial rate is \$.067. (TR 594) In their joint brief the CLECs argue that: “At a minimum, the Commission, under TELRIC principles should require BellSouth to use the more recent commercial AC power rate.” (AT&T BR at 25) The reference in the brief is the first time the \$.067 rate is proposed; as such, staff does not believe it is appropriate to consider a recommendation that was not presented in a party’s direct case.

Each of the ILECs provided rebuttal of witness Turner's assertion that telecommunications companies should be considered industrial users. BellSouth witness Shell notes that BellSouth also used the U.S. Department of Energy average when its cost study was developed. BellSouth used \$.07 per kilowatt-hour using the Commercial user category. (TR 259) Witness Shell argues that witness Turner's support for the Industrial category is (1) his experience with ILECs and (2) his claim that ILECs normally have load-sharing arrangements. As to his first point, witness Shell contends that the AT&T witness does not provide any detail on his experience with ILECs, or state whether that experience includes BellSouth. As to his second point, load sharing agreements are rate riders offered by the power company to be used in conjunction with base rates. (Shell TR 260) BellSouth utilizes these rate riders in conjunction with its base rates, which are commercial, where they are economically and operationally feasible. (TR 260) Further, while BellSouth may have some load-sharing arrangements with some power companies in certain central offices, this is by no means the case in the majority of BellSouth's central offices. Thus, witness Shell believes that witness Turner's "vaguely defined 'experience' with ILECs is inconsistent with the rates BellSouth actually pays for AC power." (TR 260) In addition, witness Shell notes that the discovery provided in Georgia which leads witness Turner to conclude that BellSouth actually incurs costs that are much lower than the \$0.07 per kilowatt hour is weak at best. Witness Shell argues that witness Turner based his assessment on two AC power bills for one month. The BellSouth witness explains that AC power charges are seasonal, and the total charge varies as demand varies; furthermore, the AC power charges could also vary by central office. He maintains that data for one month and a couple of central offices is not enough to make a reasonable determination. (TR 261)

Like the BellSouth witness, Sprint witness Davis also disagrees with witness Turner's claim that ILECs should be considered industrial power users for purposes of the AC cost input. (TR 434-435) Witness Davis believes that this recommendation is inappropriate. The Sprint witness explains that he consulted Ms. Harris-Russell with the US Department of Energy, who was listed as a contact on the web site associated with the report attached to witness Turner's testimony. (TR 435) According to Ms. Harris-Russell, a telephone company's switching center would typically come under the commercial use category. This fact was confirmed by an interview with Sprint's Energy Manager. (TR 535-536)

Witness Davis believes that Sprint has provided proof of its AC power costs. (EXH 12, pp. 113-162; TR 436) Specifically, the witness states:

As a matter of fact, it was AT&T who requested cost support for Sprint's AC cost input of \$ 0.0671 per KWH. In response to AT&T's Request for Production of Documents Number 17 (provided March 14, 2003 more than a month before Mr. Turner's testimony was filed), Sprint provided AT&T with an analysis of actual electric bills (usage and cost) for the 12 month period from October, 2001 through September, 2002 for 445 meter locations throughout Sprint's territory in Florida amounting to more than 10,000 data points (445*2*12). It is obvious that Mr. Turner completely ignored the extensive factual data supplied by Sprint in response to AT&T's request. This cost analysis strongly supports Sprint's cost of \$ 0.0671 per KWH which is identical to the U.S. Department of Energy's reported

revenue of \$ 0.067 per KWH for users under the “Commercial” classification for 2002. (TR 436; EXH 12, pp.113-133)

In addition, witness Davis notes that the savings resulting from Sprint’s load sharing arrangements are reflected in Sprint’s actual cost analysis provided in response to discovery. (TR 437)

Verizon witnesses Bailey/Ellis also believe witness Turner is mistaken in his claim that ILECs are industrial power users. (TR 744) They note that no Verizon central office takes energy from an industrial or an interruptible power tariff.²⁹ In fact, based on confidential information provided by AT&T in response to discovery, the witnesses contend that this should not come as a surprise to witness Turner. (TR 744; EXH 23) In addition, the witnesses note that AT&T’s own Florida average power rate is much closer to Verizon’s proposal of \$0.0717 than to witness Turner’s proposal.³⁰ (TR 744; EXH 47) Witnesses Bailey/Ellis contend that:

This is a prime example of why the Commission should be suspicious of AT&T’s proposed figures when they come from a consultant’s alleged “experience,” rather than Florida-specific, hard data. Mr. Turner obviously has access to this data, but has apparently failed to use it as the basis for his recommendations. (TR 745)

With regard to the rectifier efficiency factor, BellSouth witness Shell argues that witness Turner “simply says that BellSouth should use the rectifier efficiency that he claims exists in AT&T’s network.” (TR 261) The BellSouth witness argues that witness Turner provided no data to support that claim. Witness Shell believes that because rectifier efficiency can vary by technology and type, BellSouth chose to use a number that is used by Telcordia in many of its economic studies. Telcordia uses an average figure of 85%. In addition, as shown on exhibits attached to witness Turner’s testimony, the Southwestern Bell DC power investment proposal and the Texas PUC approved investment, both include the use of an 85% rectifier efficiency. (Turner TR 261)

ANALYSIS

Staff is not persuaded by AT&T witness Turner’s allegation that the ILEC AC power charges should be based on the industrial user category. Staff does not believe witness Turner’s position on this issue is well supported. Staff believes that the witness was provided information showing the rates ILECs are charged by utilities but did not analyze or address that data. Moreover, during cross-examination witness Turner acknowledged that he was not aware of or familiar with the tariffs filed by electric utilities in Florida that dictate what rates a user is charged. (TR 595-596) Therefore, he did not know what types of restrictions there are on usage or demand characteristics in order to qualify for an industrial rate in Florida. (TR 595-597)

²⁹ According to Verizon’s non-proprietary cost study documentation, its cost for commercial electricity is determined from actual electricity costs and KWHs used in Verizon’s facilities throughout 2001 and is state-specific. (EXH 45, p.29)

³⁰ AT&T’s Florida power rates are confidential. (EXH 47; Bailey/Ellis TR 744-unredacted version of testimony).

Staff believes that each ILEC provided adequate support as to why they should not be considered industrial users of AC power. In particular, staff believes that the confidential information in witnesses Bailey/Ellis' testimony that shows what AT&T pays for AC power and its power needs, as well as Sprint witness Davis' conversation with the US Department of Energy representative, are persuasive. (TR 744; EXH 47; TR 435) Therefore, staff recommends that the Commission reject witness Turner's recommendation that the ILECs should be considered industrial users of AC power and reduce their rates in their cost studies to \$.053. The rates for AC power should be those filed by the ILECs.

On the issue of the rectifier efficiency factor, staff does not believe BellSouth supports its proposed efficiency rating of 85%. Based on the testimony of witness Shell, it appears that BellSouth's sole support for this input is that it is a number used by Telcordia in many of its economic studies. (TR 261) The BellSouth witness was questioned at length at the hearing on this issue and acknowledged that he did not know the vintage of the Telcordia study. (TR 327-328) Staff does agree with BellSouth witness Shell that the efficiency factor is only one component that makes up the rectifier specification. Before choosing such equipment, other factors should be considered. However, staff believes that the evidence presented at the hearing and in response to discovery demonstrates that there may be more efficient rectifiers in use in the telecommunications industry. BellSouth did not provide any substantive arguments as to why the Telcordia factor should be used in its study. (EXH 16, p.53) Moreover, staff notes that the efficiency factor proposed by witness Turner more closely reflects the efficiency factor proposed by Verizon in its proprietary study. Therefore, staff recommends that BellSouth's efficiency factor be increased to 90%.³¹

CONCLUSION

Staff recommends that the appropriate rate for the AC power component of the DC power rate are those filed by the ILECs, subject to incorporating staff's recommended changes in all other applicable issues. In addition, staff recommends that BellSouth's rectifier efficiency factor be increased to 90%.

³¹ Based on staff's analysis, holding all else constant and applying a 90% efficiency factor reduces BellSouth's proposed rate from \$10.87 to \$10.69.

Cross-Connects (Cater)

This portion of the recommendation discusses the appropriateness of the recurring and non-recurring charges for cross-connects proposed by BellSouth, Sprint, and Verizon. Cross-connects are wires that run between the CLEC's collocation space and the ILEC's cross-connect frame or panel. Additionally, there can be cross-connects between two CLECs. (EXH 35, WBS-3, p.1; EXH 39, Revised JRD-2, p.33)

PARTIES' ARGUMENTS

BellSouth

BellSouth's cost study documentation explains that its monthly recurring cross-connect charges recover the recurring cost of terminating CLEC cables running from the CLEC's collocation space to the frame or panel. (EXH 35, WBS-3, pp.1-6) In discovery, BellSouth provided information regarding the assumptions it used in determining the utilization, or fill, rates for its cross-connect elements. While the utilization rates contained in the BellSouth Cost Calculator (BSCC) are confidential, they are supported by the information provided in discovery. (EXH 7, pp.13-14; EXH 34, WBS-1, Appendix H, pp.20-21, 23, 72-73, 104-105)

Except for assembly point arrangements, no party proposed any changes to BellSouth's proposed monthly recurring charges for cross-connects. (Gabel TR 884; EXH 43, SET-10, pp.2-14) Staff believes that these monthly recurring charges are reasonable, and recommends that they be approved subject to incorporating staff's recommended changes in all other applicable issues.

Monthly Recurring Charges for Cross-Connects in Assembly Point Arrangements

BellSouth witness Shell describes assembly point collocation as a method for CLECs to combine two network elements at a cross-connect point designated by BellSouth. In these arrangements, BellSouth provides the equipment required for accessing the UNEs, and the CLEC supplies the jumpers to connect the two elements. The CLEC cannot install any equipment in the assembly point area. BellSouth's assembly point collocation offerings are 2-wire, 4-wire, and DS1 cross-connects. (TR 239-240) The BSCC documentation shows that the costs of the assembly point frame, connecting block, cable, and cable rack are recovered through the monthly recurring costs for assembly point cross-connects. (EXH 34, WBS-1, Appendix H, pp.89-95)

AT&T witness Turner has concerns over BellSouth's proposed utilization rates for assembly point cross-connects, and its use of repeaters in the DS1 cross-connects in the assembly point arrangement. (EXH 43, SET-10, pp.1-2) AT&T witness Turner argues that while BellSouth proposes an 85 percent utilization rate for other types of cross-connects, it proposes a much lower utilization rate for assembly point collocation.³² He contends that since BellSouth engineers the assembly point frame, it should be engineered at the same level that BellSouth engineers its own frames. (EXH 43, SET-10, pp.1-2)

³² Staff notes that BellSouth's utilization rate for the assembly point frame is confidential. (EXH 37, WBS-1, Appendix H, pp. 89-90)

In discovery responses, BellSouth explains that while it assumes an 85 percent utilization rate for the main distribution frame, the assembly point frame is only used for terminating CLEC assembly point connections. The proposed utilization rate for the assembly point frame was developed by subject matter experts based on their estimate of the number of CLEC terminations. (EXH 8, p.208)

Staff agrees with BellSouth that since the assembly point frame is only used for terminating CLEC connections, it is reasonable to assume that an assembly point frame would have a lower utilization rate than the main distribution frame.

AT&T witness Turner also disputes BellSouth's use of repeaters with its DS1 assembly point cross-connect. He believes that this is contrary to the FCC's direction concerning repeaters. (EXH 43, SET-10, pp.1-2) He contends that BellSouth is utilizing repeaters for cabling distances of less than 655 feet. He believes that repeaters are only needed for cabling distances in excess of 655 feet. (EXH 43, SET-10, pp.1-2)

Regarding the use of repeaters in collocation arrangements, the FCC determined:

[A] repeater is only necessary to maintain the proper voltage level of an electronic signal when the length of cable between an interconnector's cage and the LEC's digital cross-connect bay exceeds 655 feet for DS1 and 450 feet for DS3. . . We therefore conclude that LECs may not recover from interconnectors that cost of repeaters within their central offices in connection with physical collocation arrangements. (FCC 97-208³³, ¶ 117)

BellSouth's cost study input files show that BellSouth's proposed cable length for DS1 cross-connects is significantly less than 655 feet. (EXH 34, WBS-1, Appendix H, p.94) While staff concedes that the FCC's order specifically refers to physical collocation, we believe that placing repeaters in BellSouth's cost study is inconsistent with the technical specifications in the FCC's Order; therefore, staff believes that it is inappropriate for BellSouth to include the costs of such repeaters in the DS1 assembly point cross-connect rate. Staff notes that BellSouth did not rebut witness Turner's testimony on this point, nor did BellSouth explain why it was using repeaters in its assembly point arrangements. Moreover, BellSouth has not provided an Assembly Point collocation arrangement in any state. (TR 399) Based on the FCC Order above, staff recommends that the repeater investment be removed from BellSouth's proposed rates for DS1 assembly point cross-connects.

Non-Recurring Charges

BellSouth's non-recurring charges for cross-connects recover the one-time costs associated with order processing, order coordination and physical connection of a network element and the physical collocation space. When cross-connects are purchased to access

³³ Second Report and Order, CC Docket No. 93-162, In the Matter of Local Exchange Carriers' Rates, Terms, and Conditions for Expanded Interconnection Through Physical Collocation for Special Access and Switched Transport, Order No. FCC 97-208, (Rel. June 13, 1997).

Date: July 22, 2004

BellSouth's network, the collocator is responsible for purchasing and installing the cables that run from its collocation space to the termination point on BellSouth's network. (EXH 35, WBS-3, p. 1)

Witness Turner contends that according to its interconnection agreement with BellSouth, AT&T is responsible, through an authorized vendor, for provisioning the cable, including tying the cables to the frame. While he believes that BellSouth's proposed charges are appropriate when it acts as the certified vendor for the CLEC, if the CLEC hires a vendor other than BellSouth, there would be a double counting of costs. AT&T witness Turner recommends that the provisioning costs be eliminated from the charge for the cross-connect elements. (EXH 43, SET-10, pp.3-15)

AT&T witness Turner explains that the costs he eliminated from BellSouth's collocation study were the costs that he believes BellSouth improperly included, which relate to extending the interconnection cables between the BellSouth frame and the CLEC frame. He believes that the BellSouth certified vendor is responsible for running the cable between the frame and the collocation arrangement. (TR 639-640)

BellSouth witness Shell responded to AT&T witness Turner's contention that the CLEC is responsible for the provisioning of the cross-connect. He explains that when a CLEC's vendor installs a cross-connect, the cross-connect would be terminated on the frame, and BellSouth would run a connecting wire. He further explains that the cross-connect element is actually placing the two wires together. He continues that BellSouth does not actually test the wire being put on the frame, but works with the provider to ensure that both parties are aware of exactly where the wires are terminated. (TR 399-401)

In discovery, BellSouth was asked to respond to AT&T witness Turner's statement that "[p]er the interconnection agreement language, the ALEC is responsible for the provisioning of the cable through an authorized vendor including tying the cables down to the frame." (EXH 43, SET-10, p.1) BellSouth responded that it agrees that AT&T is responsible for hiring a certified vendor to provision cable between the collocation space and the demarcation point. However, BellSouth did not agree that the "Connect and Test" component of the non-recurring charges should be eliminated. BellSouth's response points out that the proposed non-recurring charges are for cross-connects or jumpers that BellSouth installs related to service orders placed by CLECs to connect specific services to the CLEC's collocation space, and have nothing to do with a CLEC's own cable installation. (EXH 8, p.216)

Both parties agree that based on AT&T's interconnection agreement with BellSouth, AT&T is responsible for running the cable and tying it to the frame. AT&T witness Turner believes that based on this agreement language, BellSouth should not charge for any non-recurring costs for cross-connects. (EXH 43, SET-10, pp.1-14) Based on a discovery response from BellSouth, staff believes that BellSouth's proposed non-recurring charges are for the work it does on its side of the cross-connect in conjunction with a CLEC order, and are appropriate. Therefore, staff recommends that BellSouth be allowed to recover those costs.

Moreover, if AT&T witness Turner is correct, and AT&T's interconnection agreement with BellSouth provides that AT&T will do all the cross-connect installation work, it is still appropriate for BellSouth to have non-recurring charges for cross-connects. While AT&T's agreement may let it do all the installation work for cross-connects, BellSouth may have other agreements with other CLECs where BellSouth does some of the installation work on cross-connects; therefore, BellSouth's collocation rates should include non-recurring charges to recover those costs.

Sprint

Sprint witness Davis testifies that his company's cross-connect facilities include cross-connects between the CLEC's equipment and Sprint's equipment which allows the CLEC to provide local telephone services to its end-users, and CLEC-to-CLEC cross-connects. (TR 415) Sprint provides cross-connect options for 100-pair DS0, DS1, DS3 and 4-fiber optical connections. Internal cable space elements for fiber and copper entrance cable are also included in this category. Included in the cable space costs are portions of the manholes, conduit, vault, and infrastructure. Additionally, Sprint offers entrance cable elements in both 48-fiber and 100-pair copper for those collocators who wish to lease cable from Sprint. (TR 415)

In its cost study documentation, Sprint provides its definition of cross-connects along with the assumptions made in its cost study. Sprint's cross-connect offerings are categorized as either Electronic Cross-Connects (ECCs) or Optical Cross-Connects (OCCs). Sprint also proposes rates for co-carrier cross-connect (CCXCs) elements, which run from one CLEC's collocation arrangement to a non-contiguous collocation arrangement of another CLEC if there is no panel between them. Sprint's cross-connect rate elements contain both recurring and non-recurring cost elements. (EXH 39, Revised JRD-2, p.33)

Sprint's proposed cross-connect rates for ECCs and OCCs include the costs of cabling, either the main distribution frame (MDF) block or an allocated portion of Sprint's panels and relay rack, and termination of the cable at the MDF or panel. The cost of CCXCs includes only the costs of the cabling and not the costs of Sprint's relay rack, MDF, or panel. Some shared costs are allocated to all cross-connect elements. (EXH 39, Revised JRD-2, p.33)

In determining the components required for ECCs and OCCs, Sprint examined recent work activities. After determining these requirements, Sprint obtained a vendor price for each piece of equipment, and sales tax and freight costs were added to the price of the materials. For ECCs, the installation times were determined by recent work activities, while Sprint engineers determined the work times for OCCs. In order to account for unused capacity, utilization factors were applied to the DS1, DS3, and 4-fiber OCC elements. To determine the total investment for each element, the material costs, labor costs, freight, and taxes were added together. (EXH 39, Revised JRD-2, p.33)

For cross-connects terminating at Sprint's MDF or panels, Sprint applied an annual charge factor to the investment in order to determine an annual cost. Sprint also applied the common cost factor. These cross-connects are priced as monthly recurring charges. (EXH 39, Revised JRD-2, p.34) Sprint prices CCXCs as non-recurring charges, with recurring charges for

annual expenses. Sprint also applies its common cost factor to both the monthly recurring and non-recurring charges associated with these elements. (EXH 39, JRD-2, pp.34, 37, 40, 43, 46) These elements only recover the cost of cable investment, while for standard cross-connects, Sprint recovers the total cost of the cable and the connection. (EXH 39, Revised JRD-2, pp.93-94)

Staff witness Gabel testifies that based on his comparison of Sprint's proposed work times for provisioning copper cable for DS0 cross-connects to those proposed by Verizon, he believes that Sprint's proposed times are unreasonable. He recommends that Sprint be ordered to recalculate its provisioning costs based on the work times proposed by Verizon. (TR 883-884)

While Sprint witness Davis and staff witness Gabel disagree over the appropriate work times, Sprint has agreed in its brief to allow CLECs to hire certified vendors to do collocation work in central office common areas.³⁴ In its brief, Sprint indicates that following this Commission's Order in the policy phase of this proceeding,³⁵ Sprint re-evaluated its policies concerning CLECs working in its central offices and adopted BellSouth's practice. This policy change caused Sprint to adjust some of its proposed recurring and non-recurring costs, including the elimination of the non-recurring costs for cross-connects and the reduction of its ACFs to reflect only the cost of removal. As a result of this policy change, Sprint's brief provided cost study modifications so that the cross-connect collocation rates now will only recover the costs of cable racking, engineering, and removal. (Sprint BR at 7-12) Based on Sprint's policy change, the work times issue appears to be moot.

Other than staff witness Gabel's concerns over Sprint's proposed work times, there is no dispute concerning the appropriateness of Sprint's proposed non-recurring rates for cross-connect elements. With Sprint's adoption of BellSouth's practice of allowing certified vendors to perform work in common areas, witness Gabel's concerns appear to be alleviated. Therefore, staff recommends that Sprint's proposed cross-connect elements be approved as modified in Sprint's post-hearing brief, subject to incorporating staff's recommended changes in all other applicable issues.

Verizon

Verizon refers to its cross-connect rate elements as facility pull and termination. Included in the facility pull element is the cost of running the interconnection wire from the CLEC's collocation cage to the block or panel. (EXH 45, BKE-1, p.15) Verizon developed separate termination rates for DS0, DS1, and DS3 cable. The length of the wire pull is based on the proximity of the collocation cage to Verizon's point of termination and the type of

³⁴ Staff notes that in his testimony summary, Sprint witness Davis indicates that Sprint is modifying its policy concerning CLEC hired certified contractors performing collocation work in central office common areas, but the details of Sprint's modified proposal are contained in its post-hearing brief. (TR 463-464, Sprint BR at 7-12)

³⁵ Order No. PSC-03-1358-FOF-TP, issued November 26, 2003, Docket No. 981834-TP, In re: Petition of Competitive Carriers for Commission action to support local competition in BellSouth Telecommunications, Inc.'s service Territory.; Docket No. 990321-TP, In re: Petition of ACI Corp. d/b/a Accelerated Connections, Inc. for generic investigation to ensure that BellSouth Telecommunications, Inc., Sprint-Florida, Incorporated, and GTE Florida Incorporated comply with obligation to provide alternative local exchange carriers with flexible, timely, and cost effective collocation.

interconnection required, which varies among central offices. The times involved in pulling and terminating cable are predicated on activity-based time estimates. (EXH 45, BKE-1, p.15)

Monthly Recurring Costs

Verizon proposes monthly recurring facility termination costs on the DS0, DS1, and DS3 levels. Verizon's proposed rates are calculated by taking the total installed investment and multiplying it by an annual charge factor to determine the total annual cost of the facility termination. The annual cost is divided by 12 to provide the monthly cost. The rate is determined by taking the monthly cost of the element and multiplying it by the fixed allocator. (EXH 45, BKE-1, pp.39, 201-207)

Based on the information provided, staff believes that Verizon's approach to developing the recurring costs for its facility termination elements is reasonable and recommends the adoption of Verizon's proposed rates subject to staff's recommended changes in all other applicable issues. Moreover, staff notes that no party challenged these costs.

Non-Recurring Costs

While AT&T did not provide any evidence directly relating to Verizon's non-recurring charges for cross-connects, AT&T's position can be inferred from the exhibits to AT&T witness Turner's rebuttal testimony. In witness Turner's re-statement of Verizon's collocation rates utilizing the BellSouth Cost Calculator, AT&T does not show any proposed non-recurring rate for any of the cross-connect elements. (EXH 43, SET-9 Revised, pp.1-4) In the exhibit containing witness Turner's proposed adjustments to the BSCC, there is an adjustment to reduce each of the non-recurring work times for cross-connects to zero. He suggests that since AT&T's interconnection agreement with BellSouth requires AT&T to provision the cable through a certified vendor, CLECs should not be charged for the installation of cross-connects. (EXH 43, SET-10, pp.1-15)

Verizon witnesses Bailey/Ellis explain that Verizon provides cross-connect facilities and installs and terminates these cables. They testify that since Verizon is ultimately responsible for its central offices, it ". . . should be allowed to maintain direct responsibility for any work that could put at risk the safety of workers or the reliability of the network outside the walls of an ALEC's cage." (TR 715) The witnesses argue that allowing outside vendors to work on Verizon's network has the potential of negatively impacting the network since no party would have the ultimate responsibility for reacting to service outages and damage caused by certified vendors. (TR 716) Additionally, they point out that if a service outage is caused by either Verizon or one of its vendors, it is Verizon who has to explain what happened to the FCC and to this Commission. They believe that this requirement could become onerous if vendor activity on behalf of the CLECs increases the number of outages that must be reported to the FCC. (TR 716)

Witnesses Bailey/Ellis contend that it would be inconsistent with the FCC's collocation rules to allow CLECs to engineer their own cross-connect cables, since it would allow them to determine the cable rack assignment and termination locations throughout the central office, potentially affecting the operations of Verizon and other CLECs. The witnesses point out the

FCC has made it clear that the ILEC is ultimately responsible for assigning space within its premises.³⁶ The witnesses believe the “space” is not only floor space but also includes cable rack and relay rack space. (TR 716-717)

Witnesses Bailey/Ellis assert that if CLECs are allowed to engineer and install their own cable, some rules should apply. First, only vendors certified by Verizon to perform work outside of CLEC collocation cages may engineer, furnish, and install cables. The vendors must also perform work to the same standards that Verizon requires for the same type of work. (TR 718) Before performing work that could impact carriers other than the CLEC ordering the work, the vendors must consult with Verizon engineers, and the CLECs must compensate Verizon for the consultation and supervision time. The vendors must only install NEBS³⁷-approved equipment and cable. Verizon may also require the CLEC and vendor to be jointly and severally liable for any damage done by the contractor while he is working for the CLEC. Additionally, if Verizon has limited control over the CLEC vendor’s work, Verizon would have to reconsider its collocation intervals. (TR 718-719)

On cross-examination, witness Bailey testifies that while Verizon generally uses its own staff for central office cabling to the battery distribution fuse bay (BDFB), it would use an approved vendor if there was a shortage of workers. (TR 772) The reason he objects to CLECs hiring certified vendors to work on Verizon’s network is that if the CLEC hires the vendor, the vendor is accountable to the CLEC, not Verizon. He points out that Verizon is accountable to regulatory bodies and the entire body of network users to make sure that the network is working properly. He notes in an area of diffused responsibility, if something happens, Verizon does not have recourse with the vendor. He asserts that Verizon would have structured its network differently if it were going to be required to let CLEC-hired certified vendors work on its network. (TR 773)

It appears that the only dispute concerning Verizon’s proposed collocation rates for cross-connects concerns the non-recurring costs. The dispute is over whether or not certified vendors should be allowed to install the cross-connects as BellSouth allows CLECs to do. While AT&T provides no specific testimony on this issue, it appears witness Turner believes Verizon should allow certified vendors to install cross-connects for CLECs.

Verizon witnesses Bailey/Ellis argue that since their company is ultimately responsible for assigning collocation space, it should not be required to allow CLECs to hire certified vendors to install cross-connects. The FCC Order cited in Verizon’s testimony states:

. . . Ultimately, it is the incumbent who will be responsible for planning and maintaining the premises for the benefit of all users – the incumbent, its affiliates and subsidiaries, and other collocators. Allowing requesting carriers to exercise primary decision-making authority over space assignment decisions would give those carriers the ability to usurp an incumbent LEC’s right to manage its own

³⁶ Fourth Report and Order, CC Docket No. 98-147, In the Matter of Deployment of Wireline Services Offering Advanced Telecommunications Capability, Order No. FCC 01-204, (Rel. August 8, 2001), ¶¶ 90-91.

³⁷ Network Equipment Building System (TR 756)

property. Such a result would go beyond the limits established by the statute. (FCC 01-204, ¶ 91)

Staff believes that while this text clearly refers to the assignment of space in physical collocation arrangements, we are uncertain as to whether or not it also applies to the space for the cable rack and relay rack. (FCC 01-204, ¶¶ 85-97)

Staff believes that the prevailing federal regulation on this issue is contained in 47 C.F.R. 51.323(j) which reads:

An incumbent LEC shall permit a collocating telecommunications carrier to subcontract the construction of physical collocation arrangements with contractors approved by the incumbent LEC, provided, however, that the incumbent LEC shall not unreasonably withhold the approval of contractors. Approval by an incumbent LEC shall be based on the same criteria it uses in approving contractors for its own purposes.

In the policy phase of this proceeding, there was a discussion of this passage as it relates to the payment of non-recurring charges for collocation space. In that phase, this Commission ordered that “[a]n ILEC shall permit a CLEC to subcontract the construction of its collocation space with contractors approved by the ILEC, . . .” (Order No. PSC-03-1358-FOF-TP, issued November 26, 2003, Docket No. 981834-TP, In re: Petition of Competitive Carriers for Commission action to support local competition in BellSouth Telecommunications, Inc.’s service territory.; Docket No. 990321-TP, In re. Petition of ACI Corp. d/b/a Accelerated Connections, Inc. for generic investigation to ensure that BellSouth Telecommunications, Inc., Sprint-Florida, Incorporated, and GTE Florida Incorporated comply with obligation to provide alternative local exchange carriers with flexible, timely, and cost efficient collocation., p.15)

Sprint subsequently requested clarification of the portion of Order No. PSC-03-1358-FOF-TP that concerns CLEC hired certified vendors working outside the CLEC’s collocation space. In its Order on various motions for reconsideration and clarification of Order No. PSC-03-1358-FOF-TP, the Commission stated:

Nevertheless, we agree that parties should not be precluded from negotiating terms that would allow certified vendors to work outside the CLEC collocation areas, and the record reflects that this is BellSouth’s current practice. Our decision was that the use of certified vendors shall be in accordance with FCC rules, and this language is clearly reflected in the Order. We also note that the FCC rule on point, Rule 51.323(j), upon which our decision is based, does not specify the area in which a CLEC certified vendor may work. (Order No. PSC-04-0228-FOF-TP, issued March 2, 2004, Docket No. 981834-TP, In re: Petition of Competitive Carriers for Commission action to support local competition in BellSouth Telecommunications, Inc.’s service territory.; Docket No. 990321-TP, In re. Petition of ACI Corp. d/b/a Accelerated Connections, Inc. for generic investigation to ensure that BellSouth Telecommunications, Inc., Sprint-Florida, Incorporated, and GTE Florida Incorporated comply with obligation to provide

alternative local exchange carriers with flexible, timely, and cost efficient collocation., p. 6)

In its brief, Verizon argues that this Commission determined that “. . . ILECs may, but are not required to, allow CLECs to contract with ILEC-approved vendors to pull and terminate power and facility cables.” (Verizon BR at 11-12) Verizon believes that this Commission’s decision in the policy phase is appropriate, arguing that either using contractors or one’s own employees to pull and terminate cables are both sound business decisions, and Verizon should not be forced to replace its own decision with BellSouth’s. (Verizon BR at 12-13) Verizon concludes in its brief that it believes the Commission should affirm its ruling in the policy portion of this proceeding. However, if it chooses to overrule that decision and require Verizon to allow CLECs to contract directly with approved vendors, the Commission should impose the guidelines provided in the testimony of witnesses Bailey/Ellis in order to protect Verizon’s network. (Verizon BR at 14)

Staff believes that while this Commission’s policy decision does not preclude ILECs from allowing CLECs to hire certified vendors to work outside of their collocation space, it does not require ILECs to do so. While Sprint voluntarily decided to modify its policy to allow a CLEC’s certified vendor to work outside of a collocation area, nothing in the order on reconsideration and clarification requires Verizon to do so. Therefore, staff believes that Verizon is not required to allow CLECs to hire certified vendors to install cross-connects. However, staff believes that it is logical for CLECs to purchase and install cables from its collocation space to the termination point on an ILEC's network. Staff would encourage Verizon in its efforts to develop procedures, as BellSouth and Sprint have done, to allow such a practice.

Staff recommends that Verizon’s monthly recurring cross-connect rates be approved as filed by Verizon in its revised cost study. Additionally, staff believes that Verizon’s proposed NRCs for cross-connects are appropriate as filed in its revised cost study.

CONCLUSION

BellSouth

Staff recommends that BellSouth’s proposed non-recurring work times be accepted as the appropriate input into the collocation model. For physical, virtual, and adjacent collocation elements, BellSouth’s proposed monthly recurring costs are appropriate to use as input into the collocation model. For assembly point collocation, staff recommends that the cost for repeaters be removed from BellSouth’s proposed monthly recurring collocation rates, while its non-recurring charges remain as filed.

Sprint

Staff recommends that Sprint’s proposed collocation elements be approved as filed, with the modifications for allowing CLECs to hire certified vendors as provided in its post hearing brief.

Verizon

Staff recommends that Verizon's monthly recurring cross-connect rates included in its revised cost study be approved as filed. Additionally, staff believes that Verizon's proposed NRCs for cross-connects are appropriate as filed in its revised cost study.

Security Charges (King)

This issue addresses the various security charges assessed by the ILECs, which include costs for access card systems. As with prior elements, the ILECs' security elements and cost recovery methods vary. For example, unlike BellSouth and Sprint, Verizon allocates some of its security costs based on the average number of collocators rather than on per square foot of floor space.³⁸

Both AT&T witness Turner and staff witness Gabel raise issues regarding the security costs presented. Witness Turner focuses on several aspects of the BellSouth study, while staff witness Gabel presents some testimony on each of the ILEC's security costs. Staff will present the witnesses' concerns by company, beginning with those specific to BellSouth.

BellSouth

AT&T witness Turner has four concerns regarding BellSouth's security charges. First, witness Turner believes that there is a contradiction in BellSouth's Security Access System - New Access Card Activation times. (TR 565) He notes that BellSouth proposed a reasonable total activation time of 1.0 hour for the activation of five cards which yields 0.2 labor hours per card. (Turner TR 565-566) However, he contends that BellSouth does not use this value in its cost study; instead, BellSouth does several calculations to develop a value of 0.8583 labor hours per card. The witness recommends that 0.2 labor hours per card is more reasonable and should be used in the study. (TR 566)

Second, witness Turner contends that BellSouth has a higher cost to replace a lost security card than to initially provide one. (TR 566) He argues that replacement of a card should not take longer than providing a new card; instead, the replacement of a security card should cost less. The AT&T witness recommends that the Commission modify BellSouth's cost for replacing a security card to be the same as that for initially providing it. (TR 566)

Third, witness Turner contends that BellSouth has provided no support for its Security Key costs. He notes that based on his experience, the forward-looking choice for security is the use of a key card; however, he acknowledges that there are many instances where smaller central offices are secured using other mechanisms. (TR 566) Nevertheless, the witness recommends that the Commission set the Security Key costs equal to those for the Security Card to be consistent with TELRIC, particularly in light of BellSouth's failure to provide support for the times or costs associated with the Security Key. (TR 566-567)

Last, witness Turner believes BellSouth's security measures are discriminatory. (TR 583-584) The witness believes that the card reader and new barrier walls that BellSouth is imposing in its Space Preparation rate element are unnecessary and inconsistent with FCC guidelines on the costs for security. He states that the FCC's Advanced Services Order requires that BellSouth not impose a security requirement on CLECs for collocation that is any more stringent than what

³⁸ Verizon's security charges are included in its building modification rate. Therefore, staff will address Verizon's security charges later in this recommendation.

BellSouth imposes on its own employees or authorized contractors. (TR 583) The witness notes that based on his experience, in central offices where card readers exist, they are used by all of the personnel entering the central office, including the incumbent's employees and authorized contractors that have a need to enter critical areas of the incumbent's central office. The witness argues that in proposing its Space Preparation element BellSouth has incorporated significant additional security costs for collocators to be included in the costs for collocation. In effect, he believes that BellSouth has assumed that it must have expensive new card readers, barrier walls, and other security related costs that the collocator must pay for exclusively. (TR 583-584)

According to BellSouth witness Shell, none of witness Turner's recommendations regarding security access labor times have merit. (TR 266) First, witness Shell notes that witness Turner apparently overlooks that both labor times (0.8583 and 0.2) for new card activation are used in the study. The 0.2 labor hours are for the customer contact person to verify contractual status for billing and provisioning purposes and to ensure that the order is placed. The 0.8583 labor hours are for contract labor to administer the ordering, programming and distribution of access cards. (Shell TR 266; EXH 8, pp.179, 240) Witness Shell maintains that each is a valid and appropriate work time that applies to the labor involved in two different functions. (TR 266)

Second, witness Shell contends that witness Turner is mistaken in his belief that the charge BellSouth proposes to replace a security card is greater than the charge to initially provide a security card. (TR 266) The rate for new card activation is \$38.95 and the rate for a replacement card is \$28.78. Therefore, witness Shell argues that no change is required. (EXH 8, p. 241)

Third, with regard to witness Turner's recommendation that Security Key costs should change, witness Shell states: "Again, Mr. Turner is mistaken." (TR 266-267) BellSouth did provide support for the Security Key study. Furthermore, there are cases when keys will be required in the future. For example, there could be a need for internal keys (keys to gain access to secure areas inside a central office) and to access secure gateways. In addition, the FCC, in the Advanced Services Order³⁹, paragraph 48, made clear that ILECs can recover reasonable security costs. Hence, witness Shell argues that Security Key costs are appropriate in a TELRIC study. (Shell TR 267)

Last, regarding AT&T's claim that BellSouth's security practices are discriminatory, witness Shell notes that witness Turner "appears to be very confused as to what BellSouth is proposing for the space preparation cost element." (TR 293) BellSouth's space preparation - central office modification element recovers the costs associated with the building design, construction and modification work associated with preparing a central office space for collocation, such as heating, ventilation, and air conditioning. (Shell TR 293) To develop this forward-looking investment, BellSouth started with final investment data from actual projects over a certain time period. Costs that would not apply on a forward-looking basis, such as barrier walls, were backed out. (Shell TR 293-294) Witness Shell contends that the items

³⁹ CC Docket No. 98-147, Development of Wireline Services Offering Advanced Telecommunications Capability. Order No. 99-48, released May 31, 1999.

witness Turner highlighted in his testimony (i.e., cage cost set fee, barrier wall, and card reader) were specifically backed out of the study where they may have been included in the actual projects. (TR 294) As such, witness Shell believes this should resolve witness Turner's concern.

As noted above, staff witness Gabel also addressed security costs. With regard to BellSouth, witness Gabel noted that he initially determined how BellSouth calculated⁴⁰ its security investment and that he agreed with BellSouth's methodology. The witness contends that while he had not independently validated the cost of the security system modeled, or the average assignable square footage of a CO, the resulting costs per square foot appear to be reasonable. (TR 875)

Staff believes that witness Turner has drawn some erroneous conclusions regarding BellSouth security inputs. First, regarding witness Turner's allegation that BellSouth's cost study has conflicting labor time inputs (i.e., 0.2 and 0.8583), staff has reviewed the BellSouth study and, as BellSouth witness Shell claims, both labor times are used in the study - - for two different functions. (EXH 36) Second, witness Turner contends that it is inappropriate for BellSouth to charge more to provide a replacement card than the cost to initially provide the card. However, as BellSouth witness Shell notes, the rate to provide the initial card is \$38.95, and the rate to provide the replacement card is \$28.78; as such, witness Turner's allegation is incorrect. Moreover, the AT&T witness acknowledged on cross-examination that BellSouth does charge more for the initial card than for the replacement card. (TR 592)

Third, with regard to Security Key costs witness Turner made three points: 1) keys are less advanced technology and are not TELRIC-compliant; 2) BellSouth has provided no support for its Security Key costs; and 3) the Commission should set the Security Key costs equal to those for the Security Card to be consistent with TELRIC. (TR 566-567) Staff again believes witness Turner's analysis may be flawed. First, while the AT&T witness believes keys are not forward-looking and the prevailing choice for security is a key card system, he acknowledges that there are many instances where smaller central offices are secured using other mechanisms. (TR 566) The witness does not identify what those other mechanism are but, if staff were to speculate, it is probably keys. BellSouth witness Shell also stated that security keys will be required in some future cases. Second, with regard to witness Turner's contention that BellSouth did not provide support for this element, it is unclear to staff what witness Turner means by "support." Staff reviewed the cost study and found documentation which identified the labor times, workgroups, and descriptions of what those workgroups do in processing a Security Key request. Last, if staff is correctly understanding witness Turner's recommendation that the Commission set the Security Key costs equal to those for the Security Card, the result would be a rate increase. BellSouth's rate for an initial Security Key (element H.1.54) is \$23.28, and the rate for an initial Security Card (element H.1.38) is \$38.95. (EXH 35)

With regard to witness Turner's last contention, that BellSouth's security practices are discriminatory, staff also believes that the AT&T witness is confused as to what BellSouth is proposing. Specifically, witness Shell maintains that the items witness Turner highlighted in his

⁴⁰ BellSouth divided the cost of a two card reader security access system by the average assignable square footage of a CO. (Gabel TR 875)

testimony (i.e., cage cost set fee, barrier wall, and card reader) were specifically backed out of the study, even if they may have been included in the actual projects. (emphasis added) (TR 294) Accordingly, it appears that witness Turner's allegation of discrimination is unfounded.

BELLSOUTH CONCLUSION

Staff agrees with witness Gabel, based on the analysis above, that BellSouth's security charges are reasonable. (TR 875) Accordingly, staff recommends that BellSouth's security charges should be approved as filed subject to incorporating staff's recommended changes in all other applicable issues.

Sprint⁴¹

With regard to Sprint's security investment, witness Gabel notes that Sprint calculated this investment based on a sample of recent security additions in its COs throughout the country. Witness Gabel contends that of the 48 observations in the sample, only 2 are Florida specific. (TR 877) Moreover, he notes that Sprint made no claim that its sample is representative of the population in its Florida COs. In addition, the witness contends that there are significant variations in the per square foot cost Sprint derives from its study. (TR 877) Combining this with Sprint's proposed rate leads witness Gabel to question the reasonableness of Sprint's proposal,⁴² especially when compared to BellSouth's proposed per square foot security costs. (TR 877-878) Sprint proposes to charge a MRC for security of roughly \$.70 per square foot compared to BellSouth's rate of \$ 0.0125 per square foot.

In response to witness Gabel's criticisms regarding Sprint's 48 observations, Sprint revised its analysis to include only Florida offices. (Davis TR 446) Sprint witness Davis explains that the overall average investment per square foot for the Florida security systems is \$2.63, while the overall average investment per square foot for security systems used in Sprint's study is \$2.92. (TR 446) The witness maintains that this difference in cost does not have a material effect on Sprint's rate for floor space because Sprint spreads the cost of the security system enhancement over the total usable square footage in the central office. (TR 446) The security additive accounts for less than 2 percent of Sprint's floor space rate; the difference of \$.29 per square foot between the Florida-specific security systems versus the security systems used in the study accounts for a difference of less than 2 tenths of one percent (0.2%) in Sprint's floor space rate. Sprint did, however, revise its security costs to include only the Florida specific data as recommended by staff witness Gabel. (David TR 446) This resulted in a decrease in the floor space rate from \$9.65 to \$7.87. (TR 451)

With regard to Sprint's security additive of \$.70, witness Davis notes that witness Gabel's calculations are incorrect. Specifically, witness Davis contends that in order to arrive at a monthly recurring charge, the analyst must divide the annual charge by twelve, which witness Gabel did not do. (TR 446) Therefore, witness Gabel should have reported \$0.70 divided by 12 or \$ 0.058 per square foot compared to BellSouth's \$0.0125 per square foot. Once the

⁴¹ Witness Gabel is the only witness that addressed Sprint's security costs.

⁴² While witness Gabel has concerns regarding the rates, he notes that "I agree with Sprint inasmuch as it has proposed to recover security costs as part of the recurring rate for floor space." (TR 877)

calculation is corrected, the Sprint witness believes that he can explain why there is still a difference between Sprint's and BellSouth's cost per square foot for security systems. Specifically, he notes:

. . . if you take BellSouth's MRC cost and back into an investment per square foot using BellSouth's ACF for buildings, you arrive at \$.77 per square foot ($$.0125/.1936 * 12$ months per year). The average security investment per square foot in Sprint's larger buildings is comparable to BellSouth's cost. As shown on Exhibit JRD-4, BellSouth has much larger central office switching centers/buildings than Sprint. Sprint simply does not have the same economies of scale as does BellSouth. (TR 446-447)

SPRINT CONCLUSION

Staff believes that Sprint's adjustment to its security costs is reasonable and reflects costs which are incurred in Sprint's Florida COs. In addition, it appears that witness Gabel's concerns regarding Sprint's security additive are essentially moot based on the information provided by Sprint witness Davis. Therefore, staff recommends that Sprint's security costs be approved as revised in its filing, subject to incorporating staff's recommended changes in all other applicable issues.

Cage Construction (King)

This issue addresses the cost of cage construction for physical collocation. Staff will begin by addressing BellSouth's elements first.

BellSouth

BellSouth has two cage construction elements. The first is Physical Collocation - Welded Wire Cage - First 100 Square feet (H.1.23). This element has a recurring rate associated with BellSouth constructing the first 100 square feet of welded wire cage/enclosure for the collocater's equipment arrangement. This element is optional because a collocater can have a certified contractor build its enclosure. The recurring cost includes the material, engineering and installation. The second element is Physical Collocation -Welded Wire Cage – Additional 50 Square feet (H.1.24). This element also has a recurring rate that is associated with BellSouth constructing an additional 50 square feet of welded wire cage enclosure at the same time that the first 100 square feet is constructed. This element is also optional and includes the cost of materials, engineering and installation. (EXH 35, WBS-3, p.1)

AT&T witness Turner believes that BellSouth's cost estimates for constructing a 100 square foot collocation cage and a 50 square foot addition are greatly overstated.⁴³ (TR 579) He claims the rates should be modified based on data contained in R.S. Means. He notes that R.S. Means is a guidebook used throughout the construction industry to estimate the cost of construction projects in a variety of areas. (TR 579-80) The witness contends that the fundamental problem with the construction costs BellSouth has presented is that they are significantly higher than those contained in an independent, verifiable source (i.e., R.S. Means). He argues that in a competitive environment, there would be no reason for BellSouth to use construction costs that are significantly higher except for the fact the CLECs are a captive customer who must acquire space within BellSouth's central office for interconnection. The witness asserts: “. . . if the cage construction costs go out of line with R.S. Means, they should not be relied upon at all.” (Turner TR 580)

Witness Turner used R.S. Means to develop an alternative cage construction cost.⁴⁴ Specifically, the witness used R.S. Means to restate all of the cost components for which there was a directly comparable element in R.S. Means. (TR 580) For example, in its study BellSouth used 30 foot “welded mesh panels” in the construction of a 100 square foot cage. R.S. Means provides the cost for woven wire mesh partitions that come in a panel form just as are used in collocation arrangements. (TR 580) He notes that ILECs such as Pacific Bell and Southwestern Bell have used this method to estimate costs for partitioning material in a collocation arrangement. (Turner TR 580) Based on an eight-foot high wire mesh partition, the cost per

⁴³ BellSouth's rates for Welded Wire Cage – First 100 sq. ft. is \$189.73 and for Welded Wire Cage-Additional 50 sq. ft. is \$18.61. Witness Turner's proposed rates are \$92.86 for 100 sq. ft. and \$10.73 for an additional 50 sq. ft. (EXH 43)

⁴⁴ Witness Turner notes that he used the same approach in developing the incremental cost for a 50 square foot addition. Witness Turner contends that, as with the 100 sq. foot cage, the cost difference results primarily from the cost for the partitioning. (TR 582)

linear foot in Florida is \$29.80, while BellSouth's cost per linear foot is significantly higher at \$74.87. (TR 580-581) The witness maintains that it is unreasonable for BellSouth's cost for this element of constructing a collocation cage to be 151 percent higher than an independent source for constructing the same element. (TR 581) The table below summarizes witness Turner's suggested changes.

Element	BellSouth Cost	Joint Sponsors Cost	Restatement Source
Welded Wire Mesh Enclosure	\$2,246.00	\$885.77	R.S. Means
Swinging Door and Lockset	726.00	525.60	R.S. Means
Dust Protection	478.00	0.00	Engineering Experience
Electrical Work	336.00	481.84	R.S. Means
Electrical Grounding	1558.00	890.33	R.S. Means
Signage	132.00	132.00	None
General Conditions	433.00	0.00	Included in R.S. Means
Contractor's Fee	709.00	0.00	Included in R.S. Means
Architectural/Engineering Fee	1059.00	1059.00	None
Project Management Fee	529.00	529.00	None
Total	\$8,206.00	\$4,503.54	

(Source: Turner TR 581; EXH 43, SET-6)

Witness Turner noted that he eliminated the costs of the dust partition because based on his experience, there is virtually no dust created with this type of work. (TR 581) He argues that the main source of dust is the drilling that would be required for securing the partitions to the floor; however, the witness stated he directly observed Lucent Technologies personnel installing framing material in telecommunications lineups that required drilling, and they did not install a dust curtain. Dust partitions were not required because the drills have a vacuum that captures the dust that is caused at the time of drilling so that the expense of installing the dust curtain is eliminated. (TR 581-582)

BellSouth witness Shell begins his rebuttal by noting that the construction of the collocation cage can be done by a certified vendor, instead of BellSouth, if the CLEC chooses. (TR 294) However, he argues if BellSouth does construct the cage, it should be able to recover its costs. Witness Shell believes that witness Turner is stating that the investment is not correct because he can find a way to show that a lower investment number can be developed. (TR 294) Witness Shell contends that the R.S. Means publication simply estimates construction costs based on past construction jobs and at best can only be described as an estimator. The investment numbers used by BellSouth for cage construction are based on actual contractor quotes and actual prices from manufacturers. BellSouth contends that it is better to use actual data rather than manipulate a national average investment. (Shell TR 294)

Specifically regarding the removal of the dust partition costs, witness Shell notes that he believes the AT&T witness supports his position regarding removal of the dust partition primarily on his observation of Lucent Technologies personnel installing framing equipment.

(TR 295) Witness Shell contends that Lucent is not a good choice for comparison, because Lucent is an equipment installer and equipment installation does not typically create dust. (TR 295) The witness emphasizes that cage construction does create dust, and therefore it is appropriate for BellSouth to include the dust partition in its cost study. (TR 295)

Staff notes that, as stated by BellSouth, this element is optional, and a CLEC may contract directly with a BellSouth certified vendor for this service. (TR 294) Through the discovery process staff asked AT&T several questions regarding the viability and benefits (if any) of contracting directly with a certified vendor instead of BellSouth. (EXH 5, pp.38-39, 91) AT&T provided responses that indicate it never uses BellSouth for construction of its cages because using a certified vendor is a more economical option that cuts out the middleman. Specifically, AT&T provided the following responses:

Yes. BellSouth chooses a vendor from the same list that is available to AT&T for installing a cage. The difference is that AT&T can shop for the best price versus quality without involving a middleman. (EXH 5, p.38)

AT&T uses a certified vendor 100% of the time to construct all physical caged and cageless sites located in BellSouth central offices in Florida. . . . AT&T has always chosen a certified vendor. The competitive bidding process has naturally made the use of a certified vendor a more economical option for CLECs. (EXH 5, p.91)

Staff also asked AT&T if the charges assessed by the certified vendor were less than those being proposed by BellSouth in this proceeding. AT&T responded that “this type of analysis has never been completed.” (EXH 5, p.91)

Even though this is an optional element that may or may not be purchased by CLECs, staff, like AT&T witness Turner, reviewed BellSouth’s proposed costs. First, staff disagrees with witness Turner’s recommended changes based on the values obtained from R.S. Means. Staff believes that R.S. Means is a valuable tool for estimating costs when actual cost data are absent, but when used, the correct data should be extracted. Witness Turner appears to have ignored BellSouth’s actual data, and when he used R.S. Means as a surrogate, it is unclear if he used data specific to telecommunications.⁴⁵ (TR 607) Specifically, witness Turner testified that he performed the same sort of analysis in Florida that he did in Georgia for his testimony in Docket 14361-U. (TR 607). The witness acknowledged that he testified in Georgia that in his analysis he “use[d] other parts of R.S. Means that are more general than just telecommunications applications.” (TR 610) Under cross-examination in Florida, witness Turner admitted that he used non-telecommunications data from R.S. Means for the cage construction element. (TR 610-611) In its brief BellSouth notes that the Georgia Commission rejected witness Turner’s advocacy of this same approach in Docket 14361-U.⁴⁶ (BellSouth BR at 31)

⁴⁵ Moreover, the witness obtained costs for a woven wire mesh cage while BellSouth costs welded wire. Staff does not believe this is an apples-to-apples comparison of cage construction materials; therefore, witness Turner’s information does not appear to be a valid comparison of costs for many reasons.

⁴⁶ At the conclusion of the hearing, the Commission took official recognition of two Orders issued by the Georgia Commission, “Order Establishing Cost-Based Rates” (Docket Number 7061-U, issued December 16, 1997) and “Order” (Docket Number 14631-U, issued June 24, 2003). (Tr. 302). The Georgia Commission declined to use R.S. Means in both of these Orders.

BELLSOUTH CONCLUSION

For the reasons expressed above, staff believes AT&T witness Turner's proposal should be rejected. Staff notes that no other party challenged BellSouth's cage construction costs. In addition, this is an optional element in that a CLEC may contract directly with a BellSouth certified vendor for this service. (TR 294) As supported by the record in this proceeding, working directly with a certified vendor appears to be a viable option for the CLECs. Therefore, staff recommends that BellSouth's costs for cage construction be approved as filed subject to incorporating staff's recommended changes in all other applicable issues.

Sprint

In its filing Sprint proposed specific security cage enclosure charges.⁴⁷ However, at the hearing, Sprint witness Davis stated that subsequent to and as a result of the Commission's decision in Phase I of this proceeding, Sprint had reevaluated its policies regarding the work that CLECs can perform in Sprint's central offices. (TR 463-464) Specifically, as does BellSouth, Sprint will now allow CLECs to employ Sprint certified contractors to perform collocation work in CO common areas instead of Sprint performing this work. As a result of this policy change, the CLEC may contract directly with a certified contractor for the construction of its collocation cage. (TR 463-464; Sprint BR at 8-10) Accordingly, Sprint proposes to eliminate the costs associated with cage construction activities from its price list. Therefore, the only rates applicable to cage construction are the charges for engineering.⁴⁸ (Sprint BR at 8-10)

Staff believes Sprint's policy change is reasonable and beneficial to the CLEC community. (EXH 5, pp. 38-39, 91) Therefore, staff recommends that the Commission approve this policy change. However, since the engineering charge remains, and staff's recommendation on this issue may not be accepted, staff will address Sprint's cage construction elements as presented in Sprint's cost study.

Staff witness Gabel was the only witness to address Sprint's cage constructions costs. In his testimony witness Gabel explained that Sprint used a sample of recent work activities to estimate the cost per linear foot of constructing a basic collocation cage. (TR 878) Witness Gabel believes the estimates derived from Sprint's study are suspect because Sprint's sample size of approximately nine observations is too small to conclude with reasonable certainty that the results are statistically significant, especially given the high variance of both work times for like activities, and for material costs. (TR 879) Witness Gabel also had concerns regarding Sprint's proposed engineering times. He explains that there appears to be a problem because engineering accounts for a significant portion of the cost of a cage, even though there is little if any

⁴⁷ Sprint's security cage enclosure allows the CLEC to segregate its equipment from other CLECs. The enclosure typically consists of an 8 foot tall chain link fence with a roll gate. For safety purposes the cage must be grounded via a ground bar. (EXH 39, JRD-2, p.15) A sample of recent work activities was studied to determine the cost of the basic cage construction per linear foot. An engineering charge is also applied as a fixed fee. Engineering was also determined from the cage construction work activity sample. (EXH 39, JRD-2, p.15)

⁴⁸ Sprint's proposed rate for security cage engineering is a NRC of \$688.54. (EXH 39, JRD-2, p.5)

relationship between the engineering times applied to these projects and the scope and/or scale of the project. (TR 879) For example, Sprint claims to have provided 34 hours of time to engineer a single 10' x 10' collocation cage with a gate, one AC receptacle, one overhead light, and grounding for the cage. However, for another project it only required four hours to engineer three 10' x 10' cages with gates, one AC receptacle in each cage, and grounding for the cages. This work order also included changing the gate on an existing collocation arrangement. Witness Gabel believes that Sprint fails to explain why this second observation, which is obviously more complicated than the first, required so much less time to engineer. (TR 879-880)

Witness Gabel believes Sprint's calculation of its average engineering time also appears to be flawed because it spreads 91 total hours over 8 observations for an average of 11.375 hours per job. Sprint then arbitrarily allocates its average as follows: 8 hours to cage construction, and 1.5 hours to each AC receptacle and lighting. The witness contends that not only does Sprint fail to provide support for these allocations, it also fails to explain why engineering was necessary for all projects. (TR 880)

Last, witness Gabel notes that he is also concerned about the way in which Sprint estimated its grounding costs. He explains that these estimates are based on only three observations, and Sprint again fails to explain why grounding costs should be included in the per linear foot rate for all cages, when it appears that not all cages in its study required or received grounding. (TR 880) In conclusion, the witness notes that "Although not without flaws I believe Sprint's proposal to be the most reasonable based on its per linear foot rate proposal." (Gabel TR 880)

Sprint witness Davis responded to witness Gabel's specific criticisms in his surrebuttal testimony. (TR 455-456) Witness Davis explained that Sprint based its study on a sample size of nine observations because "Nine is all Sprint's engineers could find where cage cost could be identified." (TR 455) Witness Davis notes that according to Sprint's collocation project manager, Sprint has only built 29 collocation cages in Florida. Fourteen of those were built under the nine work activities used in Sprint's study; therefore, the sample of nine work activities represents about half of the population being studied. (TR 455) As such, Sprint believes its sample is representative of the cost of collocation cages.

Regarding witness Gabel's comments on the variance in engineering time reported for Sprint's work activities (citing 34 hours for one job and only four hours for another), the Sprint witness explains that this variation is caused by multiple field visits. (TR 455) The Sprint engineer reporting 34 hours was on a very tight time frame and had to watch the construction of the cage very closely to ensure the schedule was met and that the job was completed without mistakes. (TR 455) This necessitated three trips to the field involving a city other than where the engineer's office is located for pre-construction, mid-construction, and final inspection. (Davis TR 456)

With regard to time allocation for certain events, such as AC outlets and overhead lighting, witness Davis notes that the engineers did not report time for cages, AC outlets and overhead lights separately; therefore, Sprint had to ask for their assistance in identifying time spent for each of these activities. (TR 456) Based on their input, the 11 total hours were

separated into 8 hours for cage, 1.5 hours for AC outlets and 1.5 hours for overhead lights. Since these are actual collocations, they are representative of future requirements. (TR 456) Last, witness Davis asserts that all collocation cages are to be connected to the central office grounding field. Moreover, it is not the same activity as providing a ground bar for collocators to connect their equipment to. (TR 456)

SPRINT CONCLUSION

As stated above, staff recommends the Commission endorse Sprint's policy change to allow CLECs to contract directly with Sprint certified contractors for the construction of their collocation cages. Moreover, staff believes that Sprint's engineering charge is appropriate based on the clarifying information provided by witness Davis in his surrebuttal testimony. (TR 455-456) Staff believes that since Sprint's engineering fee is based on an average, there will be variances. Unless charges for engineering are assessed on an individual case base, there will be variances as seen in the observations provided by Sprint.

If the Commission wishes to set cage construction rates for Sprint, staff believes that Sprint's proposed rates should be approved subject to incorporating staff's recommended changes in all other applicable issues. Staff witness Gabel acknowledged that Sprint's proposal appears to be reasonable based on its per linear foot rate proposal. (Gabel TR 880)

Verizon

Verizon's cage construction element includes the vendor's cage fencing and gate labor and materials costs incurred to construct the collocator's cage. There are five cage enclosure rate elements based on the size of the cage: 1) 25 to 100 square feet; 2) 101 to 200 square feet; 3) 201 to 300 square feet; 4) 301 to 400; and 5) 401 to 500 square feet. (EXH 45, BKE-1, p.12) The rates are non-recurring and range from \$3,855.82 for the smallest cage to \$9,034.96 for the largest cage. (EXH 47 BKE-1, p.38)

There was extremely limited testimony regarding Verizon's cage enclosures. Staff witness Gabel was the only witness to address these elements and his testimony was sparse. The staff witness noted that he had concerns regarding Verizon's proposed rates for collocation cages, especially when compared to the rates proposed by Sprint. (TR 880-881) He notes that the Verizon cost estimate for a cage surrounding a 10' x 10' collocation arrangement is more than double Sprint's rates, and he asked Verizon to address this cost differential in its surrebuttal testimony. (TR 881)

Verizon witnesses Bailey/Ellis did address the costs for cage construction in their surrebuttal testimony. The witnesses begin by noting that witness Gabel's comparison of Sprint and Verizon cage enclosure costs is misleading. (TR 727) While they agree that Verizon's cage costs are higher than Sprint's, they believe witness Gabel ignores Sprint's practice of building multiple cages at once, in advance of demand, and they note there is a mathematical error in Sprint's cage enclosure. (TR 727-728) As such, they argue that there are a number of legitimate reasons for this cost difference. (TR 738)

First, the major difference between the two ILEC's cost estimates is the amount of fencing assumed, which is a direct function of where the cages are located and how they are built. (Bailey/Ellis TR 738) They contend that Sprint assumes that it will be able to build more cages along a wall and next to each other (thus minimizing the fencing - and dollars in the numerator - required for each). Verizon's collocation study assumes that cage layout in the future will resemble cage layout to date. Like Sprint, Verizon attempts to utilize existing walls in the central office, as well as side walls of other cages, to minimize the need for cage fencing; however, Verizon notes that this is not always possible. (Bailey/Ellis TR 739) Verizon's proposed cage costs are based on actual collocation configurations and reflect the average square footage of fencing required for various cage sizes. The witnesses note that there is no reason to believe that those configurations will change in a forward-looking network. (TR 739)

Second, Sprint treats some of those same cages as if they required four fenced sides when figuring the denominator used in calculating per cage costs - an error that improperly reduces Sprint's proposed cage costs. (Bailey/Ellis TR 738) Specifically, because Sprint sometimes divides actual invoice costs by the hypothetical linear footage of a cage with four fenced sides, instead of the linear footage of the cage fencing actually placed, Sprint's method improperly understates cage costs. (Bailey/Ellis TR 739) Witnesses Bailey/Ellis note that in response to discovery Sprint provided a spreadsheet showing the derivation of its proposed fencing cost per linear foot and invoice details associated with the work orders. (TR 739) The witnesses provided the following example from the information:

. . . work order 3912496 indicates that a new cage was to be placed directly adjacent to an existing arrangement, and the detail in the invoice indicates that an existing central office wall would be used as part of the cage as well. The actual dimensions of the fencing placed were one 10 foot side and one 15 foot side, a total of 25 linear feet of fencing (including the 4-foot gate). However, as shown in the spreadsheet attached to Sprint's response to AT&T POD 6, Sprint used 50 linear feet of fencing, instead of the 25 linear feet actually placed, as the denominator in its cost per foot equation, effectively (and improperly) halving its cost per linear cost. (Bailey/Ellis TR 740)

Third, Sprint's study assumes that multiple cages are built simultaneously, which has the effect of lowering average cage costs and increasing the risk of stranding cage investments. (TR 738) The witnesses note that in Verizon's experience, it is more practical and cost effective to build cages as they are actually ordered, thus avoiding the risk of stranded investment. (TR 740)

In addition, the Verizon witnesses contend that there are other differences in how Sprint and Verizon account for cage costs. In particular, Sprint includes its cage gate costs in its total fencing costs, while Verizon accounts for the cost of the gate separately. (Bailey/Ellis TR 740) In addition, Sprint includes the cage grounding bar in its general per square foot cost, while Verizon accounts for it separately. The witnesses argue that Verizon's method of separately identifying gate costs and grounding costs allows Verizon to develop discrete, representative costs for the various cage size configurations it offers. (TR 740) Last, the witnesses assert that although Verizon allows the CLECs to contract directly with an approved vendor to construct their cages,

no CLEC has ever availed itself of this option in Florida. Thus, they believe the market has spoken on this issue. (TR 740-741)

As noted above, Verizon identified the costs of its cage grounding bar separately. The cage grounding bar element captures the cost of placing a cage grounding bar inside the collocater's cage. (EXH 45, BKE-1, pp.4-5) Staff witness Curry contended that Verizon's calculation of costs for a cage grounding bar (including the mounting and cabling costs) is extremely high. (TR 821) He believes that the company should be required to provide additional documentation in the form of a 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. (Curry TR 821-822)

Witnesses Bailey/Ellis contend that although witness Curry's assertion that Verizon has overstated grounding bar costs is not accompanied by any factual information, just based on the conclusory statement that the costs are "extremely high," Verizon has investigated his claim and determined that one particular change is warranted. (TR 737) Specifically, Verizon changed its time estimate associated with pulling the 350 MCM cable (a component of the grounding bar rate element) to better reflect the placement costs for that specific cable size. The reduction in placement time reduces the total cost of the cage grounding bar from \$1,23.65 to \$926.77. (TR 737) Witnesses Bailey/Ellis believe that this reduction should address witness Curry's concerns.

It appears that the primary criticism regarding Verizon's cage construction charge is that it is higher than that proposed by Sprint. (Gabel TR 880-881) The Verizon witnesses provided specific detailed testimony addressing why they believe their proposed costs differ from those proposed by Sprint. In addition, the witnesses acknowledge that based only on comments made by the staff witness, Verizon modified its proposed rate for its cage ground bar. Staff believes that even in the face of unsubstantiated assertions, Verizon revisited its cost analysis to determine whether any changes were warranted and, as is the case here, modified its proposed rate when appropriate. Moreover, it appears that when Verizon disagreed with a specific comment or modification, it provided additional data via surrebuttal testimony and in response to discovery to support its position.

VERIZON CONCLUSION

Staff believes Verizon has investigated witness Gabel's claim that its cage construction costs are too high and has provided reasonable explanations as to why their costs differ from those proposed by Sprint. Moreover, as is the case with BellSouth, a CLEC may contract directly with a certified vendor to construct its cage if desired. Staff has reviewed Verizon's cage construction costs in conjunction with the additional detail provided by witnesses Bailey/Ellis in surrebuttal testimony and believes that Verizon's proposed rates for cage construction are reasonable. Accordingly, staff recommends that Verizon's cage construction costs be approved as filed, subject to incorporating staff's recommended changes in all other applicable issues.

Floor Space (King)

BellSouth, Sprint, and Verizon have each proposed a floor space rate element. The floor space rate element for each incumbent is a monthly recurring charge, per square foot. (EXH 35; EXH 39; EXH 46) AT&T witness Turner and staff witness Gabel address BellSouth's proposed floor space rate element in detail. Staff witness Gabel also addressed this element for Sprint and Verizon. Staff begins by addressing BellSouth's floor space rate element.

BellSouth

BellSouth's floor space element has a recurring charge that recovers the cost of the building space being occupied by CLECs. It includes the costs for lighting, heating, air conditioning, and other allocated expenses and associated maintenance of the building. (Shell TR 283) BellSouth used actual costs for telephone company building additions to develop this investment, and this element excludes any power-related costs. (EXH 35, p.1) BellSouth's proposed floor space rate is \$5.28 per square foot, per month. (EXH 37, p.1)

As noted above, both AT&T witness Turner and staff witness Gabel address this element. While both were critical of BellSouth's proposed methodology for recouping its costs, each witness identified different concerns. Staff will present witness Turner's concerns and arguments first.

AT&T witness Turner appears to focus his argument on the fact that the investment BellSouth has used in its study is higher than publicly available data on telecommunications space investment. (TR 572) As a result he believes BellSouth's rate for floor space is inconsistent with TELRIC principles and should be rejected by the Commission. (TR 543, 572)

Witness Turner calculates what he believes is a more appropriate cost per square foot (\$3.58) using data from R.S. Means.⁴⁹ The witness contends that the investment information contained in R.S. Means can be manipulated to be state-specific because it provides adjustments to modify its "national" numbers to correspond to numerous cities across the United States, including 16 Florida cities. (TR 572-573) In addition, witness Turner believes that there are several advantages to using external sources for construction elements wherever possible. Specifically, he argues the information is verifiable because the source is public and can be reviewed to ensure that the costs are competitive. (TR 572-573) Moreover, he notes that R.S. Means has been used by state Commissions and incumbents, such as Sprint, in developing investments for collocation. (Turner TR 573-574)

Witness Turner outlined the four steps he used to convert the information found in R.S. Means into a proposed rate per square foot. (TR 575-576) First, he selected a value from R.S.

⁴⁹ According to AT&T witness Turner, R.S. Means is a data sourcebook widely used in the construction industry. The information provided in R.S. Means is based on the actual construction of 12 telecommunications central offices by contractors who have then reported back to R. S. Means what their costs were for the project. R.S. Means compiles this information and reports the costs in the Building Construction Cost Data guide each year. (TR 572-573)

Means that he believed provided the greatest assurance that site preparation work and ancillary equipment needs are included in the investment (\$200.00 per square foot). Second, witness Turner applied the appropriate "Square Foot Project Size Modifier" that is provided in R.S. Means. He explains that the modifier allows for adjustments off of the average investment per square foot based on whether the building being constructed is larger or smaller than average. Application of the modifier led to an investment of \$180.00 per square foot. (TR 575) Third, the witness noted that based on his experience approximately 80 percent of the space within central offices is assignable to telecommunications use. (TR 575) Thus, to fully recover the investment for the central office, the \$180.00 investment per square foot was divided by this factor to yield an investment of \$225.00 per square foot. (TR 576) Last, the value of \$225.00 was adjusted based on the information provided for the 16 cities in Florida. Specifically, R. S. Means provides indices that should be multiplied by the national averages to bring the costs in line with those for a particular city.⁵⁰ The median and the average value for the 16 cities in Florida is 81.0%. After application of this index, the final investment is \$182.25. Witness Turner argues that \$182.25 should be used for Florida in lieu of BellSouth's value of \$268.70. (TR 576) The witness believes that the \$182.25 value he advocates is highly conservative and is far more likely to be consistent with the economic cost for central office floor space than BellSouth's proposal. (TR 576)

Staff witness Gabel noted several concerns regarding BellSouth's floor space calculation. First, he argues that BellSouth used the investment from eight recent additions and makes no claim that the costs of these additions provide an unbiased estimate for the population of central offices where collocation occurs. The witness contends that eight observations are too small of a sample to be statistically valid.⁵¹ (TR 847)

Second, witness Gabel argues that BellSouth has not provided adequate documentation regarding the eight projects. (TR 848) He explains that the filing includes the capital expenditure and the square footage associated with these additions but does not indicate, for example, the degree to which the additions were associated with adding space to an existing central office, or to some other type of building. (TR 848) The data provided by BellSouth as part of its collocation cost model suggests significant variation within this small sample of recent CO additions; therefore, the witness maintains that this high degree of variation makes it even more unlikely that BellSouth has obtained a statistically valid sample. (TR 848)

Third, and what witness Gabel argues is most important, the space addition data used by BellSouth is not appropriate for a TELRIC cost study. (TR 848) He notes that the FCC's 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." (Gabel TR 848) Since BellSouth used incremental rather than total demand in its space study, even if the eight offices were representative of the population of space additions, witness Gabel believes that its floor space investment estimate would still violate the FCC's pricing rules. (TR 848)

⁵⁰ The Florida values range from a high of 88.4 percent for Melbourne down to 70.6 percent for Panama City.

⁵¹ For a given level of statistical confidence and bound of the error, the sample size is positively correlated with the variance in the underlying population. (TR 847)

Witness Gabel argues that the likely impact of using incremental rather than total demand in a collocation space cost study is to overstate the TELRIC of collocation space. (TR 848-849) The witness contends that this may be caused by the set-up costs associated with building construction. For example, he notes that work equipment must be transported to a jobsite, and the cost per square foot of an addition is generally higher than the square foot cost of a new building because the set-up costs are spread over fewer square feet. (Gabel TR 849) Furthermore, he believes that certain environmental problems arise as part of an expansion that do not exist when a structure is first constructed. (Gabel TR 849) Moreover, when space is added to an existing site, special care must be taken so that no harm comes to the existing structure or the equipment operating within. (Gabel TR 849) Witness Gabel notes that this argument was supported by Sprint in North Carolina where “Sprint stated that BellSouth’s methodology is not reasonable because a building addition inherently costs more per square foot than construction of a new building . Sprint maintained that even though BellSouth uses forward-looking building costs, it adds site preparation fees when, based upon FCC Rule 51.323 (f) (3) , the cost of construction projects should already have been taken into consideration.”⁵² (TR 849-850)

Witness Gabel also argues that BellSouth is the only party to advocate an incremental cost methodology for floor space in this proceeding. (TR 850) While the witness expressed some concerns regarding the floor space costs proposed by Verizon and Sprint (which staff addresses later in this recommendation), he believes that it is clear that BellSouth’s incremental cost methodology has produced investment estimates that are significantly out of line with the estimates supported by either Verizon or Sprint. (TR 850)

Last, witness Gabel believes that BellSouth should be permitted to recover its building modification and environmental conditioning costs when an addition occurs. However, BellSouth’s methodology effectively assumes that this cost is incurred at every central office, an assumption that witness Gabel believes is incorrect and results in an overstatement of its floor space costs. (TR 850) Witness Gabel recommends that BellSouth be ordered to adopt the methodology used by Verizon. (TR 850) Specifically, BellSouth should convert its embedded building investment to a current value using current cost-to-book cost ratios. The current investment should then be divided by the associated floor space in order to obtain a current investment per square foot. (Gabel TR 855-856; TR 862-864) This quotient would then be the input to BellSouth’s model that is used to determine the monthly cost per square foot.

BellSouth witness Shell specifically addressed each point made by AT&T witness Turner and staff witness Gabel. To begin with, witness Shell strongly disagrees with AT&T witness Turner’s allegation that because the investment used by BellSouth in its study is greater than publicly available data it is inconsistent with TELRIC and should be rejected. (TR 282) The BellSouth witness argues that the use of actual costs for BellSouth’s actual building additions is more reflective of the costs that BellSouth will incur in providing floor space to CLECs on a going-forward basis than publicly available data that does not relate to BellSouth. (TR 282-283) He argues that there is no reason to believe that the costs incurred recently are not reflective of

⁵² Gabel TR 849.

future expenditures. (Shell TR 282) Moreover, the R.S. Means publication relied on by the AT&T witness simply estimates construction costs based on past construction jobs and averages jobs done across the nation. (TR 283) The BellSouth witness argues that the publication is dependent upon contractors reporting information, and the R.S. Means user must then use a modifier to adjust estimates for the size of the building. The user must also use a factor to adjust the national average to make it a state/city average. Witness Shell believes that R.S. Means can be best described as an estimator. (TR 282-283) In addition, witness Shell argues that TELRIC principles do not require that the information must be publicly available; moreover, he believes it is better to use actual data to determine realistic investment numbers, rather than manipulate an estimate based on national averages to arrive at an artificially low investment number. (TR 283)

Verizon witnesses Bailey/Ellis also argue that the R.S. Means data witness Turner uses to calculate average square footage costs are not accurate and omit significant costs. (TR 729-730) In addition, they contend that R.S. Means itself warns that its square-foot costs should be used only as a starting point for informational purposes in examining contractor bids and that its estimates should be disregarded once real data are obtained. (TR 730) For example, the Verizon witnesses believe that it is impossible to determine whether the R.S. Means costs include such items as outside plant cabling and infrastructure, additional site specific costs, and building construction “soft costs” (e.g., architect, design, and engineering fees). Moreover, R.S. Means states that some site preparation costs, such as storm water management, landscaping, site surveys, environmental assessments, parking space, and site lighting are not included in its estimates. (Bailey/Ellis TR 730) Finally, the witnesses note that based on Verizon’s discussions with R.S. Means, the data regarding telecommunications structures are outdated, with the vast majority of the projects examined having been completed before 1985. (TR 730) Last, the witnesses note that although witness Gabel states that “R.S. Means is not a wholly unreasonable starting point” for determining cost inputs, he acknowledges that R.S. Means offers no more than “ball park figures” that must be adjusted based on “experience, local economic conditions, and local building codes.” (TR 731) As a result, the witnesses believe witness Gabel correctly concludes that using R.S. Means to develop building investment costs is inferior to Verizon’s building investment methodology. (TR 731)

Witness Shell next addressed staff witness Gabel’s concern that not enough BellSouth central offices are represented to be a statistically valid sample. He argues that the floor space charge allows BellSouth to recover the cost of the building space being occupied by collocators. (TR 286) Therefore, as noted above, BellSouth believes that the actual costs for its actual telephone-company central office building additions is reflective of the costs that BellSouth will incur in providing central office floor space to CLECs on a going-forward basis. There is no reason to believe that the costs incurred recently will not be reflective of future expenditures. (Shell TR 286) As for the number of observations used, witness Shell argues that BellSouth used 100% of the building additions with final numbers for the years 2001 and 2002, which were the most current jobs. Witness Shell states that “[t]he numbers are unbiased in that we did not selectively remove any jobs from the study.” (Shell TR 285-286)

Responding to witness Gabel’s criticism that there is significant variation in the cost per square foot shown from one CO building addition to the next, witness Shell argues that the cost per square foot by central office does vary. (TR 286) He explains that this variation is due to the

specific requirements at each central office. For example, some building additions could trigger the need for a new air conditioning system, and the code requirements in one city could be more stringent than in another city. (Shell TR 286)

Next, the BellSouth witness argues that contrary to staff witness Gabel's assertion, BellSouth has produced a TELRIC-compliant study in which total costs are divided by total usage of the element. (TR 286-287) Witness Shell explains that the total costs of the building additions have been divided by the total useable square footage added, which includes space used both by BellSouth and other parties (i.e., total costs divided by actual total usage). (TR 287) Moreover, witness Shell believes that this methodology, since it is based on the most current expenditures, is reflective of forward-looking space costs for both BellSouth and collocators. Given that the FCC's collocation rules (specifically FCC Rule 51.323(f)(1)) do not require ILECs to lease or construct additional space to provide for physical collocation when existing space has been exhausted, witness Shell does not believe that there is a TELRIC requirement to develop an investment based on reconstructing all central offices in the state and dividing by the total central office space in all central offices in the state. (Shell TR 287)

Further, witness Shell contends that while it does appear that BellSouth's investment per square foot is greater than Verizon's, it also appears that BellSouth's investment is less than Sprint's. (Shell TR 287) Moreover, as stated above, the witness believes that in approving BellSouth's applications for in-region interLATA authority in all of its nine states, the FCC concluded that BellSouth provides collocation based on TELRIC. He notes that the same floor space cost development process that witness Gable criticizes was in use at the time the FCC made that determination. Therefore, witness Shell maintains that BellSouth's floor space costs and resulting rate are reasonable and nondiscriminatory. (TR 288)

Last, witness Shell states his disagreement with witness Gabel's recommendation that BellSouth use Verizon's methodology for estimating its floor space costs. (TR 292) The BellSouth witness notes that, as previously stated, the FCC has found BellSouth's costs for collocation to be TELRIC-compliant. Witness Shell argues that the staff witness has offered no concrete evidence that BellSouth's costs are not TELRIC-compliant, and he simply used a methodology that produces a lower cost, based on the belief that this is what TELRIC requires. Witness Shell notes that the FCC allows for a range of reasonableness for TELRIC pricing. Specifically, paragraph 30 in FCC Order 02-260⁵³ states:

We will, however, reject an application if "basic TELRIC principles are violated or the state commission makes clear errors in factual findings on matters so substantial that the end result falls outside the range that the reasonable application of TELRIC principles would produce."⁵⁴ We note that different states may reach different results that are each within the range of what a reasonable application of TELRIC principles would produce. (TR 292)

⁵³ WC Docket No. 02-150, 17 FCC Rcd 17595, para 30.

⁵⁴ CC Docket No. 01-138, 16 FCC Rcd 17419, 17453, para. 55. (Shell TR 292)

Witness Shell again asserts that costs and rates must be developed on a company-specific basis. For example, BellSouth has approximately 200 central offices in Florida and approximately 130 have collocation arrangements. Verizon has fewer central offices and fewer central offices with collocation in Florida. This simple difference between the two companies would have a real impact on the procedures and planning within the state, which would impact the resulting cost estimates. (Shell TR 292-293) Verizon's methodology of reconstructing all central offices in the state by using the embedded investment (adjusted using a current cost to booked cost factor) divided by the total demand is not a more accurate method than BellSouth's method of looking at situations where building additions have occurred. BellSouth has divided the total cost associated with its recent building additions by the total useable square footage added, and thus reflected the forward-looking cost of floor space. (Shell TR 293)

ANALYSIS

Each of the parties that addressed this issue has different ideas as to what method should be used to calculate floor space costs. The three recommended approaches are:

1. Require BellSouth to use Verizon's proposed method;
2. Use publicly available data from R.S. Means; or
3. Use actual cost data from recent BellSouth building additions. (EXH 35, p. 1; Turner TR 572; Gabel TR 293)

Staff addresses each proposal below.

1. The Verizon Method

As discussed above, staff witness Gabel recommended that BellSouth use Verizon's proposed method for estimating its floor space costs. The Verizon method is:

. . . essentially a reproduction cost methodology in which the historical cost of a building is converted to current dollars. This approach is somewhat inconsistent with the FCC's pricing rules that require the use of forward-looking efficient technology. The older central offices were constructed during an era when analog telecommunications equipment, such as step-by-step and crossbar switches, were heavier and larger than today's digital equipment. Due to the evolution in technology it would be sensible to rely on cost estimates from more recently constructed buildings that were designed to house modern digital equipment. (TR 842)

The staff witness stated at hearing: "I like that approach because it's going to reflect local conditions throughout Florida for the most - - by using the cost associated with the actual buildings, it also provides some consistency between the cost of the building and what's the distances within the buildings." (TR 891)

In his rebuttal testimony, witness Gabel addressed why the Verizon approach is "somewhat inconsistent with the FCC's pricing rules that require the use of forward-looking

efficient technology.” Essentially, witness Gabel believes that a newly constructed hypothetical CO would be smaller than Verizon’s current COs; as such, distance-sensitive costs for items such as cable runs could be less (i.e., a smaller CO would have shorter cable runs among other things). (TR 841-844) Therefore, basing costs on current equipment configurations is not “forward-looking.” The staff witness then goes on to state that because of the difficulty in determining which of the many feasible equipment configurations best reflects the way in which equipment would be placed in a newly constructed CO, the Commission should rely on the information provided by the ILEC for existing central offices. (Gabel TR 844)

Staff agrees in part with witness Gabel’s analysis on this point. While it would be difficult to determine which of the many possible equipment configurations would be most appropriate (and forward-looking), we do not believe it is necessary. Staff avers that if one reviews the requirements of 47 C.F.R. § 51.505(b)(1), consideration of current central office characteristics may not be inconsistent with the FCC’s rules. 47 C.F.R. § 51.505(b)(1) states:

The total element long-run incremental cost of an element should be measured based on the use of the most efficient telecommunications technology currently available and the lowest cost network configuration, *given the existing location of the incumbent LEC’s wire centers.* (emphasis added)

Staff believes that use of the existing locations of an incumbent LEC’s wire centers imposes limits on the analysis of floor space costs to where COs currently exist. We also believe that it is reasonable and in accord with § 51.505(b)(1) to acknowledge existing CO characteristics, including typical configurations, in determining the costs of other collocation elements. Therefore, staff believes that for this particular element, “lowest cost network configuration” is not the principal driver; rather, forward-looking cost is.

Staff believes that Verizon’s approach is not consistent with the forward-looking technology aspect of the FCC rules; rather, its methodology appears to violate basic TELRIC principles.⁵⁵ Specifically, 47 C.F.R. §51.505(d)(1) states:

(d) Factors that may not be considered.

The following factors should not be considered in a calculation of the forward-looking economic cost of an element:

(1) Embedded Costs. Embedded costs are costs that the incumbent LEC incurred in the past and that are recorded in the incumbent LEC’s books of accounts;

Staff believes that Verizon’s approach is in direct conflict with this proscription. Accordingly, staff recommends that the Verizon methodology not be imposed on BellSouth because it appears to be inconsistent with 47 C.F.R. § 51.505(d)(1).

⁵⁵ Sprint witness Davis does not believe the method endorsed by witness Gabel (i.e., Verizon’s indexing of embedded cost) is TELRIC-compliant. Specifically, since embedded costs are being used, he argues that it is obviously not forward-looking. (TR 442)

2. R.S. Means Data

Staff believes that R.S. Means is a valuable tool for estimating costs when used as intended (i.e., the correct data is extracted). As noted in other issues, it is unclear if AT&T witness Turner used only data specific to telecommunications. (TR 607) Specifically, witness Turner testified that he performed the same sort of analysis in Florida that he did in Georgia for his testimony in Docket 14361-U. (TR 607). The witness acknowledged that he testified in Georgia that in his analysis he “use[d] other parts of R.S. Means that are more general than just telecommunications applications.” (TR 610) Under cross-examination in Florida, witness Turner admitted that he used non-telecommunications data from R.S. Means for the cage construction element. (TR 610-11) In its brief BellSouth notes that the Georgia Commission rejected witness Turner’s advocacy of this same approach in Docket 14361-U.⁵⁶ (BellSouth BR at 31) Staff does not have confidence in the data provided by witness Turner. Moreover, staff does not believe data must be publicly available to be used in a TELRIC cost study. Accordingly, staff believes that in this case the use of R.S. Means data should be rejected.

3. Data from Recent BellSouth Building Modifications

The third recommended approach for developing floor space cost is that proposed by BellSouth. BellSouth’s method uses actual cost data from recently completed building additions. Staff finds this the most reasonable option for several reasons. First, as staff noted above, the Verizon method appears to violate TELRIC principles and should be rejected. Second, while R.S. Means is a valuable tool for estimating costs, staff is not confident that witness Turner used this tool as intended. Third, staff was not persuaded by witness Gabel’s argument that because BellSouth used data for building additions, the data should be rejected. This argument is similar to that made by witness Gabel in the DC power issue.⁵⁷ Staff believes that the costs incurred for recent building augments are a reasonable surrogate for costs which will be incurred in the future. Moreover, BellSouth witness Shell stated that the total cost of the building additions have been divided by the total usable square footage added, which includes both space used by BellSouth and other parties. Therefore, staff believes the methodology employed by BellSouth based on building additions yields a reasonable input value for use in the company’s floor space cost study.

BELLSOUTH CONCLUSION

Staff believes the methodology employed by BellSouth based on building additions yields a reasonable input value for use in the company’s floor space cost study. Therefore, staff recommends that BellSouth’s floor space rate be approved as filed subject to incorporating staff’s recommended changes in all other applicable issues.

⁵⁶ At the conclusion of the hearing, the Commission took official recognition of two Orders issued by the Georgia Commission, “Order Establishing cost-Based Rates” (Docket Number 7061-U, issued December 16, 1997) and “Order” (Docket Number 14631-U, issued June 24, 2003). (Tr. 302). The Georgia Commission declined to use R.S. Means in both of these Orders.

⁵⁷ Witness Gabel argues in this issue and in the DC power issue that BellSouth’s data is not TELRIC-compliant because using augments for calculating DC power costs and using building additions for calculating floor space costs do not consider dividing total costs by total usage.

Sprint

The floor space rate proposed by Sprint recovers the cost of the building including electrical and mechanical subsystems and security arrangements. In addition, this rate recovers the costs to run the environmental conditioning systems and the land where the building is located. (EXH 39, pp.17-19)

In its cost study documentation, Sprint states that building investment, including architectural and engineering fees and construction management fees, are determined based on recent R.S. Means data for telephone exchange buildings. Investments are determined as though CO buildings that housed conditioned transmission space are newly constructed all at one time. For this reason, Sprint assesses no additional charges for routine site preparation.⁵⁸ (emphasis added) (EXH 39, p.17)

Staff witness Gabel notes that there are a number of problems with Sprint's methodology. (TR 856) First, the witness explains that Sprint obtains its floor space estimate by assuming a new building is constructed to replicate its existing facilities. Witness Gabel believes that this is problematic because if a new building were constructed, it could be smaller than today's central offices. (TR 856) In addition, it is unlikely that the layout of the building would be identical to the existing layout so cable lengths and other essential cost model inputs would have to be adjusted accordingly. (Gabel TR 856)

Second, the staff witness believes that Sprint's building investment calculations already include the cost of permanent fixtures such as overhead lighting and AC receptacles. Thus, if the FPSC were to approve Sprint's building investment estimates and separate rate elements that included the cost of overhead lights, AC receptacles, or any other item included in the R.S. Means building investment estimates, Sprint would double recover these costs. (Gabel TR 856-857)

Third, witness Gabel believes that Sprint improperly grosses up its floor space investment to account for shared support and growth space in the CO. (TR 857) Specifically, the witness claims that the basis for Sprint's shared support and growth space factor was an analysis of floor plan drawings for five Sprint COs that purportedly represent a cross section of small, medium, and large COs in Florida. (TR 858) The staff witness contends that any estimates derived from this study are highly suspect because Sprint's sample size of five observations is far too small to conclude with reasonable certainty that the results are representative of the population of Sprint COs in Florida. (TR 858)

Witness Gabel believes that there are other flaws in the Sprint study itself. For example, Sprint derived its shared support and growth space factor by dividing the assignable transmission space by the total footprint of the CO after subtracting out from the total footprint the floor space associated with offices, vault space, and power equipment. (TR 858-859) Sprint then weights

⁵⁸ The documentation notes: “. . . this methodology does not preclude Sprint from imposing modification charges in special circumstances. . . . In these circumstances, Sprint is allowed to recover “make ready” costs.” (EXH 39, p. 17)

the results by the relative size of each CO to derive its factor. Because of this methodology Sprint effectively assumes that the costs associated with all common floor space should be assigned to, and thus recovered from, the rate element associated with transmission floor space. (Gabel TR 859) The witness contends that at a minimum, Sprint should have allocated what it classified as growth, shared, AC, and egress space proportionally to the remaining floor space classifications, such as office, transmission, vault, and power, and then calculated its floor space factor. (TR 858) This methodology is appropriate because it allocates the common space of a CO to all floor space classifications that cause or derive benefit from its existence. (Gabel TR 859) When corrected in this fashion the observed floor space factor is estimated to be roughly 81% as opposed to Sprint's original value of 40%. (TR 859)

Witness Gabel believes that his corrected floor space factor is conservative, because it relies on Sprint's original study, which contains numerous errors and inconsistencies that over-allocate common space to the transmission category. (TR 860) First, witness Gabel explains that it is reasonable to assign more than a proportionate share of egress and shared space to the office category because the amount of such space in a building depends largely upon the number of people expected to occupy the building at any one time. (TR 860) Thus, the existence of call centers and other dedicated Sprint offices in a CO requires that the building have more exits, wider pathways, and larger bathrooms and lounges than a building dedicated to housing only telecommunications equipment and the relatively few employees necessary to maintain it. (TR 860) Second, the staff witness believes that Sprint's study was a very simple collection of "back of the envelope" calculations in which dimensions were rounded, and spaces that appear to be dedicated to Sprint and its call center employees were allocated to the shared category without explanation. (TR 860) Third, Sprint's response to discovery indicates that this study did not include any observations of Sprint COs that are listed as "full" on its web site. (TR 860-861) Since more than one-third of Sprint's COs in Florida are represented on this list, but none in its sample, it is even less likely that Sprint's sample is representative of the population of COs in Florida. (TR 861) Witness Gabel argues that Sprint's exclusion of these observations likely understates actual floor space utilization rates because COs at or near exhaustion are likely to have less common space to allocate to other categories, including transmission, as a result of there being little or no unused growth space remaining. (Gabel TR 861)

Witness Gabel believes that R.S. Means is not a wholly unreasonable starting point but is concerned that Sprint is placing too much reliance on this source for such a crucial input to its cost study. He believes that R.S. Means and similar construction cost estimators generally caution that the cost estimates derived from their products, while accurate, are "ball park" figures. R.S. Means cautions that while its estimates are useful "when no details are available" and "should present a fairly accurate base figure," adjustments must be made based on the estimator's experience, local economic conditions, and local building codes. (TR 861-862) Witness Gabel believes that these adjustments would already be considered, and thus unnecessary, if Sprint followed Verizon's building investment methodology. As such, witness Gabel recommends that Sprint convert its embedded building investment to a current value using current-to-book ratios. The current investment should then be divided by the associated floor space in order to obtain a current investment per square foot. This quotient would then be the input to Sprint's model that is used to determine the monthly cost per square foot. (TR 862)

Last, witness Gabel notes that independent validation of specific input or output values is quite difficult. However, he notes that based on BellSouth's response to discovery it appears that it is possible to lease space to house central office equipment for approximately \$2.25 per square-foot, per month. Similarly, in a recent collocation proceeding the North Carolina Utilities Commission found ". . . evidence in the record that the ILECs lease central office space for \$0.20 to \$0.80 per square foot per month." (TR 863) Witness Gabel states that he is "not advocating that the PSC establish collocation floor space rates based on these values, but I do believe that these values can be used to test the reasonableness of the floor space rates proposed in this proceeding. In as much as the rates proposed by the ILECs in this proceeding are anywhere from 1.7 to 4.2 times the rate at which CO space is available for lease, this indicates an overstatement of costs." (TR 863)

Sprint witness Davis argues that contrary to staff witness Gabel's assertions, Sprint's floor space rate development is TELRIC-compliant. (TR 441) The Sprint witness contends that its floor space rate development using R.S. Means is based on the forward-looking cost of building a CO building on a scale which fits the total demand for space by both the ILEC and the CLECs sharing the space. Witness Davis believes that by using the forward-looking cost on a scale of total demand, Sprint's floor space rate assumes that finished transmission space is available, meaning that the cost for routine site preparation for items like ductwork is included. Therefore, unlike Verizon and BellSouth, Sprint does not have a separate rate element for space preparation or building modification. (Davis TR 441)

Witness Davis does not believe the method endorsed by witness Gabel (i.e., Verizon's indexing of embedded cost) is TELRIC-compliant. Specifically, since embedded costs are being used, he argues that it is obviously not forward-looking. (TR 442) Witness Davis notes that even staff witness Gabel acknowledges that "this approach is somewhat inconsistent with the FCC's pricing rules that require the use of forward-looking efficient technology." (TR 442) Witness Davis also disagrees with witness Gabel's assertions that if embedded cost indexing is used, the inclusion of space preparation cost for CLECs in the building investment account negates the need for a separate rate element like BellSouth's space preparation or Verizon's building modification. (TR 442) Using embedded cost, while assuming all collocation-related modification costs are already accounted for, would not fairly attribute the cost of preparing collocation space to the CLECs. The investment associated with space preparation for CLECs is very small compared to the investment cost of the entire building and would therefore not have a material effect on the overall investment cost per square foot. (TR 442) Under the Verizon methodology, CLECs should bear the full cost of space preparation since they are the cost causers. Otherwise, CLECs' operations would be subsidized by the ILEC. (TR 442)

Sprint witness Davis notes that Sprint did an analysis to convert embedded building cost to current cost to duplicate the Verizon methodology advocated by witness Gabel. (TR 442-443) The witness explains that indexing the vintage data of the sample of offices shown on his Exhibit JRD-7 yielded a cost of \$227, which is higher than the cost derived from R.S. Means (\$146, from lines 1 and 2 of Work paper 4.0 of Revised Exhibit JRD-2). (TR 443)

Witness Davis next notes that AT&T witness Turner is a strong proponent of R.S. Means while staff witness Gabel is not. (TR 443) Witness Turner speaks of R.S. Means as being an

independently verifiable source that “has been used by state Commissions and incumbents in developing investments for collocation.” (TR 443) Witness Gabel, on the other hand, is critical of R.S. Means and states: “While R.S. Means is not a wholly unreasonable starting point, I am concerned that Sprint is placing too much reliance on this source for such a crucial input to its cost study.” (TR 861)

The Sprint witness also argues that both the AC receptacles and overhead lighting collocation elements are only charged when applicable. As explained in response to discovery, R.S. Means does in fact account for the cost of AC outlets along the perimeter of a finished space, but the construction cost estimator does not account for AC outlets that CLECs often add to their equipment bays, which are located out in the middle of the floor. (Davis TR 440; EXH 1) Moreover, although R.S. Means does cover overhead lights, Sprint has found that CLECs sometimes want to add additional lighting; therefore, Sprint only charges for AC outlets and additional overhead lighting when CLECs request these elements and Sprint incurs the cost. (TR 440-441) Witness Davis also notes that as shown in response to discovery, CLECs do not always order these elements; in fact only three of five collocators ordered an AC outlet(s), while none of the five collocators ordered additional overhead lights. (TR 441)

The Sprint witness notes that if the FPSC were to adopt Verizon’s methodology for floor space rate structure, three elements would need to be added to Sprint’s collocation rate list. (TR 444) Specifically, as can be seen in a Sprint response to discovery, Sprint’s proposed floor space rate element encompasses Verizon’s elements of: floor space, building modification, environmental conditioning, and cage ground bar. (TR 449; EXH 1, pp.76-80)

According to the Sprint witness, witness Gabel’s criticisms of Sprint’s floor space rate development contain numerous inaccuracies. Specifically, the Sprint witness disagrees with witness Gabel’s assertion that if a new central office building were to be constructed, it might be smaller than today’s central offices. Witness Davis does not believe this would be the case. He believes that what witness Gabel was referring to is the trend towards smaller switching equipment; however, that does not take into account the fact that additional space is needed to house the ever growing number of systems necessary to provide modern telecommunications including fiber systems, SS7 networks, digital cross-connects, and ATM networks. (Davis TR 445) Furthermore, collocation itself adds to the general requirements for space. However, even if newer central offices were smaller, their cost per square foot would be higher which would offset the effects of shorter cable runs. Sprint does not see any valid reasons for why a new central office building housing telecommunications network equipment would be materially different in size as compared to an existing one. Moreover, even if a new building would actually be built, collocation would fairly be spread throughout the central office as it is today. Sprint’s Response to Staff Request for the Production of Documents Number 20 shows a wide range of cable lengths for both DC power feeds and cross-connects, clearly indicating that collocations are indeed spread throughout Sprint’s central offices. (TR 445; EXH 2)

Last, Sprint witness Davis contends that the rates witness Gabel puts forth as leased floor space rates from North Carolina are misleading.⁵⁹ Specifically, witness Davis notes:

Dr. Gabel cites comments from a North Carolina proceeding making reference to an anomalously low historic floor space lease costs. What Dr. Gabel does not mention however, is that three of the five leases cited are from extremely small towns (two of which have populations of less than 300 people) and involve 30 year old leases with little to no provisions for inflationary increases. One other lease was for a small remote switch at a strip shopping center. None of these four locations had any collocation in them nor likely ever will. These buildings and leases are hardly comparable with the larger towns and the value of property in Florida. It should be noted that Sprint does not lease space in Florida for central office equipment buildings . . . (TR 447)

Staff witness Gabel recommends that the Commission reject Sprint's floor space costs because they were developed using R.S. Means, and adopt the Verizon methodology for Sprint. (TR 862) For the reasons detailed above, staff, as well as Sprint witness Davis, believes that the Verizon method should be rejected because it appears to violate TELRIC principles.

SPRINT CONCLUSION

Staff believes that Sprint has developed its cost input using a reasonable surrogate, R.S. Means. As noted previously, staff believes that R.S. Means is a useful tool when used properly. In fact, staff witness Gabel notes that R.S. Means is not a wholly unreasonable starting point. In addition, he notes that R.S. Means cautions that while its estimates are useful, adjustments must be made based on the estimator's experience, local economic conditions, and local building codes. (TR 861-862) Staff believes that Sprint is in the best position to make these necessary adjustments. Furthermore, staff believes that Sprint's method is forward-looking and consistent with TELRIC principles. Accordingly, staff recommends that Sprint's floor space investment be approved as filed, subject to incorporating staff's recommended changes in all other applicable issues.

Verizon

Verizon's average floor space cost is based on the actual sizes (in square feet) of Verizon's existing central offices. (Ellis TR 670; Bailey/Ellis TR 730) Verizon begins with actual historical costs incurred in building and maintaining the central offices and updates this value to current dollars by adjusting for inflation through the use of the R.S. Means Index Factor.⁶⁰ (TR 670) Land investment is included at its original investment value – despite Florida's increasing real estate values - because Verizon has not yet identified an appropriate

⁵⁹ Staff reviewed the BellSouth response to discovery referred to by witness Gabel which he alleges shows that BellSouth can lease space to house central office equipment for approximately \$2.25 per square-foot, per month; staff could not locate this information on the referenced response. (EXH 8, pp. 64-65)

⁶⁰ The index is used to convert national average building costs in the past to an approximate building cost in today's dollars. (EXH 45, p. 23)

index to develop current land values. Thus, in this respect, Verizon's cost study understates forward-looking land costs. (Bailey/Ellis TR 730-731)

Witness Ellis explains that the investments for land and buildings are annualized and combined with average annual maintenance and utility costs to develop an annual total floor space cost. That total is divided by the total square footage of Verizon's central offices to develop the average floor space cost per square foot rate element. (TR 671) Verizon's proposed rate is \$3.25 per square foot, per month. (EXH 47, p. 39)

Staff witness Gabel was the only witness to address Verizon's floor space costs. He begins his testimony by asserting his belief that Verizon's methodology for estimating floor space investment is reasonable. Specifically, he states "It is reasonable to approximate the current cost of a building by applying a price index to the book investment." (TR 841) However, the witness notes some concerns with Verizon's method. (TR 841-842)

First, witness Gabel notes that Verizon's methodology is essentially a reproduction cost methodology in which the historical cost of a building is converted to current dollars. (TR 842) He believes that this method is "somewhat inconsistent" with the FCC's pricing rules that require the use of forward-looking efficient technology because the older central offices were constructed during an era when analog telecommunications equipment were heavier and larger than today's digital equipment. (TR 842) The witness argues that a new building might be smaller and would therefore require shorter cable runs; as such, he believes that distance-related prices would need to be modified to reflect the likelihood that the layout of equipment in a newly constructed office would be different than in the current buildings. (TR 842-844) Therefore, in order to be internally consistent, if a replacement building is modeled in a cost study, then the distance related cable charges should be modified to reflect the assumption of a new building. (TR 842)

Witness Gabel asserts that it would not be difficult to calculate one of many possible equipment configurations for each of the buildings; however, the difficulty arises in trying to determine which of the many feasible configurations best reflects the way in which equipment would be placed in a hypothetical office. As such, the witness believes that in order to limit the number of controversies, he recommends that the Commission rely on current lengths of at the existing central offices. (TR 844) Last, the witness acknowledges that "We have very little data on the cost of new central offices and therefore we don't have sufficient information to conclude if using the Verizon reproduction cost methodology results in values that would be higher or lower than the costs that would be incurred if all of the buildings were replaced." (TR 844)

The staff witness next looks at how Verizon used its investment estimate to develop its rates. Specifically, he notes that building investment is recorded in account 2121 and:

This account shall include the original cost of buildings, and the cost of all permanent fixtures, machinery, appurtenances and appliances installed as a part thereof. It shall include costs incident to the construction or purchase of a building and to securing possession and title. (TR 845)

Account 2121 includes the capitalized cost of security, the cable vault, overhead lighting and electrical receptacles. Witness Gabel contends that Verizon proposed a separate charge for the cable vault; therefore, he believes that the cost of the vault will be recovered once in the floor space charge and a second time through the proposed rates for cable vault space, which is inappropriate. Witness Gabel noted that in response to discovery, Verizon acknowledged that the cable vault space rate is not necessary because the cable vault space investment is included in the (account 2121) building investment and that Verizon witness Ellis would withdraw support for this element at the hearing. (TR 845)

Witness Gabel believes that the FPSC should require Verizon to remove all duplicative costs from its study. In addition, when estimating building investment the FPSC should consider ordering the ILECs to convert booked building investments to current values only for COs where collocation has occurred. He argues that excluding COs where no collocation has taken place from these investment calculations should return results that are more representative of the costs of floor space actually used to provide CLECs with collocation space. (TR 862-863)

Witness Gabel believes that the FPSC should find Verizon's method of estimating building investments to be an acceptable starting point for estimating the floor space costs for each ILEC. Therefore, he recommends that the FPSC require BellSouth and Sprint to conduct a study, similar to that used by Verizon, where the investments booked in Account 2121 are made current based on accepted current to booked ratios. The witness acknowledges that based on the information at hand he does not know the outcome of applying Verizon's methodology to either BellSouth or Sprint. However, he argues that this methodology is clearly superior to what has been proffered by either BellSouth or Sprint. (TR 863-864)

Verizon witnesses Bailey/Ellis address each of witness Gabel's concerns regarding the development of the floor space rate element. First, they assert that including only the central offices which currently house collocators would have little impact on Verizon's investment figures. (TR 747) They explain that all Verizon central offices in Florida that currently house collocators were included in the sample used to determine average floor space costs. That sample also included three central offices that do not currently house collocators. (TR 747) Removing those three COs would increase Verizon's average building investment by 20 cents per square foot, and thus would increase the associated monthly recurring rates by about three cents per square foot. (Bailey/Ellis TR 747)

Next, the witnesses note that although witness Gabel endorses Verizon's approach, he thought that Verizon may have double-counted certain costs relating to floor space - once in the floor space element, and a second time in other specific elements. (TR 748) Witnesses Bailey/Ellis contend that Verizon clearly has not included any collocation costs in its building investment data, because the building investment data are from 1998 and earlier - before there was any collocation in Verizon's COs. In the future, when Verizon updates its building investment data, it will remove all collocation-related expenditures that are booked to the building investment account. (Bailey/Ellis TR 748)

As noted previously, staff does not believe that Verizon's methodology for calculating floor space costs is TELRIC-compliant. Staff believes that the use of embedded costs violates the TELRIC principles outlined in 47 C.F.R. §51.505(d)(1) which states:

(d) Factors that may not be considered.

The following factors should not be considered in a calculation of the forward-looking economic cost of an element:

(1) Embedded Costs. Embedded costs are costs that the incumbent LEC incurred in the past and that are recorded in the incumbent LEC's books of accounts;

Staff witness Gabel, who endorsed the Verizon method, readily admits that this method is not TELRIC compliant. In addition, Sprint witness Davis argues that Verizon's indexing of embedded cost is not TELRIC-compliant. (TR 442)

VERIZON CONCLUSION

Staff believes that because Verizon's methodology is not TELRIC compliant it should be rejected. Staff recommends that the Commission order Verizon to re-file its study for this element. Since staff could support either the methodology used by BellSouth or that used by Sprint, Verizon should evaluate both methods to determine which would more accurately reflect its forward-looking costs. The revised study should be filed within 60 days of the issuance of the order in this proceeding. Verizon should include in its filing all supporting documents, and the study should also include all other Commission-approved modifications. Staff will evaluate the new filing and bring its findings before the Commission.

Space Preparation/Building Modification⁶¹ (King)

BellSouth and Verizon each have separate rate elements to recoup the costs of space preparation (BellSouth) or building modifications (Verizon).⁶² As with other elements addressed in this recommendation, each company included different costs in their space preparation/building modification elements; therefore, direct cross-company comparisons are not possible. The details of these elements will be addressed below, beginning with BellSouth.

BellSouth

BellSouth's space preparation cost elements allow it to recover the cost of engineering, designing, and modifying the network infrastructure and the building to meet a collocator's specified requirements. (Shell TR 284) Such modifications could include:

- augmenting air conditioning cooling capacity;
- reworking ventilation ducts;
- adding cable racking; or
- adding or moving light fixtures. (TR 284)

According to BellSouth's cost study documentation, there are four different space preparation elements. One of the elements has a non-recurring rate and the other three have recurring rates. (TR 284; EXH 35, p.2) The non-recurring space preparation element is called Firm Order Processing, and it recovers costs associated with receiving, reviewing, and processing a collocation firm order. A CLEC submits a firm order to notify BellSouth to move forward with the collocation installation work after reviewing the application response. (TR 284) The three recurring cost elements are:

- 1) CO Modification per square foot, which recovers the costs associated with the building design, construction and modification work associated with preparing central office space for collocation. For example, it would include the following types of work: heating, ventilation, and air conditioning, electrical and architectural. This element applies for both cageless and caged collocation. (Shell TR 284-285)
- 2) Common Systems Modification per square foot for cageless collocation recovers the costs associated with the installation and modification of network infrastructure (e.g., cable racking, stanchions, AC main feed to bay, fiber ducts) required to prepare the central office for cageless collocation. Note that this element would only apply with cageless collocation. (Shell TR 284-285)
- 3) Common Systems Modification per cage recovers the costs associated with the installation and modification of network infrastructure (e.g., cable racking, AC main feed to bay, fiber ducts) required to prepare the central office for caged collocation. Note that this element would only apply with caged collocation. (TR 285)

⁶¹ Space preparation and building modification are terms that can be used interchangeably.

⁶² Sprint does not have an element labeled as building modification or space preparation. Instead, it appears that the costs associated with this type of work are included in its floor space element. (EXH 39, pp.17-20)

AT&T witness Turner and staff witness Gabel both address BellSouth's space preparation rate elements. Staff will present witness Turner's arguments first.

AT&T witness Turner believes that BellSouth includes in its space preparation rate elements costs it alleges are necessary to generally prepare the telecommunications space within its offices for CLECs. (TR 582) Witness Turner contends that BellSouth identifies three components associated with space preparation for which it charges: cage cost set fee, barrier wall, and card reader. The witness explains that the barrier wall price changes based on how many feet BellSouth installs, but it appears that the largest costs are for the card reader. (TR 582)

The AT&T witness believes that it is first important to understand the principles underlying the costs for security, which substantially affect BellSouth's inputs for this element.⁶³ (TR 582) Moreover, he believes that it is important to understand that the FCC's Advanced Services Order requires that BellSouth not impose a security requirement on CLECs for collocation that is any more stringent than what BellSouth imposes on its own employees or authorized contractors working on BellSouth's equipment. (Turner TR 583) The witness notes that based on his experience, in central offices where card readers exist, they are used by all of the personnel entering the central office including the incumbent's employees and authorized contractors that have a need to enter critical areas of the incumbent's central office. The witness argues that in proposing its Space Preparation element, BellSouth has incorporated significant additional security costs for collocators to be included in the costs for collocation. In effect, he believes that BellSouth has assumed that it must have expensive new card readers, barrier walls, and other security-related costs that the collocator must pay for exclusively. (Turner TR 583-584)

In addition, witness Turner maintains that the card reader and new barrier walls that BellSouth is imposing are unnecessary and, again, inconsistent with FCC guidelines on the costs for security. (TR 584) Because witness Turner believes that BellSouth's security measures are inappropriate, he has removed these costs from his restatement of BellSouth's space preparation element.⁶⁴ (TR 584)

Last, witness Turner contends that there are several problems with the investment BellSouth seeks to recover in these elements. Specifically, he argues that in a TELRIC cost study, the building investment already recovers the forward-looking investment for central office space capable of housing all carriers' telecommunications equipment. Thus, the witness contends BellSouth cannot recover a forward-looking investment for the building and then also recover the cost for modifying that same building to house collocated telecommunications equipment since doing so results in a double-recovery. (TR 545)

Staff witness Gabel believes that the concept of a space preparation charge is reasonable based upon cost-causation principles, but he believes that BellSouth's proposed charges need to

⁶³ Because witness Turner's testimony on this point addressed both the security element and the space preparation element, his arguments and BellSouth's rebuttal to those arguments are addressed both here and in staff's recommendation on security.

⁶⁴ In his restatement of rates witness Turner proposes a zero rate for BellSouth's recurring space preparation elements and a rate of \$287.36 for its non-recurring space preparation element. (EXH 43)

be closely reviewed to ensure they are both nondiscriminatory and reflective of reasonably incurred costs. (TR 850-852) The witness contends that BellSouth has not adequately demonstrated that the costs reported in its study are reasonable. (TR 852) Specifically, he maintains that BellSouth has not shown that the costs reported in its study were drawn from a random sample that is representative of the locations where it incurs space preparation costs. (TR 852)

Staff witness Gabel next notes that BellSouth's tariff requires that at the termination of occupancy a collocator "at its expense [must] remove its equipment and other property from the Collocation Space." (TR 852) The tariff further mandates that the collocator

. . . surrender such Collocation Space to the Company in the same condition as when first occupied by the [physical] collocator except for ordinary wear and tear unless otherwise agreed to by the Parties. The [physical] collocator shall be responsible for the cost of removing any enclosure, together with all support structures (e.g., racking, conduits), at the termination of occupancy and restoring the grounds to their original condition. (Gabel TR 852-853)

Witness Gabel argues that BellSouth appears to be asking the CLEC to pay for the cost of making the space ready for the CLEC and then require that the CLEC pay to get the space ready for the next occupant. (TR 853) The witness believes that such a proposition is unreasonable. (TR 853) Moreover, the witness believes there is an existing pricing process for paying for the costs of removing equipment that has been retired by the ILEC. (TR 853) The witness explains that the depreciation rates reflect the cost of removing the plant; therefore, he believes that the cost of removing equipment from the CO has already been reflected in the rates charged by BellSouth. (TR 854) In light of this accounting and rate-making practice, the witness contends that it is problematic to have the CLECs pay for the cost of removing equipment that has already been paid for by the customers who benefited from the use of the equipment. (Gabel TR 854)

Another concern raised by witness Gabel is that BellSouth's application of its space preparation charge discriminates against competitors by charging them for space preparation while not including the costs of space preparation in its retail cost studies. (TR 854) For example, suppose that there is space available in an office that could house DSLAMs owned by either a CLEC or BellSouth. The witness believes that BellSouth would allocate a portion of its historical building investment, converted to current dollars, based on the cost of the DSLAM. Whatever costs have been incurred for refurbishing buildings would then be included in the historical building investment. If a CLEC were to use the same space for its own DSLAM it would likely have to pay a space preparation charge.

The witness further contends that BellSouth is using a different costing methodology for wholesale and retail services. (TR 854-855) Witness Gabel believes that this difference in methodology has the potential to exclude from the market an efficient firm because it would have to pay for a cost that exceeds the amount that BellSouth's retail service would have to cover. (Gabel TR 854-855) Witness Gabel believes that this discrimination can be eliminated if the Commission sets BellSouth's space preparation charge to zero and required BellSouth to use Verizon's methodology for estimating space costs. (TR 855) The capitalized space

preparation costs would be included in the building investment that is used to determine the space fee. Furthermore, under the Verizon methodology, the space preparation costs are effectively allocated in the same fashion to both wholesale and retail services. (TR 855)

BellSouth witness Shell rebuts the testimony of both AT&T witness Turner and staff witness Gabel. First, witness Shell argues that “Mr. Turner appears to be very confused as to what BellSouth is proposing for the space preparation cost element.” (TR 293) He explains that witness Turner appears to address only one of the four space preparation elements - - the central office modification element. As noted previously, this element recovers the costs associated with the building design, construction and modification work associated with preparing a central office space for collocation, such as heating, ventilation, and air conditioning. (Shell TR 293) To develop this forward-looking investment, BellSouth started with final investment data from actual projects over a certain time period. Costs that would not apply on a forward-looking basis, such as barrier walls, were backed out. (Shell TR 293) This data was obtained region-wide due to the limited quantity of projects with final costs, and a weighted-average of the data from all nine states was taken to produce the forward-looking investment per square foot of \$121.11. In addition, witness Shell believes that witness Turner is also confused in that the items he highlighted in his testimony (cage cost set fee, barrier wall, and card reader) were specifically backed out of the study, even though they may have been included in the actual projects. Therefore, he believes that concern should be resolved by his additional explanation on this point. (TR 294)

Verizon witnesses Bailey/Ellis also rebut witness Turner’s argument that ILECs should not be permitted to recover both their building investment and the building modification costs they incur. (TR 749) The witnesses believe that witness Turner’s argument rests on the premise that building modification costs would not be incurred in a forward-looking environment because forward-looking COs would be built with collocation in mind. (TR 749) The witnesses contend that even if that were true, the costs of conditioning space for collocation would still have to be borne; they just would be incurred in large part when the COs are constructed rather than when they are modified. (TR749) Moreover, they argue there would be changes in space utilization through the years that would require building modifications and further space conditioning.

Witnesses Bailey/Ellis note that witness Turner’s argument has been rejected by the Massachusetts Department of Telecommunications and Energy (DTE), which explained that “the fundamental difference between the Building Expense and Space Conditioning charges is that the former recovers costs associated with investments to the central office as a whole, whereas the latter recovers investments specific to collocation space.” (TR 749, 757) Moreover, in approving Verizon’s proposed rate elements, the DTE went on to “note that the FCC recognizes that ILECs may incur additional incremental space conditioning costs as a result of collocation, and [has] established minimum requirements to ensure cost recovery and to allocate costs equitably.” (Bailey/Ellis TR 749, 757) The Verizon witnesses believe that this Commission should also reject witness Turner’s argument.

Witness Shell believes that while staff witness Gabel criticizes BellSouth’s space preparation charges in general, his comments specifically address the CO Modification per square foot element. Witness Gabel argued that BellSouth has not shown that its sample is

representative. (Shell TR 288) Witness Shell explains that a total of 123 projects encompassing 594 firm order collocation sites were used. Thus, he argues that the investments shown for the CO Modification per square foot element are representative of locations where the company incurs space preparation costs. (Shell TR 288-289) Moreover, the BellSouth witness notes that the FCC, in paragraph 51 of its Advanced Services Order, specifically allows ILECs to recover the costs of preparing collocation space. It states:

We conclude, based on the record, that incumbent LECs must allocate space preparation, security measures, and other collocation charges on a pro-rated basis so the first collocator in a particular incumbent premises will not be responsible for the entire cost of site preparation.

Witness Shell maintains that BellSouth's methodology for developing its investment per square foot or per cage is simply a way of pro-rating the cost of collocation space preparation requirements among CLECs on a reasonable and nondiscriminatory basis. (TR 289)

In addressing witness Gabel's concerns regarding BellSouth's tariff requirements at termination of occupancy, witness Shell argues that the tariff simply requires the CLEC to remove its equipment/property and to return the space in the same condition when first occupied by the CLEC. (TR 290) The CLEC is only responsible for removing its equipment, not BellSouth's equipment. Moreover, the CLEC is not required to remove any items of investment (e.g., racks and power bays) BellSouth has included in its study. In addition, while witness Gabel is correct that depreciation rates reflect the cost of removing BellSouth's depreciable equipment, they do not reflect the cost of removing CLEC equipment. Since the tariff only requires the CLEC to remove its equipment, there is no overcharge. (Shell TR 290)

Last, as to witness Gabel's concern that BellSouth's application of the space preparation charge discriminates against competitors by charging them for space preparation, while not including the costs of space preparation in its retail cost studies, witness Shell asserts that the staff witness is incorrect. (TR 290) Witness Shell argues that when a CLEC uses collocation to provision its network, BellSouth incurs specific costs for preparing that collocation space and assigns a portion of that building for use only by that collocator. As noted above, Paragraph 51 of the FCC's Advanced Services Order allows ILECs to recover the costs of preparing collocation space. (TR 291) Witness Shell states that in its retail offerings BellSouth recovers the costs of its buildings by assigning the cost on a per circuit investment basis. Hence, BellSouth has chosen its methodology for recovering building-related costs from its end users. It should be noted that the prices for retail offerings are not set at cost. Similarly, the CLEC can choose to recover its costs from its end users using any method it chooses. The important distinction is that provisioning a circuit out of a DSLAM or switch to an end user does not entail the same costs as providing central office space and its preparation for a collocator. (TR 291)

AT&T witness Turner contends that in a TELRIC cost study, the building investment already recovers the forward-looking investment for CO space capable of housing all telecommunication equipment; thus, allowing a space preparation charge results in double-recovery. (TR 545) Staff disagrees, as does witness Gabel who believes that space preparation charges are appropriate based on cost-causation principles. (TR 850-852) Moreover, the FCC

acknowledges that space preparation charges are appropriate as long as the charges are pro-rated in some way so that the first collocator in a particular central office is not responsible for the entire cost of the modification. Staff also found the arguments made by Verizon witnesses Bailey/Ellis on this point compelling. Therefore, staff believes that a space preparation/building modification charge is appropriate.

Witness Turner also argued that the security costs BellSouth included in this element is inappropriate. (TR 582-584) However, witness Shell maintains that the items witness Turner highlighted in his testimony (i.e., cage cost set fee, barrier wall, and card reader) were specifically backed out of the study, where they may have been included in the actual projects. (emphasis added) (TR 294) Accordingly, it appears that witness Turner's is incorrect on this point.

While staff witness Gabel believes that a space preparation fee is appropriate, he had several concerns regarding BellSouth's proposal. Staff believes that many of witness Gabel's criticisms were either vague or unsupported. For example, he argues that BellSouth's sample may not be an accurate representation of locations where it incurs space preparation costs. (TR 852) Witness Shell responded that a total of 123 projects encompassing 594 firm order collocation sites were used; therefore, he argues that the investments shown for the CO Modification per square foot element are representative of locations where the company incurs space preparation costs. Because witness Gabel's criticism was vague, it is difficult for staff to assess whether or not the information provided by witness Shell addressed his particular concerns.

Witness Gabel also alleges that some of BellSouth's collocation tariff requirements, as they relate to vacating a collocation space, were inappropriate. He did not, however, support this assertion. Staff notes that BellSouth witness Shell clarified that a CLEC is only responsible for removal of its equipment, not BellSouth's. On its face this seems reasonable to staff. Moreover, there is no empirical evidence, such as complaints filed with this Commission, that this tariff provision is a problem; staff believes that if this tariff provision were a problem, it would have been brought to the attention of the Commission via a complaint or other action. Therefore, staff does not believe that this tariff provision is unreasonable.

Finally, witness Gabel alleged that BellSouth's application of its space preparation charge discriminates against competitors by charging them for space preparation while not including the costs of space preparation in its retail cost studies. He believes that this discrimination can be eliminated if the Commission sets BellSouth's space preparation charge to zero and requires BellSouth to use Verizon's methodology for estimating space costs. Witness Shell argues that witness Gabel is incorrect for several reasons, the least of which is that the prices of retail services are not set at cost. Staff believes that witness Gabel's allegation is incorrect and contradicts his statement that space preparation is appropriate, based on cost-causation principles. The space that is being modified is being done so at the request of a collocator; therefore, the costs should be borne by the cost-causer.

BELLSOUTH CONCLUSION

Based on the above, staff believes that BellSouth's space preparation charges are appropriate as filed. No party presented specific testimony demonstrating that BellSouth's costs are not reasonable and based on our own analysis of the information in the record, staff believes the charges are reasonable and based on our own analysis of the information in the record, staff believes the charges are reasonable. Therefore, BellSouth's space preparation costs should be approved subject to incorporating staff's recommended changes in all other applicable issues.

Verizon

Verizon's monthly recurring building modification rate element includes site modification costs associated with construction work, minor HVAC work, dust partition installation, and security. (Ellis TR 672; EXH 45, pp.30-31) Verizon determined the costs associated with building modification by examining actual central office modifications undertaken to provision caged and cageless collocation. According to Verizon witness Ellis, this allowed Verizon to determine the actual work activities required for a typical building modification. Verizon's labor and materials costs were then applied to the identified work activities to determine the building modification costs. (Ellis TR 672)

Witness Ellis notes that building modification costs should be recovered as non-recurring charges assessed at the time that the (one-time) modification costs are incurred. (TR 672) However, in response to CLEC concerns about being forced to incur steep upfront charges, Verizon has proposed to recover building modification costs in monthly recurring charges over the expected life of the building. The witness believes that this recovery method exposes Verizon to additional risks with regard to cost recovery because collocators may vacate the collocation space at any time. (Ellis TR 672-673)

The costs per collocator for each of the cost components included in the building modification element are summed to arrive at the total investment costs. The monthly cost for building modification is developed by applying an annual cost factor and dividing by 12. A fixed allocator, designed to recover Verizon's common costs, is applied to the monthly cost to develop the rate element. The proposed recurring rate of \$227.53 is applied for each caged or cageless collocation arrangement request. (EXH 46, pp.16-17; EXH 47, p. 39)

The testimony on this issue was limited with staff witness Gabel being the only witness to address this element. The staff witness first addressed the possibility that Verizon is double recovering costs booked in Account 2121 (building investment).⁶⁵ He stated "I am concerned that Verizon's methodology could lead to double recovery of other costs booked in Account 2121, specifically, the costs associated with Verizon's proposed Building Modification charge." (TR 845-846) The staff witness noted that Verizon's work papers show that HVAC investments

⁶⁵ Witness Gabel also addressed the issue of double recovery relating to Account 2121 costs when he addressed Verizon's floor space rate. Specifically, 47 CFR § 32.2121 states: "This account shall include the original cost of buildings, and the cost of all permanent fixtures, machinery, appurtenances and appliances installed as a part thereof. It shall include costs incident to the construction or purchase of a building and to securing possession and title." (TR 845)

were backed out of their calculations, but the witness states "I have seen no indication that investments associated with other Account 2121 items were given similar treatment." (TR 846) Witness Gabel notes that based on the supporting documentation provided by Verizon at the time his testimony was prepared, he was unable to make certain that the costs associated with items booked to Account 2121 were removed from Verizon's building investment costs. (TR 846) Witness Gabel believes that if Verizon has not already done so, the FPSC should require Verizon to remove all duplicative costs from its study. (TR 846)

Next, the staff witness addressed Verizon's security access costs (i.e., card readers and controllers) which are included in Verizon's building modification rate. Witness Gabel explained that Verizon estimated its security investment based on the cost of security additions made in Texas and California. The staff witness had four concerns regarding the way in which Verizon proposed to recover its security costs. (TR 875)

- First, he believes it is possible that the costs for security have already been included in Verizon's building investment calculations used to develop floor space rates. (TR 875-876)
- Second, Verizon has proposed to recover these costs as part of its Building Modification charge; however, witness Gabel was unable to determine the circumstances in which a CLEC would be charged this fee. (TR 876)
- Third, Verizon has proposed to recover these costs based on the number of parties it expects to "share" this element. The occupancy rate proposed by Verizon in its study is confidential; however, the occupancy rate is allegedly based on the average number of collocators in a Verizon CO. Based on a discovery response, witness Gabel notes that while Verizon's occupancy value is roughly equal to the national average number of collocators in Verizon COs, it is clearly not representative of Verizon's experience in Florida. (TR 876)
- Fourth, he contends Verizon's recovery proposal conflicts with a previous decision of the FPSC regarding cost sharing of modifications or enhancements that benefit multiple collocators as well as the ILEC.⁶⁶ (TR 876)

Witness Gabel recommends that, at a minimum, Verizon should be required to spread its security investment over the total floor space of the CO rather than the number of collocators it expects, plus itself. (TR 876-877)

The Verizon witnesses rebut each of witness Gabel's points. First, they note:

Although Dr. Gabel endorses Verizon FL's approach to determining average floor space costs, he suggests that Verizon FL may be double-counting certain costs relating to floor space - once in the Average Floor Space element, and a second time in certain specific elements. Specifically, Dr. Gabel asserts that Verizon FL

⁶⁶ Specifically, FPSC Order No. PSC-00-0941-FOF-TP, issued May 11, 2000, at page 86 states: "... we shall require that when multiple collocators and the ILEC benefit from modifications or enhancements, the cost of such benefits or enhancements shall be allocated based on the amount of square feet used by the collocator or the ILEC, relative to the total useable square footage in the central office." (TR 876-877)

may not have removed from the figures used to calculate average floor space costs the costs associated with security, overhead lighting, electrical receptacles, or its proposed Building Modification charge. (TR 748)

However, they explain that Verizon has not included any collocation costs in its building investment data, because the building investment data are from 1998 and earlier - before there was any collocation in Verizon's offices. In the future, when Verizon updates its building investment data in subsequent analyses, it will remove all collocation-related expenditures that are booked to the building investment account. (TR 748)

Next, the Verizon witnesses believe that witness Gabel's argument that security costs should be apportioned according to floor space usage rather than pro rata among all the carriers (including Verizon) who benefit from the security measures is not reasonable. (Bailey/Ellis TR 750-751) The Verizon witnesses believe that the Commission decision cited by witness Gabel should be reconsidered because the installation of a card reader system at a central office provides the same level of security to all occupants, and the cost of the system is not in any way related to the size of the central office, or any resident's share thereof. (TR 751) Each central office resident protected by the security system should pay a pro rata share of the system's costs, as Verizon has proposed. In addition, advanced security systems are necessary only because of the requirement that CLECs be allowed to collocate in Verizon's COs. (EXH 4, p.79) Accordingly, the Verizon witnesses argue, in its cost study Verizon properly assigns security costs pro rata to itself as well as to an average number of CLECs per central office, so that all companies that benefit equally from the security devices pay equally for security costs. (TR 751-752)

Regarding witness Gabel's criticism that Verizon was relying on old data for its assumed occupancy level, Verizon notes that the most recent data available shows an average of 5.43 collocators per Verizon central offices that have at least one collocator. (EXH 4, pp.44-45; TR 752) The witnesses note that raising the fill factor in the Building Modification rate element from four to five would result in a 7.5% reduction of that element, from \$237.96 to \$220.16. (Bailey/Ellis TR 752)

Last, in its brief Verizon asserts that the Commission should approve Verizon's proposed building modification rate element because this element has not been specifically challenged in this proceeding. (Verizon BR at 38) Moreover, Verizon witnesses Bailey/Ellis argue that Verizon will continue to incur building modification costs in a forward-looking environment, either in conjunction with the initial construction of the central office or in responding to the first request of a CLEC to collocate at the central office. (TR 749)

ANALYSIS

FPSC Order No. PSC-00-0941-FOF-TP states, in pertinent part,

. . . we find it appropriate that the costs of security arrangements, site preparation, and other costs necessary to the provisioning of collocation space incurred by the ILEC that benefit both current and future collocating parties shall be recoverable

by the ILEC from current and future collocating parties. In this case, these costs shall be allocated based on the amount of floor space occupied by a collocating party, relative to the total collocation space for which site preparation was performed. (emphases added)

. . . costs of security arrangements, site preparation, and other costs necessary to the provisioning of collocation space incurred by the ILEC that benefit current or future collocating parties and the ILEC shall be recoverable by the ILEC from current and future collocating parties, and a portion shall be attributed to the ILEC itself. We note that the ALECs addressed their concerns over security issues that not only benefit collocating parties, but also benefit the ILEC. Acknowledging those concerns, we shall require that when multiple collocators and the ILEC benefit from modifications or enhancements, the cost of such benefits or enhancements shall be allocated based on the amount of square feet used by the collocator or the ILEC, relative to the total useable square footage in the central office. (emphasis added) (PSC-00-0941-FOF-TP, pp. 94-95)

In its order the Commission recognized that cost recovery should differ depending on which party (or parties) benefited from the modification or enhancement.

Staff witness Gabel recommends that, at a minimum, Verizon should follow the prior Commission order and allocate the security access costs (which are included in Verizon's building modification element) on a per square foot basis rather than pro rata based on the number of occupants. However, staff believes that there is merit in allocating these security costs based on the number of occupants. First, staff notes that based on cost-causation principles it is the existence of collocation that causes Verizon to incur additional security costs. Verizon notes that prior to collocation, its COs were secured with a simple lock and key. Second, it appears that if these costs are assessed on a per square foot basis Verizon arguably would incur a disproportionate share of the cost, since it occupies the majority of the central office. Third, consistent with the Commission's prior order, Verizon includes itself in the occupancy rate total; therefore, the costs of security access are shared by the ILEC and collocating CLECs. Most importantly, this method is also consistent with the FCC's and the FPSC's directive that the first collocator in a CO not be responsible for the entire cost of an upgrade or change that would benefit other collocators or the ILEC. (PSC-00-0941-FOF-TP, pp. 93-94) Fourth, staff believes that cost allocation is not an exact science. In its prior order the Commission stated that "The objective is to arrive at a method that neither favors nor discriminates against any carrier."⁶⁷ Staff believes that allocating the security access costs based on the number of occupants meets this criterion; therefore, staff recommends that the Commission consider modifying its policy for these costs, based on the additional information provided by Verizon in this proceeding.⁶⁸

⁶⁷ PSC Order No. PSC-00-0941-FOF-TP, p. 92.

⁶⁸ As noted in other sections of this recommendation, BellSouth and Sprint currently recover their security costs on a square foot basis. Staff does not believe that having the ILECs recover costs via different allocation strategies is problematic because as noted several times within this recommendation, each ILEC has different practices and procedures.

While witness Gabel focused solely on the recovery method for the security access portion of Verizon's building modification element, staff believes that the prior Commission order also addressed site modifications. Included in Verizon's building modification rate are its site preparation costs (i.e., demolition and site work etc.) which are allocated based on the average number of collocators, not per square foot. (EXH 47) Staff believes that like the security access cost, but for collocation, Verizon would not need to modify its COs. Therefore, staff believes that the collocators are the cost causers and the parties which benefit from these modifications. Verizon's recovery method for its site preparation costs reflect this concept, consistent with the Commission's prior order. As stated above, staff believes it is reasonable to relax the Commission's prior policy and allow Verizon to recover these costs based on the average number of CLECs in its COs rather than on a square foot basis. Staff believes that, consistent with the Commission directive in its prior order, this method neither discriminates against or benefits one provider over another.

VERIZON CONCLUSION

Staff believes that this record supports several options. Moreover, staff believes that since the security access costs and the site preparation costs are easily severable from the building modification rate, the Commission could allow Verizon to recover one based on the number of occupants and the other based on square footage.⁶⁹ (Ellis/Bailey TR 752-753)

If the Commission believes it is appropriate for Verizon to recover its building modification costs (both security access costs and site modification costs) based on the number of occupants, staff recommends that Verizon modify its occupancy level (from 4 to 5.43) to reflect the most recent data. (EXH 4, pp.44-45) Holding all else constant, staff believes that increasing the occupancy rate from 4 to 5.43 reduces the building modification rate from \$227.53 to \$203.24.⁷⁰

If the Commission prefers that building modification costs (security costs and site modification charges) be recovered on a per square foot basis, it should order Verizon to apportion these costs on a per square foot basis, consistent with Order No. PSC-00-0941-FOF-TP.

Last, if the Commission believes that the costs for security access charges and site preparation should be recovered differently (i.e., one based on the number of occupants and the other based on square footage), it should direct Verizon accordingly. Staff believes that if any rate is developed based on the number of occupants, the occupancy rate should be modified in all cases to reflect the most recent data as stated above.

⁶⁹According to the Verizon witnesses, the result of removing security costs from the building modification rate lowers that rate from \$237.96 per month to \$163.29 per month; adding security costs into the floor space rate raises that rate by \$0.37 per square foot per month.⁶⁹ (Bailey/Ellis TR 752-753)

⁷⁰This calculation was done by staff using the revised Verizon study (EXH 47, BKE-1) filed on September 26, 2003, changing only the occupancy factor. When staff's other recommended changes are applied, the building modification rate is \$112.67.

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All rates are also subject to the modifications recommended by staff in all other applicable issues. Any revised rates and all supporting documentation demonstrating the changes made, should be filed within 60 days of the issuance of the order in this phase of the proceeding.

Space Availability Reports (T. Brown)

The issue before the Commission is to determine the proper rates and appropriate application of those rates as they apply to space availability reports. Space availability reports may also be called premises space reports by certain parties. Before beginning, staff notes that AT&T witness Turner's testimony and recommendation only address BellSouth's space availability report. Staff also notes that Verizon provided limited testimony on this topic. In addition, Sprint and Verizon both claim that they have never had a request for a space availability report in Florida, and BellSouth has had fewer than five requests region wide. (TR 274, 314, 453, 753)

The space availability report is an optional offering, with a non-recurring charge. Each of the ILEC's proposed rates seeks to recover the costs incurred in producing the report for a particular premises or central office (CO). The rate is applied per wire center per request. (EXH 35, p.2; EXH 39, p.13; EXH 45, p.19) BellSouth's space availability report will specify the amount of collocation space available at each requested premises, the number of collocators, and any modifications in the use of the space since the last report. (EXH 35, p.2) Sprint's premises space report rate includes the following information: square footage available for collocation, number of other collocators in the CO, modifications in the use of space since the last space report, measures being taken to make additional space available, average distance to the main distribution frame (MDF), and the average distance to the power source. (EXH 39, p.13) Verizon's detailed report provides the requesting collocator with the available collocation space within the specific CO. (EXH 45, p.19) In addition, Verizon's report also includes information on existing occupied space and future requirements for space within the CO. (EXH 45; pp.19-20)

ANALYSIS

BellSouth

BellSouth witness Shell asserts that BellSouth's "... proposed rates should be proper if they are based on a forward-looking cost study that adheres to the Total Element Long Run Incremental Cost (TELRIC) pricing rules and uses the cost study methodology previously approved by this Commission." (TR 241) Witness Shell asserts that BellSouth has used the same cost methodology that was previously approved by this Commission in its Orders in Docket No. 990649A-TP (Order No. PSC-01-1181- FOF-TP, dated May 25, 2001 and Order No. PSC-01-2051-FOF-TP, dated October 18, 2001). (TR 241-42, 298) In addition, witness Shell claims that BellSouth has made all applicable adjustments which were ordered in that docket and has updated other factors and loadings to reflect the latest available inputs. (TR 243, 298)

AT&T witness Turner argues that BellSouth's proposed nonrecurring charge of \$572.66 for a space availability report is "completely outrageous" and "unsupportable," especially when compared to charges in place in other states. (TR 568; AT&T/Covad BR at 27) Witness Turner asserts that the \$572.66 charge BellSouth has proposed for the space availability report "... does not account for efficient processes that I am confident BellSouth has at its disposal such as using computer aided design (CAD) systems to maintain a space inventory." (TR 569-70) Responding to witness Turner's allegations, BellSouth witness Shell testified that BellSouth does

not have a CAD system to maintain a space inventory for use in developing a space availability report. (TR 274) Although BellSouth does have a CAD system, witness Shell asserts that it is only used to maintain floor space drawings for company purposes. Moreover, the CAD system is not “real-time” and given the fact that BellSouth has over 1,600 central offices, witness Shell believes that “. . . it is not reasonable to assume that the CAD system will have the current information at any point in time.” (Id.)

AT&T witness Turner also alleges that BellSouth has inappropriately included costs for developing the space availability report, which would usually be treated as a normal part of being in the telecommunications business. (TR 569) He argues that based on the development of the costs for this report, it is BellSouth’s intention to transfer the costs to inventory the use of its telecommunications space within a central office to the CLEC every time a report of this nature is requested. (Turner TR 569) As a result, witness Turner proposed that BellSouth’s rate be rejected by this Commission.

BellSouth witness Shell disagrees, asserting that BellSouth is merely seeking to recover the costs BellSouth incurs in preparing a report requested by a CLEC, not to recover the cost of building an inventory as AT&T witness Turner suggests. (TR 274; BR at 27) Witness Shell notes that in any event, the space availability report is an option made available to CLECs. The witness also notes that to date, BellSouth has received fewer than five requests for these reports in all nine of its operating states. (TR 274, 314)

AT&T witness Turner, however, offers the following table to illustrate that BellSouth’s proposed rate is out of line with what has been ordered or proposed in other states. (TR 569, 620)

State	Space Availability Report Charge
Texas	\$204.06
Missouri	\$168.04
Kansas	\$168.04
Oklahoma	\$168.04
California	\$150.00

(Source: TR 569; BR at 27)

Witness Shell responds to AT&T witness Turner’s allegations, offering that “. . . Mr. Turner’s analysis did not include charges for any of BellSouth’s states” (TR 273) Witness Shell adds,

If Mr. Turner had reviewed the Commission approved charges for other states in BellSouth’s territory, he would have seen that BellSouth’s proposed charge in Florida is not out of line. In fact, it is the lowest. (TR 273)

⁷¹ Staff notes that the five rates AT&T witness Turner provides this Commission are not from BellSouth’s nine-state operating area.

The witness offers the following information in support of BellSouth's proposed charge:

Table 9B-8, BellSouth's Space Availability Report Rates		
State	Price	Order/Docket Number
Alabama	\$1,075.12	Ordered 05/31/02 in Docket No. 27821
Florida	\$572.66	Proposed in Docket No. 981834-TP/990321-TP
Georgia	\$2,148.00	In current Interconnection Agreement
Kentucky	\$2,158.67	Ordered 12/18/01 in Administrative Case No. 382
Louisiana	\$1,044.07	Order No. U-24714, Sub docket A, dated 09/21/02
Mississippi	\$1,081.40	Ordered 10/21/01 in Docket No. 00-UA-999
North Carolina	\$2,140.00	Ordered 09/24/02 in Docket No. P-100, Sub 133j
South Carolina	\$1,077.57	Order No. 2001-1089, dated 11/30/01
Tennessee	\$2,027.00	Interim price pursuant to Docket No. 00-00544

(Source: EXH 8, p.182; Shell TR 273)

Witness Shell goes on to assert that the nonrecurring rate proposed in Florida is appropriate and based on the most up-to-date review of this activity. (TR 273) According to witness Shell, BellSouth developed the cost associated with its space availability report by determining the work groups involved and the amount of time required to produce a report. After that, the work time was multiplied by the appropriate labor rate and factors to calculate the cost for developing the report. (Id.) In addition, producing the space availability report “. . . requires one group to interface with the CLEC and two other groups to make an assessment and compile data of current space availability, current and future space demand, current and future associated power and air conditioning needs, etc.” (Shell TR 273)

In addressing the out-of-region rates provided by AT&T witness Turner, witness Shell asserts that given the existence of vast differences in the rates for space availability reports it is possible that they reflect different activities. Witness Shell adds that BellSouth does not know what assumptions are used by other companies, and that the rates in the out-of-region states are “a poor basis for comparison.” (TR 274) In support, BellSouth also alleges in its post-hearing brief that witness Turner has embarked on a course “. . . to mislead the Commission.” (BR at 23, 26) BellSouth offers testimony on the same point from the Georgia commission (Docket No. 14361-U, April 5, 2002) where witness Turner presented a much different table.

Table 9B-9, Witness Turner's Space Availability Rate Comparison Provided in Georgia Proceeding⁷²	
State	Space Availability Report Charge
Texas	\$204.06
Missouri	\$168.04
Kansas	\$168.04
Oklahoma	\$168.04
Massachusetts	\$651.76 ⁷³
Pennsylvania	\$800.00
Virginia	\$800.00
Maryland	\$800.00
New Jersey	\$800.00
Delaware	\$800.00
California	\$150.00 ⁷⁴

(Source: EXH 44, p.82; BR at 25)

Witness Turner provided the Georgia Commission with rates from eleven other states ranging between \$150 and \$800, in a proceeding in which BellSouth had proposed a rate in excess of \$1,000. AT&T did not provide the same information to this Commission in this proceeding wherein BellSouth proposed a different, lower rate. (TR 569; TR 619-623; EXH 44, p.82) In testimony filed with this Commission, witness Turner omitted the \$800 rate set in five different states, and the \$651.76 rate proposed in Massachusetts. (TR 569; TR 619-623; EXH 44, p.82; BellSouth BR at 25) Upon cross-examination, witness Turner conceded that in preparing his testimony in this proceeding, he started with the Georgia chart but took out everything that was higher than what BellSouth proposed in Florida. (TR 623) As such, staff is not persuaded by witness Turner's claims that BellSouth's rate for a space availability report is "completely outrageous when compared to charges that have been established in other parts of the country." (TR 568)

Upon comparing BellSouth's proposed rate to rates in-region and out-of-region, the rate proposed in Florida seems reasonable. In fact, staff notes that BellSouth's proposed space availability rate in Florida would be the lowest of any in the BellSouth operating territory. (EXH, 8, p.182; TR 273) Despite the fact that BellSouth witness Shell believes the rates in the out-of-region states are "a poor basis for comparison," BellSouth's rate still appear reasonable when compared to other states mentioned in this proceeding. (TR 274; EXH 44, p.82; BR at 25) Staff sees no reason to assume that BellSouth's proposed work times and its corresponding rate is anything less than appropriate given the record here. In fact, staff believes that both are well

⁷² In EXH 44, BellSouth provided this Commission with a table AT&T witness Turner provided the Georgia Commission which contains six additional rates from outside the BellSouth operating area. Staff notes that all six rates were above the rate BellSouth has proposed in Florida in this proceeding.

⁷³ This value represents Verizon's proposed value in Massachusetts. There is no final ordered value at this time, but it is still indicative of the significant problem with BellSouth's proposed rate. (EXH 44, p.82; BellSouth BR at 25) (Footnote included in the table originally provided by witness Turner in the Georgia Commission proceeding.)

⁷⁴ This rate is the proposed rate by SBC-Pacific Bell in California and does not reflect a Commission-approved rate at this point.

supported by BellSouth. (TR 273; EXH 34-36) Once again, staff is comforted knowing that space availability reports are optional and infrequently requested. (EXH 35, p.2; TR 274, 314)

Alternatively, AT&T witness Turner proposed that the work times associated with space availability reports be limited to only two labor times and categories. (TR 570) Specifically, witness Turner proposed retaining BellSouth's estimate of 0.5 labor hours for the Account Team Collocation Coordinator and reducing the time for the Common Systems Capacity Management function. Witness Turner states that the Common Systems Capacity Management function ". . . will only require one hour to pull the space availability from the CAD systems that BellSouth has available to it, identify the available space, and provide this information to the Account Team Collocation Coordinator in an email message." (TR 570) As such, the resulting rate proposed by AT&T is \$112.56. Staff believes that the 1.5 hours proposed by witness Turner is unsupported. He provides no concrete evidence to support his assertion that BellSouth's rate is "completely outrageous" and "unsupportable," nor does he support his claim that BellSouth ". . . does not account for efficient processes that I am confident BellSouth has at its disposal . . ." (TR 569-70) Although witness Turner specifically addressed the use of a CAD system as an efficiency enhancement, staff notes that BellSouth's CAD system appears to be used to maintain floor space drawings and is not "real-time." (TR 274) Witness Shell goes so far as to state that given the fact that BellSouth has over 1,600 central offices, he believes that ". . . it is not reasonable to assume that the CAD system will have the current information at any point in time." (Id.) Based on the foregoing, staff recommends accepting the BellSouth's space availability report rates and the application of those rates, subject to incorporating staff's recommendations in all other applicable issues.

Sprint and Verizon

Staff witness Gabel asserts that the ILECs rely on work time estimates of subject matter experts (SMEs) to support their respective proposed costs. Sprint assumes that the costs associated with producing a space report are the result of one-time events for each CO report requested, while Verizon assumes that each space report is a combination of two processes. (Gabel TR 881) The first is a one-time comprehensive examination of the CO, and the second, an annual evaluation to update any information that has changed since the initial examination of conditions within the CO. (Id.)

Witness Gabel asserts that he observed significant variations in the estimated work time each party assumed necessary to complete the task at hand, especially with respect to Verizon. (TR 881) He contends that although it may be reasonable to observe some variation in the number of tasks and work times necessary to produce a space report, one would expect to observe considerable similarities across the companies as well. (TR 882) Witness Gabel states, "[t]he magnitude of the variations observed indicates that Verizon expects to be far less efficient than BellSouth and even Sprint when producing these reports." (Id.) Witness Gabel goes on to assert that even though there are only a few hours difference between Sprint and BellSouth, Sprint's proposed rate should not be approved. He contends, "[w]hile Verizon's work time estimates are clearly overstated the relatively more efficient time estimates proffered by Sprint also suggest an overstatement of costs." (Gabel TR 882) Because BellSouth's rates are the lowest, witness Gabel suggest that those rates apply to Sprint and Verizon.

According to staff witness Gabel, Sprint indicates that it produces space reports based on an analysis of CO drawings. (TR 882) Witness Gabel claims that it is reasonable to assume that these drawings are kept up to date as additional equipment and collocators are placed in a CO. If that is the case, witness Gabel states that “. . . determining existing conditions and calculating the square footage and distances to essential facilities should take little time to complete.” (Id.) Additionally, he contends that the remaining items on Sprint’s report should also take a relatively brief amount of time to gather since the information should be readily available from billing records or data maintained by Sprint employees. (Id.)

Staff witness Gabel recommends that this Commission require both Sprint and Verizon to calculate their space report costs assuming that this activity requires no more than 10 hours to complete. (TR 883) He goes on to state, “I find this amount of work time to be more reasonable than either Sprint or Verizon's original proposals as it reflects greater efficiency and a more intimate knowledge of the operating conditions of their COs.” (Id.) Addressing Sprint and Verizon’s proposed rates, staff witness Gabel states “. . . my proposal is not that the rate be identical across company [sic] but just the important input of how much time it takes to do something . . .” (TR 890)

Sprint witness Davis argues that witness Gabel’s recommendation is based solely on the fact that BellSouth had the lowest total work time necessary to produce a space availability report. (TR 453) He asserts that witness Gabel’s proposal to use a total work time of 10 hours (to match BellSouth) fails to address the fact that “Sprint has no experience providing space reports in Florida.” (TR 453; EXH 2, p.310) In addition, witness Davis argues that staff witness Gabel fails to acknowledge that services provided so infrequently take extra time due to a lack of familiarity by the individuals performing the work. (TR 453) Moreover, Sprint’s cost studies and rates were not evaluated in detail by AT&T since it chose to focus on BellSouth instead. (Turner TR 541-542; EXH 17, p.70; Sprint BR at 13)

Sprint witness Davis contends that,

[s]pace availability including assignments of interfaces to Sprint’s network changes continuously which means that work performed on an application or a space availability report on behalf of one ALEC will not benefit future applicants for collocation. Each collocation arrangement is unique and is built based on specifics contained on the ALEC’s application. (TR 419-20)

Witness Davis asserts that Sprint predominately uses non-recurring charges (NRCs) for collocation so that cost recovery matches the timing of when those costs are incurred. He goes on to argue that the continuing use of NRCs to recover costs as they are incurred is warranted because of Sprint’s experience with abandoned and unclaimed collocation arrangements and the sharp decline in collocation applications the past few years. (TR 420) Witness Davis contends that Sprint’s NRCs were determined by applying a common costs factor to the sum of labor, materials, sales tax and freight. (Id.)

Verizon witnesses Bailey/Ellis assert that “. . . no ALEC has ever ordered a space report in any Verizon West jurisdiction, primarily because Verizon provides a list of space exhausted central offices on the Internet free of charge.” (TR 753) Additionally, Verizon’s witnesses contend that witness Gabel’s proposed 10 hours would not provide Verizon with enough time to provide a space availability report of the detail Verizon typically offers. (TR 573; EXH 4) In any event, Verizon asserts in its post-hearing brief that “the parties had only minor criticisms of a small number of inputs.” (BR at 2) Verizon proposes that this Commission adopt the rates proposed in Verizon’s Revised Expanded Interconnection Services Cost Study. (Id.; EXH 47)

Although witness Gabel believes that his proposal is consistent with the TELRIC objective that costs should reflect the operations of an efficient firm, staff believes that he does not take into account that costs will vary among companies. (TR 890) By accepting witness Gabel’s recommendation, staff believes that Sprint and Verizon may be denied the ability to recover their costs for providing such a report. Moreover, this Commission has previously recognized the appropriateness of company-specific inputs in Dockets Nos. 990649A-TP, and 990649B-TP. (Orders Nos. PSC-02-1311-FOF-TP, PSC-02-1574-FOF-TP, and PSC-03-0058-FOF-TP)

Staff believes that witness Gabel’s recommendation fails to address the inherent operational and procedural differences between the ILECs. (TR 453; EXH 2, p.310) Instead, it appears that witness Gabel has merely applied “. . . the time estimate of the ILEC who has proposed the lowest time estimate” without any additional analysis. (TR 890) For example, Verizon witnesses Bailey/Ellis contend that witness Gabel’s proposal would not provide Verizon with enough time to provide a space availability report of the detail Verizon typically offers. (TR 573; EXH 4) Similarly, Sprint witness Davis puts forth Sprint’s concerns, stating “Sprint has no experience providing space reports in Florida.” (TR 453; EXH 2, p.310) Witness Davis acknowledges that services provided infrequently take extra time due to a lack of familiarity by the individuals performing the work. (TR 453) Absent additional support, staff does not believe that witness Gabel’s space availability report work time proposal of 10 hours is appropriate for Sprint or Verizon. (Gabel TR 883, 890; Davis TR 453) Instead, staff recommends that the proper rates and appropriate application of those rates for Sprint and Verizon are those proposed by each ILEC in this proceeding, subject to incorporating staff’s recommended changes in all other applicable issues. Staff takes additional comfort with its recommendation here given the fact that space availability reports are optional and so infrequently requested. (EXH 39, p.13; EXH 45, p.19; TR 453, 753)

CONCLUSION

The proper rate and the appropriate application of the rate as applied to space availability reports are those proposed by the ILECs in this proceeding, subject to incorporating staff’s recommended changes in all other applicable issues.

Collocation Cable Records (Cater)

In its cost study, BellSouth proposes separate rate elements for collocation cable records. (EXH 35, WBS-2, p.4) These rate elements recover BellSouth's non-recurring labor costs of updating its records concerning the location of CLEC equipment. (EXH 68, WBS-3, pp.6-7) During the course of the hearing, both staff witness Gabel and AT&T witness Turner raised concerns over these elements. This section of the recommendation addresses those concerns.

Staff notes that Sprint does not have separate elements for cable records, but indicates that it recovers these costs through its cable records elements through various project management and engineering fees. (EXH 5, Interrogatory 83; Revised Response to Interrogatory 55) Verizon expects the CLEC to keep its own collocation cable records, and does not maintain its records to the same precision as BellSouth. (Bailey/Ellis TR 713)

PARTIES' ARGUMENTS

BellSouth

BellSouth witness Shell explains that his company's collocation cable records rate elements represent charges for the work required to build cable records in BellSouth's systems. He indicates that the charges for cable records are nonrecurring charges, and the only reason this work is done is to comply with a CLEC's request to collocate in a BellSouth central office. He explains that these charges are a standard rate developed by BellSouth for activities associated with placing company-specific cable termination information into BellSouth's systems. (TR 275-276)

Witness Shell further explains that once a CLEC submits a bona fide firm order, the space preparation and cable records work begins. From the time BellSouth receives a firm order to when it completes its work at the collocation site, the Circuit Capacity Management (CCM) group interfaces with the CLEC, obtains the equipment inventory utilization of the frame, and works with other network personnel to develop the initial frame assignments, based on CLECs' applications and firm orders. (TR 277-278) While BellSouth is reviewing the application, the CCM verifies the equipment availability and other associated equipment requirements. (Shell TR 278)

The CCM's function is to obtain the equipment inventory of the frames and work with the CLEC's certified vendor on the initial assignment on the frame. Performing this function may require phone calls, meetings, and site visits. Additionally, once the cables are installed, and prior to the facility assignments being input into the required databases, the terminations must be verified to ensure they are correct. (Shell TR 279) After the frame terminations are verified, the CCM provides other BellSouth network groups the information they need in order to input the assignments into databases. (Shell TR 279-280) BellSouth indicates that a CLEC is only charged for the collocation cable records rate elements when the collocation application requests additional facilities. (EXH 8, p.183)

Staff witness Gabel testifies that he cannot say much about BellSouth's proposed rates for collocation cable records since BellSouth did not do a good job of explaining the activities involved with these elements or the basis for its time estimates. Moreover, he contends that he cannot compare BellSouth's proposed rates for collocation cable records since neither Sprint nor Verizon propose similar rate elements. He recommends that the price for the collocation cable records elements be set to zero until BellSouth provides a more detailed explanation of what is being recovered through these elements. (TR 884-885)

AT&T witness Turner testifies that a large portion of the costs BellSouth recovers in the collocation cable records elements are already recovered from other elements the CLEC pays for when purchasing interconnection arrangements. He argues that the CCM labor times appear to be duplications of functions and labor costs included in the application cost rate elements⁷⁵ where BellSouth also recovers costs for CCM. (TR 571)

Witness Turner contends that it is a routine process for BellSouth to establish operational support systems records of CLEC cables terminating on BellSouth's frame and that the cost is already being recovered through the capital recovery charges included in monthly recurring rates. He argues that updating cable records is a normal function in maintaining the assets' integrity and is included in recurring maintenance charges. He testifies that it is AT&T's position that there is no justification to create a collocation element for updating cable records. (TR 572)

Witness Turner notes that Sprint and Verizon do not have charges of this type in their collocation proposals. He states that the bottom line is that these rates are unreasonable and constitute double-recovery since they are already being recovered in recurring rate elements. He observes that in reviewing collocation cost studies from around the country, he does not believe that he has seen any other ILEC charge for updates to its cable records system, as part of its proposed collocation elements. (TR 572)

BellSouth witness Shell responds that while AT&T does not dispute that cable records should be kept, the allegation is that other rate elements incorporate the functions and labor that comprise the elements that recover cable records costs. (TR 277) He notes that AT&T witness Turner seems to believe that the cost of the CCM function in the cable records elements is already recovered in the Application Cost elements. However, he states that the CCM costs in the Application Cost elements are only associated with processing the CLEC's application and occur prior to the CLEC accepting the response to its application by submitting a bona fide firm order. (TR 277) Witness Shell asserts that the cost of the manual efforts required for BellSouth to update its cable records is not recovered through any factors such as the maintenance factors, which are in place to recover routine maintenance costs; cable records work is not part of BellSouth's routine repair and maintenance systems. (TR 278)

⁷⁵ These rate elements are Application Cost-Initial (H.1.1) and Application Cost-Subsequent (H.1.46).

ANALYSIS

There does not appear to be any dispute that BellSouth should update its cable records. (TR 572) AT&T's concern with these elements is whether or not BellSouth is double-recovering its costs of updating cable records.

AT&T argues that BellSouth already recovers its collocation cable records costs through its Application Cost-Initial (Element H.1.1) and Application Cost-Subsequent (Element H.1.46) rate elements. In BellSouth's input file for the Application Cost-Initial rate element, there is a proposed work time of eight hours for the CCM work group. BellSouth's cost study documentation indicates this work group reviews the service inquiry and interfaces with various work groups to discuss and respond to the application. (EXH 34, Appendix H, pp.9-10) In the Application Cost-Subsequent element, there is a proposed work time of five hours for the CCM to do similar activities for subsequent applications as it did with the initial application. (EXH 34, Appendix H, pp.10-11)

Staff reviewed the input sheets for the collocation cable records rate elements, and it does not appear that any of the work times provided for any of these elements cover the same work functions that are included in the application cost rate elements. For example, with the application rate elements, the CCM group reviews and responds to the collocation application, while with the collocation cable records rate elements, the CCM works with other groups and performs such functions as preparing wiring schematics and issuing various cable system records. (EXH 34, Appendix H, pp. 9-11, pp.122-125)

CONCLUSION

Since there is no apparent double recovery of CCM costs, staff recommends that BellSouth be allowed to recover its cost of collocation cable records elements appear to be reasonable. Therefore, staff believes that BellSouth's proposed collocation cable records rates are appropriate and recommends that the rates be approved, subject to staff's recommended changes in all other applicable issues.

Cabling (T. Brown)

Each of the ILECs in this proceeding has proposed numerous elements for performing cabling activities. Staff notes that not all of the elements identified by the parties are addressed within this recommendation. Instead, staff focused on the few elements that have generated the most discussion, whether in the parties' testimony or in their post-hearing briefs. To the extent that other cable-specific elements are not addressed here, staff recommends accepting the parties' rates as filed, subject to staff's recommendations in all other applicable issues. In the BellSouth analysis that follows, there is discussion related to entrance cable and riser cable. Staff offers a brief explanation of each here. Entrance cable refers to the cable which enters a central office (CO) and continues to a splice point, while riser cable refers to cable that runs from the splice point to a CLEC's collocation space.

ANALYSIS

BellSouth

Performance of Activities

AT&T witness Turner argues that BellSouth's charge for installation of fiber entrance cables exceeds what is reasonable or necessary and may include costs the CLEC incurs. (TR 562-65) Moreover, witness Turner asserts that many of the functions that BellSouth has identified will not be performed by BellSouth and should not be included in the time estimate. (TR 563) He offers several examples in support of his assertion, including that BellSouth's Outside Plant (OSP) Construction does not install the fiber riser cable according to BellSouth's interconnection agreements, BellSouth fails to provide data to support the 7.5 hours for Outside Plant Engineering, and BellSouth includes costs for Manhole Contract Labor. (Turner TR 562-65) In an effort to remedy the alleged deficiencies, witness Turner proposed the following:

- Removing the 4.0 hours for Common Systems Capacity Management for Riser Cable Installation from BellSouth's cost study. (TR 562; EXH 16, p.56)
- Reducing BellSouth's estimate of the time required for Outside Plant Engineering to 5.5 hours to account for work performed by the collocater. (TR 563-64)
- Reducing the time required for installation of a 24-fiber cable to 5.0 hours (including 3.0 hours for activity associated with set-up, take-down, and travel, and 2.0 hours for fiber splicing) (TR 564)
- Removing the cost of installing the entrance facility through the manhole into the interconnection point in the cable vault. (TR 564-65)

To the contrary, BellSouth witness Shell asserts that BellSouth's work times associated with fiber entrance cable installation are valid and should not be reduced as AT&T witness Turner proposes. (TR 262-63) Witness Shell argues that BellSouth "always installs the entrance cable (fiber or copper) through the manhole into the cable vault up to the splice point." (TR 263, 265, 275) He contends that "this is never done by a CLEC or it[sic] certified vendor." (TR 263) In support, witness Shell offers the following;

- Common System Capacity Manager work time relates to planning the riser cable installation, and is “. . . required whether BellSouth is installing the riser cable or a CLEC’s certified vendor is installing riser cable.” (TR 263)
- Outside Plant Engineer work time is valid because BellSouth will always install the entrance cable.
- The riser cable, the cable that runs from the collocation space in the central office to the splice point in the cable vault, is the cable that the CLEC will install. (TR 264)
- BellSouth has already reduced the work time to 5.25 hours for Outside Plant Construction in element H.1.65 as a result of the CLEC installing the riser cable. (TR 265)

Moreover, witness Shell claims that witness Turner’s testimony is suspect because he appears to confuse entrance cable with riser cable. (TR 562) Specifically, he points out that witness Turner’s testimony includes a question relating to “fiber entrance cable installation elements,” yet his answer to this question discusses riser cable installation. (Id.)

Witness Shell acknowledged that witness Turner “. . . is correct that most of the current interconnection agreements state that the CLEC will provide and install the riser cable, which is the cable that runs from the collocation space in the central office to the splice point in the cable vault.” (TR 263)(emphasis in original) He notes that most of the current interconnection agreements state that CLECs are responsible for providing riser cable, and not entrance cables. (Id.) BellSouth points out in its post-hearing brief that witness Turner relies upon a single sentence buried within a lengthy paragraph in the AT&T/BellSouth Interconnection Agreement.⁷⁶ (BR at 18-19) In fact, BellSouth adds that the same paragraph begins with language stating that “AT&T may elect to place AT&T-owned or AT&T leased entrance facilities into the Collocation Space.” (Id. at 19) Staff believes that this appears to illustrate that AT&T may elect to place entrance facilities instead of using BellSouth to place entrance facilities. Still other parts of the same document provide the applicable rates for cable installation done by BellSouth. Another section specifically states the following: “Cable Installation. Cable Installation Fee(s) are assessed per entrance cable placed.”⁷⁷ (Id.) If BellSouth never places entrance cable for AT&T (as witness Turner contends), staff finds it hard to believe that there would be a negotiated provision addressing how BellSouth is to be compensated for entrance cable placement.

AT&T witness Turner explains that what is actually described does not refer to cable installation, but rather to the engineering work portion of the installation fee, despite the fact that it expressly refers to “cable installation” and “entrance cable.” (TR 603-604) On cross-examination, witness Turner continued to insist that AT&T installs its own entrance cables. However, he admitted to having no personal knowledge on this point and claimed instead to have gathered information from speaking to the AT&T personnel responsible for this activity. (TR 604-605) At the same time, he did not identify any of these AT&T employees with whom he ostensibly spoke. Moreover, he could not identify the time frame in which AT&T personnel installed entrance cable, did not know the number of times that AT&T had installed entrance

⁷⁶ See AT&T/BellSouth Interconnection Agreement-Florida, as approved by this Commission in Docket No. 000731-TP, Order No. PSC-01-2357-FOF-TP. (Attachment 4, § 5.3)

⁷⁷ Id., § 7.3

cables in Florida, and was unable to identify a single central office in Florida in which such installation has taken place. (TR 605-606) Staff believes that at a minimum there appears to be some misunderstanding on witness Turner's part regarding the proper interpretation of several sections of the Agreement. (TR 599-604) For the foregoing reasons, staff believes that BellSouth's work times and associated activities appear to be reasonable and well-supported by the record.

Separation of Entrance Cable Elements

Witness Turner also suggests that BellSouth should have two rate elements for entrance cable installation: one when BellSouth performs splicing, and one when no splicing is required. (TR 565) Alternatively, he proposes that BellSouth "weight" the costs that only occur when splicing is required with a factor that is based on how often fiber entrance cable installations require splicing. In support witness Turner states, "[b]ased upon my experience in other parts of the country, splicing is generally not required." (Id.) By doing so, he argues that BellSouth could retain one rate element and more accurately reflect the costs that it incurs. (Id.) Witness Turner alleges that similar problems exist with BellSouth's copper entrance cable installation nonrecurring charge. (TR 570-571)

Staff believes that BellSouth seems to have already addressed witness Turner's concerns. Witness Shell suggests that BellSouth already has two elements to reflect whether or not BellSouth performs the splice, just as witness Turner proposed. (TR 265, 275, 570-571) Element H.1.65 represents the non-recurring cost of labor to pull the fiber cable and Element H.1.66 is the splicing charge. (Id.) BellSouth filed cost support for both elements. (TR 263-265) According to witness Shell, if BellSouth does the splice, both elements apply; if not, only the first element, H.1.65, applies. As such, witness Shell contends that there is no overcharge for splicing. (TR 265) These elements also recover the costs associated with planning the riser cable installation, but do not include the cost to install the riser cable. (Id.) Element H.1.5 recovers this cost and would still apply where an agreement does not require BellSouth to install the riser cable. (Id.; EXH 8, pp.135, 209, 214-215)

Witness Turner claims that BellSouth has also included costs associated with a "Connect and Test" function performed by Outside Plant Construction for a total of 16.8333 labor hours in rate element H.1.57. (TR 570) According to the AT&T witness, this is inappropriate as BellSouth includes a "Connect and Test" function in rate element H.1.58 for Outside Plant Construction amounting to 0.4167 labor hours per 100 copper pairs. (TR 570-71) To avoid a double recovery situation, witness Turner proposes that the Commission remove the 16.8333 labor hours for the "Connect and Test" function performed by BellSouth's Outside Plant Construction. (TR 571) Contrary to the assertions of witness Turner, BellSouth witness Shell asserts that Element H.1.58 is a new cost element, designed to recover the cost to splice copper pairs. (TR 275) However, Element H.1.57, "recovers the cost to perform functions other than splicing, e.g., pulling the entrance cable from the manhole to the vault and placing the cable on racks in the vault," and is similar to Element H.1.5 discussed previously. (Id.) Accordingly, there are connect and test activities performed in both cost elements, and there appears to be no double recovery. (Id.) Staff believes that the parties' arguments and staff's analysis regarding fiber entrance facilities are equally applicable to the copper entrance facilities discussed here. In

regards to witness Turner's double recovery argument, staff once again disagrees. Staff notes that elements H.1.57 and H.1.58 are two separate elements that reflect and recover separate labor activities. Staff believes that contrary to witness Turner's belief, collocators would not be charged for splicing when splicing is not done. Staff believes that as a result, witness Turner's concerns surrounding possible overcharges for splicing appear to be without merit. Because BellSouth already has two elements to separate entrance cable installation costs, staff sees no merit in addressing Turner's weighting proposal.

Cable Rack/Support Structure

Addressing cable racks, witness Turner states, "BellSouth has failed to properly account for the quantity of cables that can be placed in a cable rack in developing the pro-rata cost that the ALEC should bear." (TR 544) Witness Turner alleges that BellSouth's cost input for cable racks is ". . . out of line with a reasonable, cost-based level for this input." (TR 578) Using industry-accepted data from Bell Labs, witness Turner asserts that a 12 inch rack with a conservative 7 inch pile height should have a cable capacity of 74 cables, not 30 as proposed by BellSouth. (TR 577-78) By understating the number of cables, he argues that BellSouth has more than doubled the cost that collocators must pay for the cable support structure. (Turner TR 577) Witness Turner claims that his approach ". . . is the only cost-based approach that is appropriate in developing this important cost variable." (TR 578) He goes on to state, "I recommend that the Commission use the value that I have calculated because BellSouth provided no support for its value." (Id.)

In response, BellSouth witness Shell argues that witness Turner uses an arbitrary assumption for the cable rack size and assumes that 3 DS1 cables equal one fiber cable. (TR 296) He argues that witness Turner's analysis is not representative of the rack size BellSouth would use, nor is it representative of the procedures BellSouth uses for placing fiber cable in racks. (Id.) Witness Shell asserts that BellSouth's fiber entrance cable support structure costs are based on several assumptions, including; a five inch cable rack width with a five inch pile height, an average riser cable diameter of approximately .75 inches, cable racks equipped with cable retaining brackets with the cables run unsecured; and the physical fill of racks is estimated at 70% of theoretical maximum or approximately 30 riser cables. (TR 296; EXH 8, p.229; BR at 35-36) Witness Turner, on the other hand, proposes a 12 inch cable rack and a pile height of 7 inches holding 74 cables. (TR 577-578)

Witness Shell asserts that BellSouth's cable rack capacity is appropriately based on BellSouth's standards and the cable racking actually being used. Moreover, the witness contends that BellSouth utilized a systematic approach for determining the capacity of cable racks and witness Turner's proposal should be rejected. (TR 296; EXH 8, pp. 185-88; BR at 35-36) In its post-hearing brief, BellSouth puts forth that it is more appropriate for the Commission to set costs based on the standards and procedures that actually exist, as opposed to methods created by witness Turner to develop an unrealistically low rate. (BR at 36) Staff agrees, noting that BellSouth indicates that its analysis is representative of cable racking that it would typically use and the procedures that it has in place for placing fiber cable in racks. (TR 296) Staff believes that witness Turner has failed to support his proposal regarding cable racking. Specifically, witness Turner does not appear to have identified the specific Bell Lab study, nor the vintage of

the information that he relies upon. Contrary to witness Turner's claim that BellSouth provided no support for its cable rack value, staff believes that BellSouth has provided the very information that witness Turner desires as evidenced in the discussion above. (TR 578) BellSouth has also provided the assumptions used in determining support structure costs and provided additional detail on its support structure costs through discovery responses and testimony to support its position. (TR 296; EXH 8, p.229)

Sprint

Sprint witness Davis asserts that Sprint's cost studies comply with TELRIC principles, are forward-looking and contain no embedded costs.⁷⁸ (TR 417, 451, 464; Sprint BR at 24) Sprint asserts in its post-hearing brief that "[w]here staff's witnesses have questioned various aspects of Sprint proposed rates, Sprint has either modified its cost studies and associated prices to address these concerns or has demonstrated that the concerns are without merit." (Id.) AT&T did not extensively evaluate Sprint's cost studies or rates, choosing instead to focus on BellSouth. (TR 541-542; EXH 17, p.70) Therefore, staff's witnesses were the only parties to address Sprint's cabling elements.

Subsequent to and as a result of the Commission's decision in Phase I, Sprint has re-evaluated its policies regarding the work that CLECs can perform in Sprint's central offices and adopted BellSouth's practice. (TR 463-464; BR at 8) Sprint's policy change means that certain elements originally included in its cost study and proposed price list for activities currently performed by Sprint are no longer necessary. As a result, Sprint proposes to exclude costs associated with those activities from its price list. According to Sprint, this results in the elimination or reduction of both recurring and nonrecurring rates and charges related to power cable installations. (EXH 14, pp.92-96; BR at 8, 10) Sprint proposes to reduce rates related to Internal Cable - 48 Fiber and - Per 100-Pr. Copper Stub Cable. (Sprint BR at 9) Specifically, Sprint reduced the annual expense factor to 1.94% to reflect only the cost of removal. There was no change in the non-recurring charge (NRC), which recovers engineering only. (BR at 10) Sprint also eliminated or reduced several rates related to power cable material. (Id. at 9-11)

Witness Davis offers that current material costs are combined with work times supported by recent collocation installations, or supported by up-to-date building construction costs or recent vendor quotes. (TR 417-418, 464; EXH 1, p.26) In support, witness Davis offers that on average 80-90% of the first year collocation costs are supported by either actual cost analysis or forward looking vendor quotes, while 96-99% of the ongoing monthly recurring charges are supported by actual cost analysis or forward-looking vendor quotes. (TR 451; EXH 1, p.27) Moreover, he asserts that over 95% of the 190 work activities examined involved Florida-specific collocation arrangements. (Id.) Witness Davis believes that the use of "recent and current" data is "the best verifiable data for producing forward looking collocation costs." (TR 418) As such, Sprint contends that the Commission should approve Sprint's positions and its collocation costs and charges as set forth herein. (TR 416-417, 463; BR at 24)

⁷⁸ Sprint believes that it has fully met the burden established in FCC Rule 51.505 through its cost study and through the evidence presented in its testimony and related exhibits, and additional evidence presented in Sprint's responses to the extensive discovery in this proceeding. (BR at 13)

Staff witness Curry appears to be the only witness to specifically address Sprint's cabling. (TR 458-459, 828) Although witness Curry claims that Sprint's power cable costs were "significantly higher" than BellSouth's or Verizon's, he also asserts that most of Sprint's methodologies and explanations "appeared reasonable." (TR 828) In any event, it appears that witness Curry based his opinion on an R.S. Means estimate for power cables which was not intended for telecommunications applications. According to Sprint witness Davis, witness Curry is mistaken when he compares Sprint's power cable charges to the charges for power cables set forth in R.S. Means. (TR 458-459) Witness Davis asserts that the cable that the R.S. Means costs are based on is not telecommunications power cable. Witness Davis argues that telecommunications power cable is more expensive because it must be more flexible and offers greater protection against heat, moisture, flames and corrosion. (TR 458-459) In any event, Sprint has adopted BellSouth's practice of having CLECs build much of their own collocation arrangement, and it appears that CLECs will purchase their DC power cable directly. As such, Sprint's costs and charges for DC power cable will not apply and have been removed from the study. (Sprint BR at 9-11, 21) Because Sprint has revised its cost study and the charges appear to no longer apply, staff will not go into any additional detail regarding Sprint's power cable costs here.

In addition, witness Davis rebuts staff witness Gabel's general assertions on Sprint's costs and cost analysis calling them a series of "misrepresentations." (TR 451, 462) He argues that witness Gabel systematically zeroes in on the lowest cost provided by the three ILECs. (Id.) The witness states, "[l]ike Mr. Turner, Dr. Gabel does not credit Sprint with supporting its cost through actual cost analysis and does not acknowledge that Sprint does not have the same purchasing power or economies of scale of either BellSouth or Verizon." (Id.) Sprint's costs represent the purchasing power of 8 million access lines system-wide as opposed to Verizon's 58 million. (EXH 40)

As stated elsewhere in staff's recommendation in this proceeding, staff does not believe that it is appropriate to apply witness Gabel's "lowest of the three costs" recommendation. Despite witness Gabel's belief that his proposal is consistent with the TELRIC objective that costs should reflect the operations of an efficient firm, staff does not believe that he has taken into account that costs will vary among companies. (TR 890) By accepting witness Gabel's recommendation, staff believes that Sprint might be denied the ability to recover its costs. Moreover, this Commission has previously recognized the appropriateness of company-specific inputs, in Dockets Nos. 990649A-TP, and 990649B-TP. (Order Nos. PSC-02-1311-FOF-TP, PSC-02-1574-FOF-TP, and PSC-03-0058-FOF-TP) In addition, staff notes that witness Curry states "there were just a few revisions that I would suggest be made," but never suggests any revisions with any certainty. Instead, witness Curry only claims that Sprint's rates require further review. (TR 829)

Staff agrees that Sprint has supported its cost study as it relates to cabling elements through its testimony, exhibits, and discovery responses filed during the course of this proceeding. Staff believes that Sprint has used current materials costs and work times supported by recent collocation installations, up-to-date building construction costs, or recent vendor quotes. (TR 417-418, 464; EXH 1, p.26; EXH 39) In addition, Sprint has used Florida-specific collocation arrangements in over 95% of the 190 work activities examined. (TR 451; EXH 1,

p.27) Furthermore, like witness Davis, staff also believes that the use of verifiable recent and current data is beneficial in producing forward-looking collocation costs. (TR 418) Staff makes its recommendation based on all of these factors, and the fact that Sprint's cabling elements were essentially uncontested. As such, staff recommends that Sprint's proposed cabling rates be approved subject to staff's recommendations in all other applicable issues.

Verizon

Verizon acknowledged in its post-hearing brief that many of its proposals have gone without challenge. To the extent that concerns have been raised in this proceeding, Verizon believes that it has addressed those concerns through revisions to its cost study. According to Verizon, even these revisions went unchallenged. (Verizon BR at 15) For example, Verizon offers that "to address Dr. Gabel's concern that Verizon was double-counting its cable vault investment, in its floor space rates, Verizon eliminated from its revised filing the five 'Cable Vault Space' rate elements it had originally proposed." (TR 759; EXH 4, 47; EXH 18, pp.94-96)

Witnesses Bailey/Ellis assert that Verizon developed its costs "using cost methods that are consistent with the Federal Communication Commission's (FCC) Total Element Long-Run Incremental Cost (TELRIC) construct." (TR 662) Witnesses Bailey/Ellis contend that Verizon's costs reflect the costs of labor and materials needed to offer collocation to CLECs in Florida. The witnesses assert that Verizon's analyses use general contractor invoices, materials costs, and estimated work times and expenses from the various work groups involved in provisioning collocation arrangements. (Id.; BR at 16) Furthermore, the witnesses assert that Verizon's collocation cost studies are complete, well-supported, and should be adopted. (TR 720) In support, Verizon offers the hundreds of pages of cost studies and supporting documents that it has filed in this proceeding. (Id.; TR 755) Moreover, to the extent that no witness has challenged a particular cost element, witnesses Bailey/Ellis assert that this Commission should adopt those cost elements as submitted by Verizon. (Id.) The following discussion addresses Verizon's material costs, the 750 MCM connector tap cost, fiber cable pull, and cable rack, albeit to varying degrees.

Staff witness Curry argues that "[i]n a number of instances, the costs or time estimates appear high, and should be modified." (TR 819) He states, "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." (Id.) Moreover, the witness contends that Verizon's estimate of the time required per foot to install power cable "is simply not credible," proposing instead to reduce the estimate such that the installation time is 3 minutes per foot per cable. (Curry TR 820)

Verizon witnesses Bailey/Ellis contend that the actual installation activity includes "the time required to set up at the manhole and the cable vault, prepare for the cable pull, and actually pull the cable through the manhole, cable vault, and conduit system . . ." to the CLEC's collocation arrangement. (TR 680) Witnesses Bailey/Ellis assert that as part of the installation, an Outside Plant Engineer must visit the location and determine the subduct assignment from the manhole to the cable vault. (TR 679-680) The witnesses assert that the revised cost study assumes 12 minutes per foot, instead of the 15 minutes per foot originally used to pull a 750

MCM power cable. (TR 741) Witnesses Bailey/Ellis note that the 12-minute estimate is the figure that Verizon uses for developing cost estimates for internal jobs. (Id.) The witnesses state, “[u]se of current, Florida-specific data across cable gauges leads to a weighted average power cable pull time of 7 minutes per foot, which Verizon has now incorporated into its cable pull NRC. (TR 741)

While witness Curry believes the cost of the cables themselves appears reasonable, he believes the ratios used to calculate the costs of installation are overstated. (TR 813, 816, 820) The witness asserts that Verizon splits the cost of providing power cable into two components: one from the main power board to the Battery Distribution Fuse Bay (BDFB) and another from the BDFB to the collocator’s space. (TR 815) The cost of cabling from the main power board to the BDFB is included in the recurring monthly rate for DC Power Facilities, while 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. In 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. In Verizon’s non-recurring cost study, a labor-hour-per-foot method is used to calculate the cost of installing the same type of cable. (TR 815-16) Witness Curry asserts that both methods provide erroneous results. (TR 816) In support, witness Curry contends that SME estimates have been found to be “subjective or biased” by both state regulators and the FCC. (Id.) As a result, he cautions that the SME estimates should be reviewed closely, and compared to other data sources using “the basic test of reasonableness.” (Id.) In lieu of using SME estimates, witness Curry asserts that “a more reasonable estimate” may be obtained through the use of the R.S. Means database. (TR 817)

Witnesses Bailey/Ellis contend that the 750 MCM connector tap cost is the only straight material cost that any witness has challenged. (BR at 38) In fact, witness Curry contends that the cost of a 750 MCM connector tap “is clearly exaggerated” and should be reduced “to a more reasonable amount,” without offering a specific rate or range of reasonableness. (TR 819-823) He goes on to argue that Verizon’s cable and connector tap estimates are “not credible,” “appear high,” and are “clearly exaggerated.” (TR 819-820) Instead, he suggests that Verizon should be instructed to obtain price quotes from at least two unaffiliated vendors for this component, and adjust their studies accordingly. (Id.)

Although staff witness Curry asserts that Verizon’s model is “open,” he suggests that it uses largely embedded investments and data to compute costs. (TR 812) Verizon’s witnesses counter, arguing that witness Curry’s assertions are flawed for several reasons. (TR 745-746, 821; BR at 38) Verizon’s witnesses offer that R.S. Means estimates are just that, estimates, and that 750 MCM connector taps cost more than 500 MCM connector taps. (TR 746) Staff agrees with Verizon, noting that estimates are just that, estimates. Staff also agrees with Verizon that 750 MCM connector taps cost more than the 500 MCM connector taps that R.S. Means’ estimates rely upon. (TR 720, 755) The witnesses also point to the fact that the GTE Advanced Material System (GTEAMS) data reflect actual prices. (TR 736-737, 745) The witnesses assert that GTEAMS provides costs which are available to Verizon now, and provides costs that Verizon can expect to incur on a forward-looking basis. (TR 666, 736-737) Moreover, the

witnesses assert that the material costs⁷⁹ included in the cost study reflect Verizon's economies of scale. The witnesses argue that current material, labor costs, and work times are appropriate in estimating future collocation costs in Florida because the process is labor- and materials-intensive, not technology intensive. (TR 666-667) As such, witnesses Bailey/Ellis assert that this Commission should approve Verizon's proposed "real-world" 750 MCM connector tap costs.

While staff acknowledges witness Curry's concerns related to some of the materials cost outputs from GTEAMS, staff agrees with Verizon that he may not have an accurate understanding of what GTEAMS is and how it is used. (TR 736-737, 812, 828) Despite any implied misunderstanding, witness Curry acknowledges that "... a comprehensive examination of GTEAMS has not been possible within the scope of this project." (Id.; TR 828) Staff disagrees with witness Curry's assertion that Verizon "uses largely embedded investments and data to compute costs," noting that GTEAMS reflects prices that are available to Verizon now, and those it can expect to incur on a forward-looking basis. (TR 666, 736-37, 812) GTEAMS provides materials cost information based on the actual prices paid for materials that are in Verizon's inventory, and current and effective price quotes for materials that are not in inventory. (Id.) Staff believes that GTEAMS data reflects the *actual prices available* to Verizon, based on Verizon's vendor discounts and purchasing power. Moreover, staff agrees that at least with respect to future collocation facilities costs, those costs will be labor- and materials-intensive. (TR 666-667) As such, Verizon's belief that it will likely incur similar costs on a going-forward basis appears to be well justified, and supported by the record in this proceeding. (Id.; TR 720)

Staff also acknowledges that the inconsistency regarding the use of R.S. Means versus an internal activity time estimate of 15 minutes per foot appears to have been adequately addressed and corrected by Verizon. (TR 741) Accordingly, staff believes that this inconsistency is no longer an issue. In fact, Verizon witnesses Bailey/Ellis state, "Mr. Curry is correct with respect to this inconsistency in Verizon's cost study - R.S. Means should not have been used for the floor ground bar cable pull estimate, and it has appropriately been removed from the updated cost study filed as an attachment to this testimony." (Id.) Verizon has updated its cost study which now reflects 12 minutes per foot, rather than the 15 minutes originally criticized by witness Curry, to pull a 750 MCM power cable. Staff notes that the 12-minute estimate represents the same time that Verizon asserts it uses for developing cost estimates for internal jobs. (TR 741) Staff believes that the revisions contained in Verizon's revised cost study, and the continued use of GTEAMS take into consideration witness Curry's desire to have two non-affiliated quotes. (TR 759; EXH 47, BKE-1, pp.39-41) Staff acknowledges that GTEAMS provides materials cost information on the actual prices paid for materials in Verizon's inventory, and information on current and effective price quotes for materials that are not in inventory. (TR 666, 736-737)

Although addressed only in limited detail, witness Turner took issue with Verizon's cable rack assumptions. In particular, witness Turner believes that a 24 inch rack should contain 74 entrance cables. (TR 577) However, in its cost study, Verizon assumed that the same 24 inch

⁷⁹ The witnesses contend that these costs are appropriate and include the appropriate shipping and handling, sales tax, minor materials, and other supply provisioning costs. (TR 666-67)

rack would typically hold 48 fiber entrance cables. (TR 750) Verizon witnesses Bailey/Ellis argue that witness Turner “. . . does not appear to have the engineering expertise necessary to make such a determination.” (Id.) Moreover, Verizon’s witnesses add that witness Turner offers no support for his recommendation. Staff notes that Verizon’s witnesses claim that Verizon’s assumptions are based on input from its engineers. (Id.) Staff sees no compelling reason not to accept Verizon’s cable rack proposal, given the limited record regarding Verizon’s cable rack, the lack of support for witness Turner’s proposal, and the fact that Verizon’s cable rack inputs are based on Verizon engineers’ recommendations. Based on the information in the record, Verizon's proposed rates appear reasonable.

Furthermore, staff notes that Verizon has provided a detailed cost study, produced numerous supporting documents, testimony, and discovery responses. Many of Verizon’s proposals have gone unchallenged as have many of the revisions made in response to concerns raised during the course of this proceeding. As such, staff agrees that Verizon’s collocation cost studies relating to cabling appear to be complete, well-supported, and appropriate based on the record in this proceeding. (TR 759; EXH 18, pp.94-96; EXH 4 and 47) In addition, Verizon asserts its cabling costs are those it would normally expect to incur in providing collocation and are based on Florida-specific material and labor costs. (TR 758) As such, staff recommends that Verizon’s cabling rates be approved, subject to staff’s recommendations in all other applicable issues.

CONCLUSION

The proper cabling rates and the appropriate application of those rates are those proposed by the ILECs, subject to staff’s recommended changes in all other applicable issues.

Minor Augments (T. Brown)

Staff notes that BellSouth does not have an element addressing minor augments. Only Sprint and Verizon provided rates in this proceeding addressing minor augments. In addition, AT&T did not specifically address minor augments and Covad did not proffer a witness in this proceeding. Augments typically consist of two levels, minor and major. Minor augments are addressed in more detail within this issue, while major augments are addressed in other portions of staff's recommendation. There was little argument between the parties on this particular issue and as a result staff's discussion and analysis will be brief, most of it addressing the appropriate labor times and pre- and post-acceptance fees. A brief company-specific description of minor augments is given below.

ANALYSIS

BellSouth

Even though BellSouth does not have an element specifically identified as a "minor augment," staff believes that BellSouth recovers costs for augment activities through other categories, such as space preparation and application and engineering fees. (Shell TR 252, 268, 284) BellSouth witness Shell states,

Space Preparation cost elements allow BellSouth to recover the cost of engineering, design, and modification of the network infrastructure and the building to meet a collocator's specified requirements. Such modification could include:

- Augmenting air conditioning cooling capacity
- Reworking ventilation ducts
- Adding cable racking
- Adding or moving light fixtures (TR 284)(emphasis in original)

In response to a staff interrogatory, BellSouth replied, ". . . the Application Cost – Subsequent fee would apply when an ALEC submits a subsequent application to request a modification or augment be made to the existing space." (EXH 8, p.21)(emphasis added)

Although AT&T made no specific proposal(s) as to minor augments, witness Turner did raise concerns regarding BellSouth's subsequent application labor times, where costs for similar activities appear to be recovered. Staff notes that BellSouth appears to include minor augments as part of other elements. Staff does not make a specific recommendation for BellSouth augments here.⁸⁰ Instead, staff believes that it is more appropriate to defer to the discussion, analysis, and recommendations provided in the issues addressing space preparation and application and engineering fees.

⁸⁰ AT&T's concerns with BellSouth's subsequent application cost are centered on the labor times associated with the application. (Turner TR 567-568; BR 26-27) Staff will address BellSouth's subsequent application cost in another part of this recommendation.

Sprint

Sprint considers minor augment fees as well as several other elements to be “universal” elements, which are to be applied to both physical and virtual collocation arrangements. (EXH 39, p.4 of 107) Sprint’s collocation cost study purports that “minor augments include things such as DC power fuse changes or extensions of AC electric circuits for occasional use outlets and lights where sufficient circuit capacity is available.” (EXH 39, p.7) Sprint costed three types of fees that relate to minor augments. (Id. at p.6) The first, Application and Augment Fees, covers the cost to administer and evaluate initial and subsequent applications for collocation services. According to Sprint’s collocation cost study, “Augment Fees are collected each time a CLEC orders changes or additions to an existing collocation arrangement, excluding requests for additional space.” (Id.; TR 421) These fees are non-recurring in nature. (EXH 39, p.5) Additional minor augment-related fees can also be found under Administrative & Project Management Fees. These include fees to recover the costs of administering and project managing installations of augmented collocations after firm order commitment (FOC). (Id. at p.7) The third type, Transmission Engineering Fees, apply to both major and minor augments after the FOC, for any collocation order that involves cross-connects, power runs of 60 amps or less, cable racks, relay racks, DS1/DS3 panels, or fiber panels. (Id. at p.8)

Sprint’s minor augment rate was unchallenged. Staff believes that Sprint’s work times and activities as they relate to minor augments appear reasonable and are supported through testimony and its cost study. (EXH 39; BR at 2) Subsequent to and as a result of the Commission’s Phase I decision, Sprint amended its work times for several elements, including one of its minor augment rates (Minor Augment-Administrative and Project Management Fee). (BR at 8-10) Sprint reduced the network project manager labor by two hours and drafting labor hours by ½ hour to extract costs associated with activities that are no longer necessary. (Id.) Because Sprint has taken steps to reduce certain labor times relating to minor augments, and since Sprint’s rates appear reasonable, staff is reluctant to make additional changes to Sprint’s activities and work times. As such, staff believes Sprint’s minor augment rates should be approved, subject to staff’s recommended changes in all other applicable issues

Verizon

Verizon’s Minor Augment Fee applies for each minor augment request of an existing caged, cageless, virtual, or microwave collocation arrangement that does not require additional power systems, HVAC system upgrades, or additional cage space. (EXH 45, BKE-1, p.70; EXH 46, BKE-4, p.2; EXH 4, p.16) Verizon’s minor augment rate is non-recurring and is applied for each minor augment requested. Augments can only occur in central offices (COs) that have existing collocation. (EXH 46, BKE-4, p.2) In addition, Verizon’s cost study adds “‘Minor Augmentation’ is a change in current service provisioning for a specific collocator within the central office, specific to blocks, panels, intra-office cables.” (EXH 45, BKE-1, p.93) Examples of minor augments include, but are not limited to, the installation of virtual equipment cards or software upgrades, removal of virtual equipment, requests to pull additional cable, and requests to terminate additional DS0, DS1, or DS3 cables. (EXH 4, p.16)

Verizon's minor augment rate was unchallenged here. Moreover, staff witness Gabel has recommended approving Verizon's activities and work times. (TR 873) Staff believes that Verizon's minor augment rate appears reasonable and is supported by the record. Verizon's minor augment rate should also incorporate staff's recommended changes in all other applicable issues.

CONCLUSION

The proper minor augment rates and the appropriate application of those rates are those proposed by Sprint and Verizon, incorporating staff's recommended changes in all other applicable issues.

Disconnects (T. Brown)

Disconnects are non-recurring costs designed to recover costs associated with the disconnection of DS0, DS1, DS3, or dark fiber on a per cable record, per circuit, or per order basis. (EXHs 34-37; EXHs 45-47) Staff notes that there was limited discussion on this issue by the parties. Staff witnesses Gabel and Curry did not address disconnects in their testimony, but noted that “[t]he Commission could either accept any unchallenged rates as filed or reduce unchallenged rate elements by a percentage reflective of the adjustments determined necessary by the Commission for any disputed elements.” (TR 866). AT&T witness Turner proposes that Sprint and Verizon should be required to use elements which mirror those proposed by BellSouth; however, no other company-specific adjustments or recommendations were made. (TR 538)

Unlike BellSouth and Verizon, Sprint does not have a collocation “disconnect” element, but recovers disconnect charges through other elements. (Davis TR 426-428; EXH 5) For disconnection of a single customer, Sprint uses the UNE loop disconnect rate approved by the Commission in Docket No. 990649B-TP, Order No. PSC-03-0058-FOF-TP. (Davis TR 427) Similarly, other elements AT&T identified as “missing” are recovered by Sprint in different elements or involve services that Sprint has never been requested to provide. (Id. at 427–428)

BellSouth’s disconnects appear to be one of the many BellSouth rate elements not addressed by any witness in this proceeding. (TR 542, 805, 837; BellSouth BR at 3, 6) As such, BellSouth proposed in its post-hearing brief that with respect to those uncontroverted elements, the Commission should simply adopt BellSouth’s rates. (BR at 6) Upon review, staff believes that BellSouth’s disconnect rates appear reasonable. As such, staff believes that BellSouth’s proposed disconnect rates are appropriate, subject to staff’s recommendations in all other applicable issues.

Verizon appears to have addressed its disconnect rate elements in its dedicated transit study (DTS). Staff notes that dedicated transit arrangements have not been ordered in Florida to date. (TR 775-776) Verizon witnesses Bailey/Ellis assert that DTS disconnect activities are similar to the ordering, provisioning, and central office activities required for an installation request. (TR 691, 687-690) Other than AT&T witness Turner’s claim that Verizon’s collocation elements weren’t comprehensive, no party specifically objected to Verizon’s DTS disconnect rates addressed in EXH 45, BKE-2. (TR 537-538) Given the CLECs’ lack of testimony related to this element and the fact that no DTS arrangements have been provisioned in Florida, staff recommends accepting Verizon’s proposed disconnect rates subject to staff’s recommendations in all other applicable issues.

CONCLUSION

Staff believes that the proper rates and the appropriate application of those rates for disconnects are those proposed by the ILECs in this proceeding, subject to incorporating staff’s recommended changes in all other applicable issues.

Other Elements (Cater)

BellSouth, Sprint, and Verizon each proposed additional rate elements which do not fit into any of the element categories previously discussed. Many of these elements were not discussed in detail by the parties or were not contested during the proceeding.

POT Bays

In its cost study, BellSouth proposes various Point Of Termination (POT) bay rate elements. These elements are cross-connect frames that are placed on the collocator's cage or outside its space. These elements are no longer used by BellSouth as the demarcation point, but are optional elements sold in various connection sizes, which have no non-recurring charges associated with them. (EXH 34, sec. 5, pp.6-7) These elements only apply to collocation arrangements installed prior to June 1, 1999, and are only available from agreements which contain this rate element. (Shell TR 297; EXH 8, p.153) Since June 1, 1999, this element has been an optional element, and witness Shell testified that at some point in the future, there would not be any additional terminations on the POT bays. (TR 297; BellSouth BR at 36-37)

The only discussion related to POT bays referenced the proposed utilization rate. During the hearing, AT&T witness Turner testified that BellSouth's proposed utilization rate for the POT bay should be increased to 85 percent, since that is the fill rate for BellSouth's own frames, and BellSouth is responsible for engineering the POT bay. (TR 578-579; EXH 43, SET-10, p.8)

Staff agrees with BellSouth. Because the POT bay is an optional element that will not be available on a going-forward basis, it is reasonable for POT bays to have a utilization rate considerably lower than the rates for BellSouth's own frame equipment. Therefore, staff recommends that the appropriate utilization rates for POT bays be those proposed by BellSouth.

Dedicated Transit Service

Verizon provided a separate cost study for the Dedicated Transit Service (DTS) rate elements, which allows CLECs to interconnect with each other at DSO, DS1, or DS3 transmission levels or via dark fiber. These connections can only be made within a single central office, and the CLEC must provide the connecting facility assignments. No DTS arrangements have been ordered by CLECs in Florida. (Ellis TR 662, 776) No party provided testimony regarding Verizon's proposed DTS rates. Based on staff's review of the information provided, staff believes that Verizon's proposed DTS rates are reasonable.

Microwave Collocation

Verizon provides proposed rates for the collocation of microwave equipment on the roof of Verizon central offices. These rates include non-recurring charges for the facility pull and a recurring rate for the rooftop space. Verizon will do additional work not specifically identified in these proposed rates on an individual case basis. Verizon does not have any microwave collocation arrangements in Florida. (TR 660-661; EXH 47, Revised BKE-1, p.7) Staff notes that Verizon's proposed rates for microwave rooftop space are equal to its rates for floor space,

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therefore whatever modifications are approved for the floor space rate are equally applicable here.

CONCLUSION

Staff recommends that the appropriate rates for the above elements are those filed by the ILECs subject to staff's recommended changes in all other applicable issues.

Issue 10: What are the appropriate definitions, and associated terms and conditions for the collocation elements to be determined by the Commission?

Recommendation: The definitions, and associated terms and conditions for the collocation elements identified in Issue 9A are those proposed by BellSouth, Sprint, and Verizon subject to incorporating staff's recommended changes in all other applicable issues. **(King)**

Position of the Parties

BST: The appropriate definitions, terms and conditions for the cost elements proposed by BellSouth are set forth in Exhibits to the testimony of BellSouth's witness, W. Bernard Shell.

Sprint: The definitions applicable to Sprint's collocation elements should be those recommended by Sprint in its cost study and associated testimony. The terms and conditions for collocation should be as set forth in the applicable interconnection agreement.

Verizon: The appropriate definitions, terms, and conditions for Verizon's collocation elements are set forth in Verizon's currently effective intrastate collocation tariff. Verizon takes no position on the appropriate definitions, terms, or conditions for BellSouth's or Sprint's collocation elements.

AT&T/Covad/FDN: Definitions, terms and conditions for collocation elements should be established using the BellSouth terms and conditions as a template. A single set of terms and conditions would lessen the cost of the regulatory process and ensure that CLECs are treated in a nondiscriminatory manner between the Florida incumbents.

Staff Analysis: Consistent with the prior issues, the CLECs are advocating a single set of definitions, terms, and conditions using BellSouth's definitions, terms, conditions, and rate structure as a template.⁸¹ (Consolidated CLEC BR at 7; Turner TR 535-536) AT&T witness Turner argues that a single set of terms, conditions, and definitions would lessen the cost of the regulatory process, ensure that CLECs are treated in a nondiscriminatory manner between the Florida incumbents, and simplify the interconnection process for CLECs within Florida.⁸² (TR 536) The AT&T witness believes collocation is a very straightforward process; as such, he believes that there is no reason that a single set of terms and conditions along with a single rate structure could not be implemented in Florida. (TR 536)

Also consistent with the prior issues, the ILECs argue against a one-size fits all approach. The ILECs believe that the appropriate definitions, terms, conditions, and rate structure should be those proposed by each individual ILEC in their witnesses' testimony in this proceeding. (Shell TR 243; Fox TR 33-35; Verizon BR at 39)

⁸¹ If the Commission rejects the Consolidated CLECs' position regarding the use of a unitary model (i.e., the BSCC) in prior issues, then the Consolidated CLECs' arguments here are moot because they are tied to use of a unitary model.

⁸² The CLECs did not present any testimony regarding this issue except as it relates to the adoption of a unitary model .

BellSouth witness Shell believes that the appropriate definitions for the elements for which BellSouth has provided cost support are the definitions provided in the Narrative Section of its cost study. (TR 243) BellSouth's cost studies also provided additional descriptive and supporting information regarding the various collocation elements. (TR 243)

Sprint's terms and conditions are found in the testimony of witness Davis, and also found in its Master Interconnection and Resale Agreement that is negotiated between Sprint and the CLECs. (Fox TR 33) Sprint witness Fox notes that Sprint has negotiated over 200 agreements with Florida CLECs since the implementation of the Telecommunications Act of 1996, and in none of those was collocation arbitrated. (Fox TR 34) Witness Fox believes that the proper way to set forth the terms and conditions is via the interconnection agreement. Sprint argues its terms and conditions are clear and reasonable as evidenced by the lack of formal collocation disputes between Sprint and any of the parties. (Fox TR 35)

Verizon notes that its definitions, terms, and conditions as set forth in its collocation tariff are fully compliant with FCC and FPSC rules and have not been challenged by any party to this proceeding. As such, Verizon argues that the Commission should endorse the definitions and associated terms and conditions of Verizon's currently effective intrastate collocation tariff. (BR at 39)

Staff believes that the appropriate definitions, and associated terms and conditions for the collocation elements identified in Issue 9(a), are those proposed by BellSouth, Sprint, and Verizon subject to incorporating staff's recommended changes in all other applicable issues. While AT&T witness Turner argued that a single set of terms, conditions, and definitions would lessen the cost of the regulatory process, he did not provide any testimony or exhibits which demonstrate this to be so. To the contrary, the ILECs in this proceeding have testified that moving to a single set of collocations standards (through application of a unitary model) could increase their costs because of the necessary modifications to numerous current systems. Witness Turner also argued that a single set of definitions, terms and conditions would ensure that CLECs are treated in a nondiscriminatory manner by the Florida incumbents. Staff believes that CLEC-specific rates and rate structures are not inherently discriminatory. However, if a CLEC is concerned about discriminatory treatment, it could bring this to the attention of the FPSC. Last, witness Turner noted that moving to a single rate structure based on the BSCC would simplify the interconnection process for CLECs within Florida. This assertion as well was unsupported. It is conceivable that moving to a single rate structure and a single set of definitions, terms, and condition, might simplify the interconnection process; however, CLECs which offer services outside Florida would still have to understand another rate structure, definitions, terms, and conditions in other states in which BellSouth, Sprint and Verizon operate. Accordingly, it is unclear at this time how adoption of the unitary approach would simplify the overall process; to the contrary, this suggestion could make the process more difficult.

CONCLUSION

Staff notes that the definitions, terms, and conditions offered here may be used as a starting point and that CLECs and ILECs are free to negotiate terms and conditions that better fit their particular needs. Therefore, staff recommends that the appropriate definitions, and

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associated terms and conditions for the collocation elements identified in Issue 9A are those proposed by BellSouth, Sprint, and Verizon subject to incorporating staff's recommended changes in all other applicable issues.

Issue 11: Should these dockets be closed?

Recommendation: If Verizon is ordered to make a compliance filing, these dockets should remain open until staff has the opportunity to evaluate the filing and bring its findings before the Commission. If a compliance filing is not required, the dockets may be closed. Recurring and non-recurring rates and charges should take effect when existing interconnection agreements are amended to incorporate the approved rates, and the amended agreements are deemed approved by the Commission. For new interconnection agreements, the rates shall become effective when the agreements are deemed approved by the Commission. Pursuant to Section 252(e)(4) of the Telecommunications Act of 1996, a negotiated agreement is deemed approved by operation of law after 90 days from the date of submission to the Commission. **(Teitzman)**

Staff Analysis: If Verizon is ordered to make a compliance filing, these dockets should remain open until staff has the opportunity to evaluate the filing and bring its findings before the Commission. If a compliance filing is not required, the dockets may be closed. cdStaff also recommends that recurring and non-recurring rates and charges should take effect when existing interconnection agreements are amended to incorporate the approved rates, and the amended agreements are deemed approved by the Commission. For new interconnection agreements, the rates shall become effective when the agreements are deemed approved by the Commission. Pursuant to Section 252(e)(4) of the Telecommunications Act of 1996, a negotiated agreement is deemed approved by operation of law after 90 days from the date of submission to the Commission.

Appendices

Attached to this recommendation are four Appendices consisting of six separate rate tables. Those tables contain the parties' proposed rates and staff's recommended rates. A brief description of each rate appendix appears below.

APPENDIX A: Appendix A contains the recurring and non-recurring rates proposed by AT&T for BellSouth, Sprint, and Verizon. The tables are labeled Appendix A-1, Appendix A-2, and Appendix A-3 respectively. This appendix contains no staff recommended rates.

APPENDIX B: Appendix B contains the recurring and non-recurring rates proposed by BellSouth and those recommended by staff. AT&T was the only other party to make a specific proposal regarding BellSouth's recurring and non-recurring rates and its proposed rates are contained in Appendix A-1.

APPENDIX C: Appendix C contains the recurring and non-recurring rates proposed by Sprint and those recommended by staff. AT&T was the only other party to make a specific proposal regarding Sprint's recurring and non-recurring rates and its proposed rates are contained in Appendix A-2.

APPENDIX D: Appendix D contains the recurring and non-recurring rates proposed by Verizon and those recommended by staff. AT&T was the only other party to make a specific proposal regarding Verizon's recurring and non-recurring rates and its proposed rates are contained in Appendix A-3.

Source of Rates: (Recurring and Non-recurring)

- **AT&T Proposed:** SET-7 (Revised-BellSouth), SET-8 (Revised-Sprint), SET-9 (Revised-Verizon)
- **BellSouth Proposed:** WBS-1 (Revised)
- **Sprint Proposed:** JRD-2 (Revised), Sprint's Post-Hearing Brief
- **Verizon Proposed:** BKE-1 (Revised)
- **Staff Recommended:** Rates based on output from each ILECs cost model with staff adjustments.

APPENDIX A-1 – AT&T RESTATEMENT FOR BELLSOUTH

Cost Element	Description	Recurring	Non-Recurring	First	Additional	Initial	Subsequent
H.0	COLLOCATION						
H.1	PHYSICAL COLLOCATION (PC)						
H.1	PC -Appl. Cost - Initial		\$2,785.00				
H.1.1	PC - Appl. Cost - Initial - Disc. Only		\$1.20				
H.1.5	PC - Fiber Entrance Cable Instal., per Cable		\$486.53				
H.1.5	PC - Fiber Entrance Cable Instal., per Cable - Disc. Only		\$43.84				
H.1.6	PC - Floor Space per Sq Ft.	\$3.58					
H.1.7	PC - Cable Support Structure per Fiber Entrance Cable	\$1.05					
H.1.8	PC - Power per Fused Amp	\$3.72					
H.1.9	PC - 2-Wire Cross-Connects	\$0.0208					
H.1.10	PC - 4-Wire Cross-Connects	\$0.0416					
H.1.11	PC - DS1 Cross-Connects	\$0.3786					
H.1.12	PC - DS3 Cross-Connects	\$4.16					
H.1.13	PC - 2-Wire POT Bay	\$0.0180					
H.1.14	PC - 4-Wire POT Bay	\$0.0360					
H.1.15	PC - DS1 POT Bay	\$0.3422					
H.1.16	PC - DS3 POT Bay	\$1.92					
H.1.17	PC - Security Escort - Basic, per Half Hour		\$33.65	\$22.05			
H.1.18	PC - Security Escort - Overtime, per Half Hour		\$44.63	\$28.89			
H.1.19	PC - Security Escort - Premium, per Half Hour		\$55.62	\$35.73			
H.1.23	PC - Welded Wire Cage - First 100 Sq Ft.	\$92.86					
H.1.24	PC - Welded Wire Cage - Add'l 50 Sq Ft	\$10.73					
H.1.31	PC - 2-Fiber Cross-Connects	\$1.71					
H.1.32	PC - 4-Fiber Cross-Connects	\$3.34					
H.1.33	PC - 2-Fiber POT Bay	\$11.42					
H.1.34	PC - 4-fiber POT Bay	\$15.42					
H.1.37	PC - Security Access System - Security System per sq. ft. per CO	\$0.0125					
H.1.38	PC - Security Access System - New Access Card Activation, per Card		\$25.78				
H.1.39	PC - Security Access System - Administrative Change, existing Access Card, per Card		\$8.84				
H.1.40	PC - Security Access System - Replace Lost or Stolen Card, per Card		\$10.61				

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APPENDIX A-1 – AT&T RESTATEMENT FOR BELLSOUTH

Cost Element	Description	Recurring	Non-Recurring	First	Additional	Initial	Subsequent
H.1.41	PC - Space Preparation - C.O. Modification per sq. ft.	\$0.00					
H.1.42	PC - Space Preparation - Common Systems Modification per sq. ft. - Cageless	\$0.00					
H.1.43	PC - Space Preparation - Common Systems Modification per Cage	\$0.00					
H.1.45	PC - Space Preparation - Firm Order Processing		\$287.36				
H.1.46	PC - Appl. Cost – Subsequent		\$1,621.00				
H.1.46	PC - Appl. Cost - Subsequent - Disc. Only		\$1.20				
H.1.47	PC - Space Availability Report per CO		\$112.56				
H.1.48	PC - Co-Carrier Cross-Connect Fiber Cable Support Structure, per Linear ft. per Cable	\$0.0008					
H.1.49	PC - Co-Carrier Cross-Connect Copper or Coaxial Cable Support Structure, per Linear Ft. per Cable	\$0.0012					
H.1.50	PC - 120V, Single Phase Standby Power Cost	\$5.26					
H.1.51	PC - 240V, Single Phase Standby Power Cost	\$10.53					
H.1.52	PC - 120V, Three Phase Standby Power Cost	\$15.80					
H.1.53	PC - 277V, Three Phase Standby Power Cost	\$36.47					
H.1.54	PC - Security Access - Initial Key, per Key		\$11.28				
H.1.55	PC - Security Access - Key, Replace Lost or Stolen Key, per Key		\$11.28				
H.1.56	PC - Copper Entrance Cable Support Structure, Per Each 100 Pairs	\$0.1406					
H.1.57	PC - Copper Entrance Cable Instal., Per Cable		\$576.10				
H.1.57	PC - Copper Entrance Cable Instal., Per Cable - Disc. Only		\$22.73				
H.1.58	PC - Copper Entrance Cable Instal., Per Each 100 Pairs		\$18.56				
H.1.59	Subsequent Appl. for Co-Carrier Cross-Connect per Occurrence		\$564.81				
H.1.60	PC - Power Reduction Appl. Fee		\$213.20				
H.1.61	PC - Administration Only Appl. Fee		\$760.91				
H.1.61	PC - Administration Only Appl. Fee - Disc. Only		\$1.20				
H.1.62	PC - Connecting Facility Assignment (CFA) Resend, per CLLI		\$79.52				
H.1.63	PC - Copper Entrance Cable Instal., per cable (0 Mh to Vault Splice)		\$397.44				
H.1.63	PC - Copper Entrance Cable Instal., per cable (0 Mh to Vault Splice) - Disc. Only		\$43.84				
H.1.64	PC - Copper Entrance Cable Instal., per each 100 pair		\$18.56				
H.1.65	PC - Fiber Entrance Cable Instal., per cable (0 Mh to Vault Splice)		\$397.44				
H.1.65	PC - Fiber Entrance Cable Instal., per cable (0 Mh to Vault Splice) - Disc. Only		\$43.84				

APPENDIX A-1 – AT&T RESTATEMENT FOR BELLSOUTH

Cost Element	Description	Recurring	Non-Recurring	First	Additional	Initial	Subsequent
H.1.66	PC - Fiber Entrance Cable Instal., per each fiber		\$3.71				
H.1.71	PC - Power per Used Ampere	\$6.73					
H.2	VIRTUAL COLLOCATION						
H.2.1	VC - Appl. Cost		\$1,241.00				
H.2.1	VC - Appl. Cost - Disc. Only		\$1.20				
H.2.2	VC - Fiber Entrance Cable Instal., per Cable		\$486.53				
H.2.2	VC - Fiber Entrance Cable Instal., per Cable - Disc. Only		\$43.84				
H.2.3	VC - Floor Space Per Sq. Ft.	\$3.58					
H.2.4	VC - Power per Fused Amp	\$3.72					
H.2.5	VC - Cable Support Structure. Per Entrance Cable	\$0.9210					
H.2.6	VC - 2-wire Cross-Connects	\$0.0201					
H.2.7	VC - 4-wire Cross-Connects	\$0.0403					
H.2.8	VC - DSI Cross-Connects	\$0.3786					
H.2.9	VC - DS3 Cross-Connects	\$4.16					
H.2.10	VC - Security Escort - Basic, Per Half Hour		\$33.65	\$22.05			
H.2.11	VC - Security Escort - Overtime, Per Half Hour		\$44.63	\$28.89			
H.2.12	VC - Security Escort - Premium, Per Half Hour		\$55.62	\$35.73			
H.2.16	VC - 2-Fiber Cross-Connects	\$1.75					
H.2.17	VC - 4-Fiber Cross-Connects	\$3.50					
H.2.20	VC - Maintenance in the CO - Basic, per Half Hour		\$54.05	\$22.05			
H.2.21	VC - Maintenance in the CO - Overtime, per Half Hour		\$72.18	\$28.89			
H.2.22	VC - Maintenance in the CO - Premium, per Half Hour		\$90.31	\$35.73			
H.2.30	VC - Power per Used Ampere	\$6.73					
H.3	ASSEMBLY POINT						
H.3.1	Assembly Point. 2-Wire Cross-Connects	\$0.1651					
H.3.2	Assembly Point 4-Wire Cross-Connects	\$0.3302					
H.3.3	Assembly Point. DS-1 Cross-Connects	\$0.9184					
H.4	ADJACENT COLLOCATION						
H.4.1	Adjacent Collocation – Space Cost per Sq ft	\$0.1666					
H.4.2	Adjacent Collocation - Electrical Facility Cost per Linear Ft.	\$4.62					
H.4.3	Adjacent Collocation - 2-Wire Cross-Connects	\$0.0194					

APPENDIX A-1 – AT&T RESTATEMENT FOR BELLSOUTH

Cost Element	Description	Recurring	Non-Recurring	First	Additional	Initial	Subsequent
H.4.4	Adjacent Collocation - 4-Wire Cross-Connects	\$0.0388					
H.4.5	Adjacent Collocation – DS1 Cross-Connects	\$0.3708					
H.4.6	Adjacent Collocation - DS3 Cross-Connects	\$4.14					
H.4.7	Adjacent Collocation - 2-Fiber Cross-Connect	\$1.70					
H.4.8	Adjacent Collocation - 4-Fiber Cross-Connect	\$3.33					
H.4.9	Adjacent Collocation - Appl. Cost		\$2,763.00				
H.4.9	Adjacent Collocation -Appl. Cost - Disc. Only		\$1.02				
H.4.16	Adjacent Collocation - 120V, Single Phase Standby Power Cost per AC Breaker Amp	\$5.26					
H.4.17	Adjacent Collocation - 240V, Single Phase Standby Power Cost per AC Breaker Amp	\$10.53					
H.4.18	Adjacent Collocation - 120V, Three Phase Standby Power Cost per AC Breaker Amp	\$15.80					
H.4.19	Adjacent Collocation – 277V, Three Phase Standby Power Cost per AC Breaker AMP	\$36.47					
H.6	PHYSICAL COLLOCATION (PC) IN THE REMOTE TERMINAL (RT)						
H.6.1	PC in the RT - Appl. Fee		\$612.23				
H.6.1	PC in the RT - Appl. Fee - Disc. Only		\$270.35				
H.6.2	PC in the RT - Per Rack/Bay	\$154.59					
H.6.3	PC in the RT - Security Access Key		\$23.28				
H.6.4	PC in the RT - Space Availability Report per premises requested		\$223.91				
H.6.5	PC in the RT - Remote Site CLLI Code Request, per CLLI Code Requested		\$73.39				
H.7	COLLOCATION CABLE RECORDS (CCR)				\$0.00	\$0.00	
H.7.1	CCR - per request				\$0.00	\$0.00	
H.7.1	CCR - per request - Disc. Only				\$0.00	\$0.00	
H.7.2	CCR - VG/DSO Cable, per cable record				\$0.00	\$0.00	
H.7.2	CCR - VG/DSO Cable, per cable record - Disc. only				\$0.00	\$0.00	
H.7.3	CCR - VG/DSO Cable, per each 100 pair				\$0.00	\$0.00	
H.7.3	CCR - VG/DSO Cable, per each 100 pair - Disc. Only				\$0.00	\$0.00	
H.7.4	CCR - DSI, per TITIE				\$0.00	\$0.00	
H.7.4	CCR - DSI, per TITIE - Disc. Only				\$0.00	\$0.00	

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APPENDIX A-1 – AT&T RESTATEMENT FOR BELLSOUTH

Cost Element	Description	Recurring	Non-Recurring	First	Additional	Initial	Subsequent
H.7.5	CCR - DS3, per T3TIE				\$0.00	\$0.00	
H.7.5	CCR - DS3, per T3TIE - Disc. Only				\$0.00	\$0.00	
H.7.6	CCR - Fiber Cable, per Cable Record				\$0.00	\$0.00	
H.7.6	CCR - Fiber Cable, per Cable Record - Disc. only				\$0.00	\$0.00	
H.9	COLLOCATION - BRSD						
H.9.1	Bellsouth Remote Site DLEC Data (BRSD), per CD per CO		\$208.02				

APPENDIX A-2 – AT&T RATE RESTATEMENT FOR SPRINT							
Cost Element	Description	Recurring	Non Recurring	First	Additional	Initial	Sub-sequent
H.0	COLLOCATION						
H.1	PHYSICAL COLLOCATION (PC)						
H.1.1	PC - Appl. Cost - Initial		\$2,973.00				
H.1.1	PC - Appl. Cost - Initial - Disc. Only		\$1.28				
H.1.5	PC - Fiber Entrance Cable Instal., per Cable		\$519.22				
H.1.5	PC - Fiber Entrance Cable Instal., per Cable - Disc. Only		\$46.79				
H.1.6	PC - Floor Space per Sq Ft.	\$3.70					
H.1.7	PC - Cable Support Structure per Fiber Entrance Cable	\$1.10					
H.1.8	PC - Power per Fused Amp	\$3.92					
H.1.9	PC - 2-Wire Cross-Connects	\$0.0218					
H.1.10	PC - 4-Wire Cross-Connects	\$0.0435					
H.1.11	PC - DS1 Cross-Connects	\$0.3971					
H.1.12	PC - DS3 Cross-Connects	\$4.37					
H.1.13	PC - 2-Wire POT Bay	\$0.0189					
H.1.14	PC - 4-Wire POT Bay	\$0.0378					
H.1.15	PC - DS1 POT Bay	\$0.3590					
H.1.16	PC - DS3 POT Bay	\$2.01					
H.1.17	PC - Security Escort - Basic, per Half Hour			\$35.91	\$23.53		
H.1.18	PC - Security Escort - Overtime, per Half Hour			\$47.63	\$30.83		
H.1.19	PC - Security Escort - Premium, per Half Hour			\$59.36	\$38.13		
H.1.23	PC - Welded Wire Cage - First 100 Sq Ft.	\$96.10					
H.1.24	PC - Welded Wire Cage - Add'l 50 Sq Ft	\$11.10					
H.1.31	PC - 2-Fiber Cross-Connect	\$1.80					
H.1.32	PC - 4-Fiber Cross-Connect	\$3.50					
H.1.33	PC - 2-Fiber POT Bay	\$11.98					
H.1.34	PC - 4-fiber POT Bay	\$16.17					
H.1.37	PC - Security Access System - Security System per sq. ft. per CO	\$0.0130					
H.1.38	PC - Security Access System - New Access Card Activation, per Card		\$27.51				
H.1.39	PC - Security Access System - Administrative Change, existing Access Card,		\$9.43				

APPENDIX A-2 – AT&T RATE RESTATEMENT FOR SPRINT

Cost Element	Description	Recurring	Non Recurring	First	Additional	Initial	Sub-sequent
	per Card						
H.1.40	PC - Security Access System - Replace Lost or Stolen Card, per Card		\$11.32				
H.1.41	PC - Space Preparation - CO Modification per sq. ft.	\$0.00					
H.1.42	PC - Space Preparation - Common Systems Modification per sq. ft. - Cageless	\$0.00					
H.1.43	PC - Space Preparation - Common Systems Modification per Cage	\$0.00					
H.1.45	PC - Space Preparation - Firm Order Processing		\$306.67				
H.1.46	PC - Appl. Cost - Subsequent		\$1,730.00				
H.1.46	PC - Appl. Cost - Subsequent - Disc. Only		\$1.28				
H.1.47	PC - Space Availability Report per CO		\$120.13				
H.1.48	PC - Co-Carrier Cross-Connect Fiber Cable Support Structure, per Linear ft. per Cable	\$0.0008					
H.1.49	PC - Co-Carrier Cross-Connect Copper or Coaxial Cable Support Structure, per Linear Ft. per Cable	\$0.0012					
H.1.50	PC - 120V, Single Phase Standby Power Cost	\$5.59					
H.1.51	PC - 240V, Single Phase Standby Power Cost	\$11.20					
H.1.52	PC - 120V, Three Phase Standby Power Cost	\$16.79					
H.1.53	PC - 277V, Three Phase Standby Power Cost	\$38.76					
H.1.54	PC - Security Access - Initial Key, per Key		\$12.04				
H.1.55	PC - Security Access - Key, Replace Lost or Stolen Key, per Key		\$12.04				
H.1.56	PC - Copper Entrance Cable Support Structure, Per Each 100 Pairs	\$0.1475					
H.1.57	PC - Copper Entrance Cable Instal., Per Cable		\$614.80				
H.1.57	PC - Copper Entrance Cable Instal., Per Cable - Disc. Only		\$24.26				
H.1.58	PC - Copper Entrance Cable Instal., Per Each 100 Pairs		\$19.81				
H.1.59	Subsequent Appl. for Co-Carrier Cross-Connect per Occurrence		\$602.75				
H.1.60	PC - Power Reduction Appl. Fee		\$227.53				
H.1.61	PC - Administration Only Appl. Fee		\$812.02				
H.1.61	PC - Administration Only Appl. Fee - Disc. Only		\$1.28				
H.1.62	PC - Connecting Facility Assignment (CFA) Resend, per CLLI		\$84.86				
H.1.63	PC - Copper Entrance Cable Instal., per cable (0 Mh to Vault Splice)		\$424.14				
H.1.63	PC - Copper Entrance Cable Instal., per cable (0 Mh to Vault Splice) - Disc. Only		\$46.79				

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APPENDIX A-2 – AT&T RATE RESTATEMENT FOR SPRINT

Cost Element	Description	Recurring	Non Recurring	First	Additional	Initial	Sub-sequent
H.1.64	PC - Copper Entrance Cable Instal., per each 100 pair		\$19.81				
H.1.65	PC - Fiber Entrance Cable Instal., per cable (0 Mh to Vault Splice)		\$424.14				
H.1.65	PC - Fiber Entrance Cable Instal., per cable (0 Mh to Vault Splice) - Disc. Only		\$46.79				
H.1.66	PC - Fiber Entrance Cable Instal., per each fiber		\$3.96				
H.1.71	PC. Power per Used Ampere	\$7.09					
H.2	VIRTUAL COLLOCATION (VC)						
H.2.1	VC - Appl. Cost		\$1,325.00				
H.2.1	VC -Appl. Cost - Disc. Only		\$1.28				
H.2.2	VC - Fiber Entrance Cable Instal., per Cable		\$519.22				
H.2.2	VC - Fiber Entrance Cable Instal., per Cable - Disc. Only		\$46.79				
H.2.3	VC - Floor Space Per Sq. Ft.	\$3.70					
H.2.4	VC - Power per Fused Amp	\$3.92					
H.2.5	VC - Cable Support Structure. Per Entrance Cable	\$0.9662			\$23.53		
H.2.6	VC - 2-wire Cross-Connects	\$0.0211		\$47.63	\$30.83		
H.2.7	VC- 4-wire Cross-Connects	\$0.0421		\$59.36	\$38.13		
H.2.8	DS 1 Cross-Connects	\$3.971					
H.2.9	VC - DS3 Cross-Connects	\$4.37					
H.2.10	VC - Security Escort - Basic, Per Half Hour			\$35.91	\$23.53		
H.2.11	VC - Security Escort - Overtime, Per Half Hour			\$47.63	\$30.83		
H.2.12	VC - Security Escort - Premium, Per Half Hour			\$59.36	\$38.13		
H.2.16	VC - 2-Fiber Cross-Connect	\$1.84					
H.2.17	VC - 4-Fiber Cross-Connect	\$3.67					
H.2.20	VC - Maintenance in the CO - Basic, per Half Hour			\$57.68	\$23.53		
H.2.21	VC - Maintenance in the CO - Overtime, per Half Hour			\$77.03	\$30.83		
H.2.22	VC - Maintenance in the CO - Premium, per Half Hour			\$96.37	\$38.13		
H.2.30	VC - Power per Used Ampere	\$7.09					
H.3	ASSEMBLY POINT						
H.3.1	Assembly Point. 2-Wire Cross-Connects	\$0.1732					
H.3.2	Assembly Point 4-Wire Cross-Connects	\$0.3464					

APPENDIX A-2 – AT&T RATE RESTATEMENT FOR SPRINT

Cost Element	Description	Recurring	Non Recurring	First	Additional	Initial	Sub-sequent
H.3.3	Assembly Point. DS-1 Cross-Connects	\$0.9635					
H.4	ADJACENT COLLOCATION						
H.4.1	Adjacent Collocation - Space Cost per Sq ft.	\$0.1705					
H.4.2	Adjacent Collocation - Electrical Facility Cost per Linear Ft.	\$4.83					
H.4.3	Adjacent Collocation - 2-Wire Cross-Connects	\$0.0203					
H.4.4	Adjacent Collocation - 4-Wire Cross-Connects	\$0.0406					
H.4.5	Adjacent Collocation - DS1 Cross-Connects	\$0.3890					
H.4.6	Adjacent Collocation - DS3 Cross-Connects	\$4.35					
H.4.7	Adjacent Collocation - 2-Fiber Cross-Connect	\$1.78					
H.4.8	Adjacent Collocation - 4-Fiber Cross-Connect	\$3.49					
H.4.9	Adjacent Collocation - Appl. Cost		\$2,949.00				
H.4.9	Adjacent Collocation - Appl. Cost - Disc. Only		\$1.09				
H.4.16	Adjacent Collocation - 120V, Single Phase Standby Power Cost per AC Breaker Amp	\$5.59					
H.4.17	Adjacent Collocation - 240V, Single Phase Standby Power Cost per AC Breaker Amp	\$11.20					
H.4.18	Adjacent Collocation - 120V, Three Phase Standby Power Cost per AC Breaker Amp	\$16.79					
H.4.19	Adjacent Collocation - 277V, Three Phase Standby Power Cost per AC Breaker Amp	\$38.76					
H.6	PHYSICAL COLLOCATION (PC) IN THE REMOTE TERMINAL (RT)						
H.6.1	PC in the RT - Appl. Fee		\$653.36				
H.6.1	PC in the RT - Appl. Fee Disc. only		\$288.51				
H.6.2	PC in the RT - Per Rack/Bay	\$160.46					
H.6.3	PC in the RT - Security Access Key		\$24.85				
H.6.4	PC in the RT - Space Availability Report, per premises requested		\$238.95				
H.6.5	PC in the RT- Remote Site CLLI Code Request, per CLLI Code Requested		\$78.32				
H.7	COLLOCATION CABLE RECORDS (CCR)						
H.7.1	CCRs - per request					\$0.00	\$0.00
H.7.1	CCRs - per request - Disc. Only					\$0.00	\$0.00

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APPENDIX A-2 – AT&T RATE RESTATEMENT FOR SPRINT

Cost Element	Description	Recurring	Non Recurring	First	Additional	Initial	Sub-sequent
H.7.2	CCRs - VG/DSO Cable, per cable record					\$0.00	\$0.00
H.7.2	CCRs - VG/DSO Cable, per cable record - Disc. only					\$0.00	\$0.00
H.7.3	CCRs - VG/DSO Cable, per each 100 pair					\$0.00	\$0.00
H.7.3	CCRs - VG/DSO Cable, per each 100 pair - Disc. Only					\$0.00	\$0.00
H.7.4	CCRs – DS1, per T1T1E					\$0.00	\$0.00
H.7.4	CCRs - DS1, per T1T1E - Disc. Only					\$0.00	\$0.00
H.7.5	CCRs - DS3, per T3T1E					\$0.00	\$0.00
H.7.5	CCRs - DS3, per T3T1E - Disc. Only					\$0.00	\$0.00
H.7.6	CCRs - Fiber Cable, per Cable Record					\$0.00	\$0.00
H.7.6	CCRs - Fiber Cable, per Cable Record - Disc. only					\$0.00	\$0.00
H.9	COLLOCATION - BRSDDD						
H.9.1	Bellsouth Remote Site DLEC Data (BRSDDD), per CD per CO		\$221.99				

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APPENDIX A-3 – AT&T RATE RESTATEMENT FOR VERIZON							
Cost Element	Description	Recurring	Non-Recurring	First	Additional	Initial	Subsequent
H.0	COLLOCATION						
H.1	PHYSICAL COLLOCATION (PC)						
H.1.1	PC - Appl. Cost - Initial		\$2,983.00				
H.1.1	PC - Appl. Cost - Initial - Disc. Only		\$1.29				
H.1.5	PC - Fiber Entrance Cable Instal., per Cable		\$521.09				
H.1.5	PC - Fiber Entrance Cable Instal., per Cable - Disc. Only		\$46.96				
H.1.6	PC - Floor Space per Sq Ft.	\$3.66					
H.1.7	PC - Cable Support Structure per Fiber Entrance Cable	\$1.10					
H.1.8	PC - Power per Fused Amp	\$3.91					
H.1.9	PC - 2-Wire Cross-Connects	\$0.0216					
H.1.10	PC - 4-Wire Cross-Connects	\$0.0432					
H.1.11	PC - DS1 Cross-Connects	\$0.3949					
H.1.12	PC - DS3 Cross-Connects	\$4.34					
H.1.13	PC - 2-Wire POT Bay	\$0.0188					
H.1.14	PC - 4-Wire POT Bay	\$0.0376					
H.1.15	PC - DS1 POT Bay	\$0.3571					
H.1.16	PC - DS3 POT Bay	\$2.00					
H.1.17	PC - Security Escort - Basic, per Half Hour			\$36.04	\$23.61		
H.1.18	PC - Security Escort - Overtime, per Half Hour			\$47.80	\$30.94		
H.1.19	PC - Security Escort - Premium, per Half Hour			\$59.57	\$38.27		
H.1.23	PC - Welded Wire Cage - First 100 Sq Ft.	\$94.84					
H.1.24	PC - Welded Wire Cage - Add'l 50 Sq Ft	\$10.96					
H.1.31	PC - 2-Fiber Cross-Connect	\$1.79					
H.1.32	PC - 4-Fiber Cross-Connect	\$3.48					
H.1.33	PC - 2-Fiber POT Bay	\$11.91					
H.1.34	PC - 4-fiber POT Bay	\$16.08					
H.1.37	PC - Security Access System - Security System per sq. ft. per CO	\$0.0128					
H.1.38	PC - Security Access System - New Access Card Activation, per Card		\$27.61				
H.1.39	PC - Security Access System - Administrative Change, existing Access Card, per Card		\$9.46				

APPENDIX A-3 – AT&T RATE RESTATEMENT FOR VERIZON

Cost Element	Description	Recurring	Non-Recurring	First	Additional	Initial	Subsequent
H.1.40	PC - Security Access System - Replace Lost or Stolen Card, per Card		\$11.36				
H.1.41	PC - Space Preparation - CO Modification per sq. ft.	\$0.00					
H.1.42	PC - Space Preparation - Common Systems Modification per sq. ft. - Cageless	\$0.00					
H.1.43	PC - Space Preparation - Common Systems Modification per Cage	\$0.00					
H.1.45	PC - Space Preparation - Firm Order Processing		\$307.77				
H.1.46	PC - Appl. Cost - Subsequent		\$1,736.00				
H.1.46	PC - Appl. Cost - Subsequent - Disc. Only		\$1.29				
H.1.47	PC - Space Availability Report per CO		\$120.56				
H.1.48	PC - Co-Carrier Cross-Connect Fiber Cable Support Structure, per Linear Ft per Cable	\$0.0008					
H.1.49	PC - Co-Carrier Cross-Connect Copper or Coaxial Cable Support Structure, per Linear Ft. per Cable	\$0.0012					
H.1.50	PC - 120V, Single Phase Standby Power Cost	\$5.60					
H.1.51	PC - 240V, Single Phase Standby Power Cost	\$11.21					
H.1.52	PC - 120V, Three Phase Standby Power Cost	\$16.81					
H.1.53	PC - 277V, Three Phase Standby Power Cost	\$38.82					
H.1.54	PC - Security Access - Initial Key, per Key		\$12.08				
H.1.55	PC - Security Access - Key, Replace Lost or Stolen Key, per Key		\$12.08				
H.1.56	PC - Copper Entrance Cable Support Structure, Per Each 100 Pairs	\$0.1466					
H.1.57	PC - Copper Entrance Cable Instal., Per Cable		\$617.02				
H.1.57	PC - Copper Entrance Cable Instal., Per Cable - Disc. Only		\$24.35				
H.1.58	PC - Copper Entrance Cable Instal., Per Each 100 Pairs		\$19.88				
H.1.59	Subsequent Appl. for Co-Carrier Cross-Connect per Occurrence		\$604.92				
H.1.60	PC - Power Reduction Appl. Fee		\$228.35				
H.1.61	PC - Administration Only Appl. Fee		\$814.95				
H.1.61	PC - Administration Only Appl. Fee - Disc. Only		\$1.29				
H.1.62	PC - Connecting Facility Assignment (CFA) Resend, per CLLI		\$85.16				
H.1.63	PC - Copper Entrance Cable Instal., per cable (0 Mh to Vault-Splice)		\$425.67				
H.1.63	PC - Copper Entrance Cable Instal., per cable (0 Mh to Vault-Splice) - Disc. Only		\$46.96				
H.1.64	PC - Copper Entrance Cable Instal., per each 100 pair		\$19.88				

APPENDIX A-3 – AT&T RATE RESTATEMENT FOR VERIZON

Cost Element	Description	Recurring	Non-Recurring	First	Additional	Initial	Subsequent
H.1.65	PC - Fiber Entrance Cable Instal., per cable (0 Mh to Vault Splice)		\$425.67				
H.1.65	PC - Fiber Entrance Cable Instal., per cable (0 Mh to Vault Splice) - Disc. Only		\$46.96				
H.1.66	PC - Fiber Entrance Cable Instal., per each fiber		\$3.97				
H.1.71	PC - Power per Used Ampere	\$7.07					
H.2	VIRTUAL COLLOCATION						
H.2.1	VC - Appl. Cost		\$1,330.00				
H.2.1	VC - Appl. Cost - Disc. Only		\$1.29				
H.2.2	VC - Fiber Entrance Cable Instal., per Cable		\$521.09				
H.2.2	VC - Fiber Entrance Cable Instal., per Cable - Disc. Only		\$46.96				
H.2.3	VC - Floor Space Per Sq. Ft.	\$3.66					
H.2.4	VC - Power per Fused Amp	\$3.91					
H.2.5	VC - Cable Support Structure. Per Entrance Cable	\$0.9609					
H.2.6	VC - 2-wire Cross Connects	\$0.0209					
H.2.7	VC - 4-wire Cross Connects	\$0.0418					
H.2.8	VC - DS1 Cross Connects	\$0.3949					
H.2.9	VC - DS3 Cross Connects	\$4.34					
H.2.10	VC - Security Escort - Basic, Per Half Hour			\$36.04	\$23.61		
H.2.11	VC - Security Escort - Overtime, Per Half Hour			\$47.80	\$30.94		
H.2.12	VC - Security Escort - Premium, Per Half Hour			\$59.57	\$38.27		
H.2.16	VC - 2-Fiber Cross Connect	\$1.83					
H.2.17	VC - 4-Fiber Cross Connect	\$3.65					
H.2.20	VC - Maintenance in the CO - Basic, per Half Hour			\$57.89	\$23.61		
H.2.21	VC - Maintenance in the CO - Overtime, per Half Hour			\$77.31	\$30.94		
H.2.22	VC - Maintenance in the CO - Premium, per Half Hour			\$96.72	\$38.27		
H.2.30	VC - Power per Used Ampere	\$7.07					
H.3	ASSEMBLY POINT						
H.3.1	Assembly Point. 2-Wire Cross-Connects	\$0.1723					
H.3.2	Assembly Point 4-Wire Cross-Connects	\$0.3445					
H.3.3	Assembly Point. DS 1 Cross-Connects	\$0.0958					
H.4	ADJACENT COLLOCATION						

APPENDIX A-3 – AT&T RATE RESTATEMENT FOR VERIZON

Cost Element	Description	Recurring	Non-Recurring	First	Additional	Initial	Subsequent
H.4.1	Adjacent Collocation – Space Cost per Sq Ft	\$0.1673					
H.4.2	Adjacent Collocation - Electrical Facility Cost per Linear Ft.	\$4.79					
H.4.3	Adjacent Collocation – 2-Wire Cross-Connects	\$0.0201					
H.4.4	Adjacent Collocation – 4-Wire Cross-Connects	\$0.0403					
H.4.5	Adjacent Collocation – DS1 Cross-Connects	\$0.3868					
H.4.6	Adjacent Collocation - DS3 Cross-Connects	\$4.32					
H.4.7	Adjacent Collocation - 2-Fiber Cross-Connect	\$1.78					
H.4.8	Adjacent Collocation - 4-Fiber Cross-Connect	\$3.47					
H.4.9	Adjacent Collocation – Appl. Cost		\$2,959.00				
H.4.9	Adjacent Collocation – Appl. Cost - Disc. Only		\$1.09				
H.4.16	Adjacent Collocation - 120V, Single Phase Standby Power Cost per AC Breaker Amp	\$5.60					
H.4.17	Adjacent Collocation - 240V, Single Phase Standby Power Cost per AC Breaker Amp	\$11.21					
H.4.18	Adjacent Collocation - 120V, Three Phase Standby Power Cost per AC Breaker Amp	\$16.81					
H.4.19	Adjacent Collocation - 277V, Three Phase Standby Power Cost per AC Breaker Amp	\$38.82					
H.6	PHYSICAL COLLOCATION (PC) IN THE REMOTE TERMINAL (RT)		\$655.72				
H.6.1	PC in the RT - Appl. Fee						
H.6.1	PC in the RT - Appl. Fee - Disc. Only		\$289.55				
H.6.2	PC in the RT - Per Rack/Bay	\$158.64					
H.6.3	PC in the RT - Security Access Key		\$24.94				
H.6.4	PC in the RT - Space Availability Report, per premises requested		\$239.81				
H.6.5	PC in the RT- Remote Site CLLI Code Request, per CLLI Code Requested		\$78.60				
H.7.1	COLLOCATION CABLE RECORDS (CCR)				\$0.00	\$0.00	
H.7.1	CCRs - per request				\$0.00	\$0.00	
H.7.2	CCRs - per request - Disc. Only				\$0.00	\$0.00	
H.7.2	CCRs - VG/DSO Cable, per cable record				\$0.00	\$0.00	
H.7.3	CCRs - VG/DSO Cable, per cable record - Disc. only				\$0.00	\$0.00	

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APPENDIX A-3 – AT&T RATE RESTATEMENT FOR VERIZON

Cost Element	Description	Recurring	Non-Recurring	First	Additional	Initial	Subsequent
H.7.3	CCRs - VG/DSDO Cable, per each 100 pair				\$0.00	\$0.00	
H.7.4	CCRs - VG/DSDO Cable, per each 100 pair - Disc. Only						
H.7.4	CCRs - DS1, per T1T1E				\$0.00	\$0.00	
H.7.4	CCRs - DS1, per T1T1E - Disc. Only				\$0.00	\$0.00	
H.7.5	CCRs - DS3, per T3T3E				\$0.00	\$0.00	
H.7.5	CCRs - DS3, per T3T3E - Disc. Only						
H.7.6	CCRs - Fiber Cable, per Cable Record				\$0.00	\$0.00	
H.7.6	CCRs - Fiber Cable, per Cable Record - Disc. only				\$0.00	\$0.00	
H.9	COLLOCATION - BRSDD						
H.9.1	Bellsouth Remote Site DLEC Data (BRSDD), per CD per CO		\$222.79				

APPENDIX B – RATE COMPARISON – BELLSOUTH & STAFF													
		BellSouth's Proposed Rates						Staff's Recommended Rates					
Cost Element	Description	Recurring	Non-Recurring	First	Add'l	Initial	Sub-sequent	Recurring	Non-Recurring	First	Add'l	Initial	Sub-sequent
H.0	COLLOCATION												
H.1	PHYSICAL COLLOCATION (PC)												
H.1.1	PC – Appl. Cost – Initial		\$2,785.00						\$2,785.00				
H.1.1	PC – Appl. Cost – Initial – Disc. Only		\$1.20						\$1.20				
H.1.5	PC – Fiber Entrance Cable Instal., per Cable		\$1,473.00						\$1,473.00				
H.1.5	PC – Fiber Entrance Cable Instal., per Cable – Disc. Only		\$43.84						\$43.84				
H.1.6	PC – Floor Space per Sq Ft.	\$5.28						\$5.28					
H.1.7	PC – Cable Support Structure per Fiber Entrance Cable	\$5.19						\$5.19					
H.1.8	PC – Power per Fused Amp ⁸³	Deleted						Deleted					
H.1.9	PC – 2-Wire Cross-Connects	\$0.0208		\$7.32	\$5.37			\$0.0208		\$7.32	\$5.37		
H.1.9	PC – 2-Wire Cross-Connects-Disc. Only			\$4.58	\$2.71					\$4.58	\$2.71		
H.1.10	PC – 4-Wire Cross-Connects	\$0.0416		\$8.00	\$5.75			\$0.0416		\$8.00	\$5.75		
H.1.10	PC – 4-Wire Cross-Connects-Disc. Only			\$5.00	\$2.69					\$5.00	\$2.69		
H.1.1	PC – DSL Cross-Connects	\$0.3786		\$7.88	\$6.25			\$0.3786		\$7.88	\$6.25		
H.1.1	PC – DSL Cross-Connects-Disc. Only			\$1.35	\$0.9899					\$1.35	\$0.9899		
H.1.12	PC – DS3 Cross-Connects	\$4.16		\$32.40	\$31.03			\$4.16		\$32.40	\$31.03		
H.1.12	PC – DS3 Cross-Connects-Disc. Only			\$11.15	\$10.98					\$11.15	\$10.98		
H.1.13	PC – 2-Wire POT Bay	\$0.0300						\$0.0300					
H.1.14	PC – 4-Wire POT Bay	\$0.0600						\$0.0600					
H.1.15	PC – DSL POT Bay	\$0.4238						\$0.4238					
H.1.16	PC – DS3 POT Bay	\$3.78						\$3.78					
H.1.17	PC – Security Escort – Basic, per Half Hour			\$33.65	\$22.05					\$33.65	\$22.05		
H.1.18	PC – Security Escort – Overtime, per Half Hour			\$44.63	\$28.89					\$44.63	\$28.89		
H.1.19	PC – Security Escort – Premium, per			\$55.62	\$35.73					\$55.62	\$35.73		

⁸³ H.1.8 rate deleted based on Phase I order.

APPENDIX B – RATE COMPARISON – BELLSOUTH & STAFF

		BellSouth's Proposed Rates						Staff's Recommended Rates					
Cost Element	Description	Recurring	Non-Recurring	First	Add'l	Initial	Subsequent	Recurring	Non-Recurring	First	Add'l	Initial	Subsequent
	Half Hour												
H.1.23	PC – Welded Wire Cage – First 100 Sq Ft.	\$189.73						\$189.73					
H.1.24	PC – Welded Wire Cage – Add'l 50 Sq Ft.	\$18.61						\$18.61					
H.1.31	PC – 2-Fiber Cross-Connect	\$1.71		\$28.26	\$25.85			\$1.71		\$28.26	\$25.85		
H.1.31	PC – 2-Fiber Cross-Connect-Disc. Only			\$13.78	\$11.01					\$13.78	\$11.01		
H.1.32	PC – 4-Fiber Cross-Connect	\$3.34		\$37.92	\$35.51			\$3.34		\$37.92	\$35.51		
H.1.32	PC – 4-Fiber Cross-Connect-Disc. Only			\$18.20	\$15.44					\$18.20	\$15.44		
H.1.33	PC – 2-Fiber POT Bay	\$12.89						\$12.89					
H.1.34	PC – 4-fiber POT Bay	\$17.39						\$17.39					
H.1.37	PC – Security Access System – Security System per sq. ft. per CO	\$0.0101						\$0.0101					
H.1.38	PC – Security Access System – New Access Card Activation, per Card		\$38.95						\$38.95				
H.1.39	PC – Security Access System - Administrative Change, existing Access Card, per Card		\$8.84						\$8.84				
H.1.40	PC – Security Access System - Replace Lost or Stolen Card, per Card		\$28.78						\$28.78				
H.1.41	PC – Space Preparation – CO Modification per sq. ft.	\$2.38						\$2.38					
H.1.42	PC – Space Preparation – Common Systems Modification per sq. ft. – Cageless	\$2.50						\$2.50					
H.1.43	PC – Space Preparation – Common Systems Modification per Cage	\$84.93						\$84.93					
H.1.45	PC – Space Preparation – Firm Order Processing		\$287.36						\$287.36				
H.1.46	PC – Appl. Cost – Subsequent		\$2,236.00						\$2,236.00				
H.1.46	PC – Appl. Cost – Subsequent – Disc. Only		\$1.20						\$1.20				
H.1.47	PC - Space Availability Report per CO		\$572.66						\$572.66				
H.1.48	PC - Co-Carrier Cross-Connect Fiber Cable Support Structure, per Linear Ft per Cable	\$0.0008						\$0.0008					
H.1.49	PC - Co-Carrier Cross-Connect Copper or Coaxial Cable Support Structure.	\$0.0012						\$0.0012					

APPENDIX B – RATE COMPARISON – BELLSOUTH & STAFF

Cost Element	Description	BellSouth's Proposed Rates						Staff's Recommended Rates						
		Recurring	Non-Recurring	First	Add'l	Initial	Subsequent	Recurring	Non-Recurring	First	Add'l	Initial	Subsequent	
	per Linear Ft. per Cable													
H.1.50	PC – 120V, Single Phase Standby Power Cost	\$5.26												
H.1.51	PC – 240V, Single Phase Standby Power Cost	\$10.53												
H.1.52	PC – 120V, Three Phase Standby Power Cost	\$15.80												
H.1.53	PC – 277V, Three Phase Standby Power Cost	\$36.47												
H.1.54	PC – Security Access – Initial Key, per Key		\$23.28										\$23.28	
H.1.55	PC – Security Access - Key, Replace Lost or Stolen Key, per Key		\$23.28										\$23.28	
H.1.56	PC – Copper Entrance Cable Support Structure, Per Each 100 Pairs	\$0.1406											\$0.1406	
H.1.57	PC – Copper Entrance Cable Instal., Per Cable		\$1,510.00										\$1,510.00	
H.1.57	PC – Copper Entrance Cable Instal., Per Cable – Disc. Only		\$43.84										\$43.84	
H.1.58	PC – Copper Entrance Cable Instal., Per Each 100 Pairs		\$18.56										\$18.56	
H.1.59	Subsequent Appl. for Co-Carrier Cross Connect per Occurrence		\$564.81										\$564.81	
H.1.60	PC – Power Reduction Appl. Fee		\$409.50										\$409.50	
H.1.61	PC – Administration Only Appl. Fee		\$760.91										\$760.91	
H.1.61	PC – Administration Only Appl. Fee - Disc. Only		\$1.20										\$1.20	
H.1.62	PC – Connecting Facility Assignment (CFA), Resend, per CLLI		\$79.52										\$79.52	
H.1.63	PC – Copper Entrance Cable Instal., per cable (0 Mh to Vault Splice)		\$1,195.00										\$1,195.00	
H.1.63	PC – Copper Entrance Cable Instal., per cable (0 Mh to Vault Splice) – Disc. Only		\$43.84										\$43.84	
H.1.64	PC – Copper Entrance Cable Instal., per each 100 pair		\$18.56										\$18.56	
H.1.65	PC – Fiber Entrance Cable Instal., Per cable (0 Mh to Vault Splice)		\$994.12										\$994.12	
H.1.65	PC – Fiber Entrance Cable Instal., per		\$43.84										\$43.84	

APPENDIX B – RATE COMPARISON – BELLSOUTH & STAFF

Cost Element	Description	BellSouth's Proposed Rates						Staff's Recommended Rates																	
		Recurring	Non-Recurring	First	Add'l	Initial	Subsequent	Recurring	Non-Recurring	First	Add'l	Initial	Subsequent												
														Non-Recurring						Non-Recurring					
	cable (0 Mh to Vault Splice) – Disc. Only																								
H.1.66	PC – Fiber Entrance Cable Instal., per each fiber		\$7.43																						
H.1.71	PC – Power per Used Ampere	\$10.87																							
H.2	VIRTUAL COLLOCATION (VC)																								
H.2.1	VC - Appl. Cost		\$1,241.00																						
H.2.1	VC -Appl. Cost - Disc. Only		\$1.20																						
H.2.2	VC - Fiber Entrance Cable Instal., per Cable		\$1,473.00																						
H.2.2	VC - Fiber Entrance Cable Instal., per Cable - Disc. Only		\$43.84																						
H.2.3	VC - Floor Space Per Sq. Ft.																								
H.2.4	VC - Power per Fused Amp ⁸⁴																								
H.2.5	VC - Cable Support Structure. Per Entrance Cable																								
H.2.6	VC - 2-wire Cross Connects	\$0.0201																							
H.2.6	VC - 2-wire Cross Connects-Disc. Only																								
H.2.7	VC - 4-wire Cross Connects	\$0.0403																							
H.2.7	VC - 4-wire Cross Connects-Disc. Only																								
H.2.8	VC - DSL Cross Connects	\$0.3786																							
H.2.8	VC - DSL Cross Connects-Disc. Only																								
H.2.9	VC-DS3 Cross Connects	\$4.16																							
H.2.9	VC-DS3 Cross Connects-Disc. Only																								
H.2.10	VC - Security Escort - Basic, Per Half Hour																								
H.2.10	VC - Security Escort - Overtime, Per Half Hour																								
H.2.11	VC - Security Escort - Premium, Per Half Hour																								
H.2.12	VC - 2-Fiber Cross Connect	\$1.75																							
H.2.16	VC - 2-Fiber Cross Connect-Disc. only																								

⁸⁴ H.2.4 rate deleted based on Phase I order.

APPENDIX B – RATE COMPARISON – BELLSOUTH & STAFF

Cost Element	Description	BellSouth's Proposed Rates						Staff's Recommended Rates					
		Recurring	Non-Recurring	First	Add'l	Initial	Sub-sequent	Recurring	Non-Recurring	First	Add'l	Initial	Sub-sequent
H.2.17	VC - 4-Fiber Cross Connect	\$3.50		\$37.92	\$35.51					\$37.92	\$35.51		
H.2.17	VC - 4-Fiber Cross Connect-Disc. only			\$18.20	\$15.44					\$18.20	\$15.44		
H.2.20	VC - Maintenance in the CO - Basic, per Half Hour			\$54.05	\$22.05					\$54.05	\$22.05		
H.2.21	VC - Maintenance in the CO - Overtime, per Half Hour			\$72.18	\$28.89					\$72.18	\$28.89		
H.2.22	VC - Maintenance in the CO - Premium, per Half Hour			\$90.31	\$35.73					\$90.31	\$35.73		
H.3	ASSEMBLY POINT												
H.3.1	Assembly Point 2-Wire Cross Connects	\$0.2452		\$7.32	\$5.37					\$7.32	\$5.37		
H3.1	Assembly Point 2-Wire Cross Connects-Disc. only			\$4.58	\$2.71					\$4.58	\$2.71		
H.3.2	Assembly Point 4-Wire Cross Connects	\$0.4903		\$8.00	\$5.75					\$8.00	\$5.75		
H.3.2	Assembly Point 4-Wire Cross Connects-Disc. Only			\$5.00	\$2.69					\$5.00	\$2.69		
H.3.3	Assembly Point DS-1 Cross Connects	\$7.28		\$7.88	\$6.26					\$7.88	\$6.26		
H.3.3	Assembly Point DS-1 Cross Connects-Disc. Only			\$1.35	\$0.9915					\$1.35	\$0.9915		
H.4	ADJACENT COLLOCATION												
H4.1	Adjacent Collocation - Space Cost per Sq Ft	\$0.1666								\$0.1666			
H.4.2	Adjacent Collocation - Electrical Facility Cost per Linear Ft.	\$4.62								\$4.62			
H.4.3	Adjacent Collocation - 2Wire Cross-Connects	\$0.0194		\$7.32	\$5.37					\$7.32	\$5.37		
H.4.3	Adjacent Collocation - 2Wire Cross-Connects-Disc. Only			\$4.58	\$2.71					\$4.58	\$2.71		
H.4.4	Adjacent Collocation - 4-Wire Cross-Connects	\$0.0388		\$8.00	\$5.75					\$8.00	\$5.75		
H.4.4	Adjacent Collocation - 4-Wire Cross-Connects-Disc. Only			\$5.00	\$2.69					\$5.00	\$2.69		
H.4.5	Adjacent Collocation - DSI Cross-Connects	\$0.3708		\$7.88	\$6.26					\$7.88	\$6.26		
H.4.5	Adjacent Collocation - DSI Cross-Connects-Disc. only			\$1.35	\$0.9915					\$1.35	\$0.9915		
H.4.6	Adjacent Collocation - DS3 Cross-Connects	\$4.14		\$32.40	\$31.03					\$32.40	\$31.03		
H.4.6	Adjacent Collocation - DS3 Cross-Connects			\$11.15	\$10.98					\$11.15	\$10.98		

APPENDIX B – RATE COMPARISON – BELLSOUTH & STAFF

Cost Element	Description	BellSouth's Proposed Rates					Staff's Recommended Rates						
		Recurring	Non-Recurring	First	Add'l	Initial	Sub-sequent	Recurring	Non-Recurring	First	Add'l	Initial	Sub-sequent
H.7.2	CCR - VG/DSO Cable, per cable record					\$646.84	\$646.84					\$646.84	\$646.84
H.7.2	CCR - VG/DSO Cable, per cable record - Disc. Only					\$362.41	\$362.41					\$362.41	\$362.41
H.7.3	CCR - VG/DSO Cable, per each 100 pair					\$9.11	\$9.11					\$9.11	\$9.11
H.7.3	CCR - VG/DSO Cable, per each 100 pair - Disc. Only					\$10.80	\$10.80					\$10.80	\$10.80
H.7.4	CCR - DS1, per T1TIE					\$4.52	\$4.52					\$4.52	\$4.52
H.7.4	CCR - DS1, per T1TIE - Disc. Only					\$5.35	\$5.35					\$5.35	\$5.35
H.7.5	CCR - DS3, per T3TIE					\$15.81	\$15.81					\$15.81	\$15.81
H.7.5	CCR - DS3, per T3TIE - Disc. Only					\$18.73	\$18.73					\$18.73	\$18.73
H.7.6	CCR - Fiber Cable, per Cable Record					\$169.96	\$169.96					\$169.96	\$169.96
H.7.6	CCR - Fiber Cable, per Cable Record - Disc. only					\$149.97	\$149.97					\$149.97	\$149.97
H.8	VIRTUAL COLLOCATION (VC) IN THE REMOTE TERMINAL (RT)												
H.8.1	VC in the RT - Appl. Fee (Same as H.6.1)												
H.8.1	VC in the RT - Appl. Fee - Disc. Only (Same as H.6.1)												
H.8.2	VC in the RT - Per Bay/Rack Of Space (Same as H.6.2)												
H.8.3	VC in the RT - Space Availability Report Per Premises Requested (Same as H.6.4)												
H.8.4	VC in the RT - Remote Site CLLI Code Request, per CLLI Code Requested (Same as H.6.5)												
H.9	COLLOCATION - BRSD												
H.9.1	Bellsouth Remote Site DLEC Data (BRSD), per CD per CO		\$208.02										\$208.02

APPENDIX C – RATE COMPARISON – SPRINT & STAFF					
Line	Element	Sprint's Proposed Rates		Staff's Recommended Rates	
		NRC	MRC	NRC	MRC
	Administrative, Engineering and Project Management Fees				
1	New Collocation - Application Fee	\$2,758.17		\$2,758.17	
2	New Collocation - Admin., Transm. Engr. & Project Management Fee	\$4,935.51		\$4,935.51	
3	Minor Augment Fee	\$801.43		\$801.43	
4	Minor Augment - Administrative & Project Management Fee	\$581.58		\$581.58	
5	Minor Augment - Transmission Engineering Fee	\$569.49		\$569.49	
6	Major Augment Fee	\$1,613.29		\$1,613.29	
7	Major Augment - Administrative & Project Management Fee	\$1,451.88		\$1,451.88	
8	Major Augment - Transmission Engineering Fee	\$1,672.88		\$1,672.88	
9	Space Report (per wire center)	\$857.94		\$857.94	
	Security Cage Construction				
10	Security Cage - Engineering	\$688.54		\$688.54	
11	Security Cage - Construction (Cost per Linear Foot)	By CLEC		By CLEC	
	Floor Space				
12	Floor Space (Per Square Foot)		\$7.87		\$7.87
	DC Power				
13	Power Costs - Per Load Ampere Ordered		\$16.14		\$15.81
14	Power Costs - Connection to Power Plant up to 30 Amps	By CLEC	\$5.69	By CLEC	\$5.59
15	Power Costs - Connection to Power Plant 35-60 Amps	By CLEC	\$8.04	By CLEC	\$7.90
16	Power Costs - Connection to Power Plant 70-100 Amps	\$533.90	\$17.10	\$533.90	\$16.88
17	Add Per Foot Over 110 Linear Feet	\$2.42	\$0.24	\$2.42	\$ 0.24
18	Power Costs - Connection to Power Plant 125-200 Amps	\$533.90	\$34.42	\$533.90	\$34.02
19	Add Per Foot Over 110 Linear Feet	\$2.42	\$0.45	\$2.42	\$ 0.45
	AC Power				
20	Cost per AC Outlet Installation (per outlet 20 amps)	\$106.78		\$106.78	
21	Cost per Additional Set of Overhead Lights	\$106.78		\$106.78	
	Cross Connect Facilities				
22	DS0 Switchboard Cable Per 100-Pr	By CLEC	\$4.51	By CLEC	\$2.34
23	DS0 Co-Carrier Switchboard Cable Per 100 Pr.	By CLEC	\$3.80	By CLEC	\$2.34

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APPENDIX C – RATE COMPARISON – SPRINT & STAFF

Line	Element	Sprint's Proposed Rates		Staff's Recommended Rates	
		NRC	MRC	NRC	MRC
24	DS1 Cross Connect (Per 28 DS1s)	By CLEC	\$6.36	By CLEC	\$3.32
25	DS1 Co-Carrier Cross Connect (Per 28 DS1s)	By CLEC	\$4.81	By CLEC	\$3.32
26	DS3 Cross Connect (Per 12 DS3s)	By CLEC	\$18.19	By CLEC	\$3.77
27	DS3 Co-Carrier Cross Connect (Per 12 DS3s)	By CLEC	\$7.48	By CLEC	\$3.77
28	Optical Cross-Connect Per 4 Fibers	By CLEC	\$8.96	By CLEC	\$7.41
29	Optical Cross-Connect Co-Carrier Per 4 Fibers	By CLEC	\$8.83	By CLEC	\$7.41
30	Internal Cable Space - Per 48 Fiber Cable		\$31.30		\$30.89
31	Internal Cable Space - Per 100 Pr Copper Stub Cable		\$20.81		\$20.76
32	Internal Cable - 48 Fiber	\$1,074.69	\$3.25	\$1,074.69	\$0.00
33	Internal Cable - Per 100-Pr Copper Stub Cable	\$185.30	\$2.93	\$185.30	\$0.00
	Security Card				
34	Security Card - Per Card	\$15.00		\$15.00	
	Additional Labor Charges (Virtual or Physical)				
35	Additional Labor 1/4 hour CO Technician - Regular	\$17.48		\$17.48	
36	Additional Labor 1/4 hour CO Technician - Overtime	\$26.22		\$26.22	
37	Additional Labor 1/4 hour CO Technician - Premium	\$34.96		\$34.96	
38	Additional Labor 1/4 hour CO Engineer	\$15.66		\$15.66	
39	Additional Labor 1/4 hour OSP Technician - Regular	\$14.55		\$14.55	
40	Additional Labor 1/4 hour OSP Technician - Overtime	\$21.83		\$21.83	
41	Additional Labor 1/4 hour OSP Technician - Premium	\$29.10		\$29.10	
42	Additional Labor 1/4 hour OSP Engineer	\$12.28		\$12.28	
43	Adjacent On-Site Collocation	ICB		ICB	
44	Remote Terminal Collocation	ICB		ICB	

APPENDIX D – RATE COMPARISON – VERIZON & STAFF					
#	Rate Element	NRC/MRC	Increment	Verizon's Proposed Rates	Staff's Recommended Rates
	Caged, Careless, Shared, Subleased & Virtual NRC Rate Elements				
1	Engineering/Major Augment-Caged/Cageless	NRC	per occurrence	\$1,380.25	\$1,380.25
2	Minor Augment	NRC	per occurrence	\$256.69	\$256.69
3	Access Card Administration	NRC	per card	\$31.64	\$31.64
4	Cage Enclosure 25-100 SF	NRC	per cage	\$3,855.82	\$3,855.82
5	Cage Enclosure 101-200 SF	NRC	per cage	\$5,148.52	\$5,148.52
6	Cage Enclosure 201-300 SF	NRC	per cage	\$6,441.22	\$6,441.22
7	Cage Enclosure 301-400 SF	NRC	per cage	\$7,742.26	\$7,742.26
8	Cage Enclosure 401 -500 SF	NRC	per cage	\$9,034.96	\$9,034.96
9	Cage Enclosure Augment	NRC	per square foot	\$11.81	\$11.81
10	Cage Grounding Bar	NRC	per bar	\$926.77	\$926.77
11	Overhead Superstructure	NRC	per project	\$1,247.53	\$1,247.53
12	Facility Pull - Engineering (Metallic & Fiber Optic Patchcord)	NRC	per project	\$83.61	\$83.61
13	Facility Pull - Labor (Metallic)	NRC	per cable run	\$128.80	\$128.80
14	Fiber Optic Patchcord Pull - Labor	NRC	per cable run	\$212.75	\$212.75
15	DSO Cable Termination (Connectorized)	NRC	per 100 pair	\$4.60	\$4.60
16	DS1 Cable Termination (Connectorized)	NRC	per 28 pair	\$1.15	\$1.15
17	DS3 Coaxial Cable Termination (Preconnectorized)	NRC	per coaxial cable	\$1.15	\$1.15
18	DS3 Coaxial Cable Termination (Unconnectorized)	NRC	per coaxial cable	\$11.49	\$11.49
19	Category 5 Cable Termination (Connectorized)	NRC	per termination	\$1.15	\$1.15
20	Fiber Optic Patchcord Termination	NRC	per termination	\$1.15	\$1.15
21	Fiber Cable Pull - Engineering	NRC	per project	\$1,371.12	\$1,371.12
22	Fiber Cable Pull - Place Innerduct	NRC	per 25 pair	\$0.73	\$0.73
23	Fiber Cable Pull - Labor	NRC	per project	\$0.49	\$0.49
24	Fiber Cable Pull - Cable Fire Retardant	NRC	per linear f t	\$45.98	\$45.98
25	Fiber Cable Splice - Engineering	NRC	per occurrence	\$68.56	\$68.56
26	Fiber Cable Splice	NRC	per fiber strand	\$41.03	\$41.03

APPENDIX D – RATE COMPARISON – VERIZON & STAFF					
#	Rate Element	NRC/MRC	Increment	Verizon's Proposed Rates	Staff's Recommended Rates
27	DC Power - Engineering	NRC	per project	\$83.61	\$83.61
28	DC Power - Cable Pull/Termination	NRC	per cable	\$395.25	\$395.25
29	DC Power - Ground Wire	NRC	per wire	\$9.38	\$9.38
30	Virtual Equipment Installation	NRC	per quarter rack	\$3,693.59	\$3,693.59
31	Virtual Software Upgrades	NRC	per base unit	\$98.62	\$98.62
32	Virtual Card Installation	NRC	per card	\$238.54	\$238.54
33	Engineering/Major Augment - Virtual	NRC	per occurrence	\$756.67	\$756.67
	Caged, Cageless, Shared, Subleased & Virtual MRC Rate Elements				
34	Building Modification	MRC	per request	\$227.53	\$112.67
35	Environmental Conditioning	MRC	per 1 amp	\$2.93	\$1.52
36	Caged Floor Space	MRC	per square ft	\$3.25	See Note ⁸⁵
37	Relay Rack Floor Space	MRC	per linear ft	\$13.82	\$7.58
38	Cabinet Floor Space	MRC	per linear ft	\$18.70	\$10.25
39	Cable Subduct Space - Manhole	MRC	per subduct	\$7.01	\$3.59
40	Cable Subduct Space	MRC	per linear f t	\$0.05	\$0.02
41	Fiber Cable Vault Splice - 48 Fiber-Material	MRC	per splice closure	\$10.98	\$6.44
42	Fiber Cable Vault Splice - 96 Fiber-Material	MRC	per splice closure	\$33.96	\$19.90
43	Cable Vault Space - Fiber	MRC	per innerduct	Element deleted by Verizon	
44	Cable Rack Shared Space - Metallic	MRC	per cable run	\$0.19	\$0.15
45	Cable Rack Shared Space - Fiber	MRC	per innerduct ft	\$0.006	\$0.005
46	DC Power	MRC	per 1 amp	\$19.43	\$14.30
47	Facility Termination - DSO	MRC	per 100 pair	\$3.51	\$2.68
48	Facility Termination - DSI	MRC	per 28 pair	\$11.12	\$8.23
49	Facility Termination - DS3	MRC	per coaxial cable	\$27.46	\$20.91
50	Virtual Equipment Maintenance	MRC	per quarter rack	\$76.12	\$71.23
	Adjacent On-Site NRC Rate Elements				

⁸⁵ Staff recommends that the Commission order Verizon to re-file its study for this element. As such, staff recommended rate is not yet known. If the Commission does not believe a compliance filing is needed, staff's recommended rate is \$1.78.

APPENDIX D – RATE COMPARISON – VERIZON & STAFF					
#	Rate Element	NRC/MRC	Increment	Verizon's Proposed Rates	Staff's Recommended Rates
51	Engineering - Adjacent On Site	NRC	per occurrence	\$1,292.21	\$1,292.21
52	Adjacent Metallic Facility Pull-Engineering	NRC	per project	\$83.61	\$83.61
53	Adjacent Metallic Facility Pull - Labor	NRC	per linear ft	\$1.15	\$1.15
54	Adjacent DSO Cable Termination (Connectorized)	NRC	per 100 pair	\$4.60	\$4.60
55	Adjacent DSO Cable Termination (Unconnectorized)	NRC	per 100 pair	\$45.98	\$45.98
56	Adjacent DSL Cable Termination (Connectorized)	NRC	per 28 pair	\$1.15	\$1.15
57	Adjacent DSL Cable Termination (Unconnectorized)	NRC	per 28 pair	\$34.48	\$34.48
58	Adjacent DS3 Coaxial Termination (Connectorized)	NRC	per coaxial cable	\$1.15	\$1.15
59	Adjacent DS3 Coaxial Termination (Unconnectorized)	NRC	per coaxial cable	\$11.49	\$11.49
60	Adjacent Category 5 Cable Termination (Connectorized)	NRC	per 25 pair	\$1.15	\$1.15
61	Adjacent Fiber Cable Termination	NRC	per fiber term	\$41.03	\$41.03
62	Adjacent Fiber Cable Pull-Engineering	NRC	per project	\$1,371.12	\$1,371.12
63	Adjacent Fiber Cable Pull-Place Innerduct	NRC	per innerduct ft	\$0.73	\$0.73
64	Adjacent Fiber Cable Pull - Labor	NRC	per linear ft	\$0.49	\$0.49
65	Adjacent-Cable Fire Retardant	NRC	per occurrence	\$45.98	\$45.98
66	Adjacent Metallic Cable Pull-Engineering	NRC	per project	\$1,371.12	\$1,371.12
67	Adjacent Metallic Cable Pull - Labor	NRC	per linear ft	\$0.60	\$0.60
68	Adjacent Metallic Cable Splice-Engineering	NRC	per splicing project	\$68.56	\$68.56
69	Adjacent Metallic Cable Splicing (greater than 200 pair)	NRC	per pair	\$0.65	\$0.65
70	Adjacent Metallic Cable Splicing (less than 200 pair)	NRC	per pair	\$1.20	\$1.20
71	Adjacent Fiber Cable Splicing-Engineering	NRC	per splicing project	\$68.56	\$68.56
72	Adjacent Fiber Cable Splicing (48 fiber cable or less)	NRC	per fiber strand	\$41.03	\$41.03
73	Adjacent Fiber Cable Splicing (greater than 48 fiber)	NRC	per fiber strand	\$38.64	\$38.64
	Adjacent On-Site MRC Rate Elements				
74	Adjacent Subduct Space-Manhole	MRC	per subduct	\$7.01	\$3.59
75	Adjacent Subduct Space	MRC	per linear ft	\$0.05	\$0.02

APPENDIX D – RATE COMPARISON – VERIZON & STAFF					
#	Rate Element	NRC/MRC	Increment	Verizon's Proposed Rates	Staff's Recommended Rates
76	Adjacent Conduit Space (4" Duct)-Metallic-Manhole	MRC	per conduit	\$13.29	\$6.81
77	Adjacent Conduit Space (4" Duct)-Metallic Cable	MRC	per linear f t	\$0.06	\$0.03
78	Adjacent Facility Termination DSO Cable-Material	MRC	per 100 pair	\$3.51	\$2.68
79	Adjacent Facility Termination DS1 Cable-Material	MRC	per 28 pair	\$11.12	\$ 8.23
80	Adjacent Facility Termination DS3 Cable-Material	MRC	per coaxial cable	\$27.46	\$20.91
81	Adjacent Cable Vault Splice (per 1200 pr)-Material	MRC	per splice closure	\$549.89	\$294.23
82	Adjacent Cable Vault Space (per 1200 pr)	MRC	per cable	Element deleted by Verizon	
83	Adjacent Cable Vault Splice (per 900 pr)-Material	MRC	per splice closure	\$400.78	\$214.45
84	Adjacent Cable Vault Space (per 900 pr)	MRC	per cable	Element deleted by Verizon	
85	Adjacent Cable Vault Splice (per 600 pr)-Material	MRC	per splice closure	\$266.52	\$142.61
86	Adjacent Cable Vault Space (per 600 pr)	MRC	per cable	Element deleted by Verizon	
87	Adjacent Cable Vault Splice (per 100 pr) - Material	MRC	per splice closure	\$56.33	\$30.14
88	Adjacent Cable Vault Space (per 100 pr)	MRC	per cable	Element deleted by Verizon	
89	Adjacent Cable Vault Splice (48 fiber)-Material	MRC	per splice closure	\$10.98	\$6.44
90	Adjacent Cable Vault Splice (96 fiber)-Material	MRC	per splice closure	\$33.96	\$19.90
91	Adjacent Cable Vault Space (fiber)	MRC	per subduct	\$1.28	\$0.66
92	Adjacent Cable Rack Shared Space - Metallic DSO	MRC	per linear f t	\$0.004	\$0.003
93	Adjacent Cable Rack Shared Space - Metallic DS1	MRC	per linear ft	\$0.003	\$0.002
94	Adjacent Cable Rack Shared Space - Fiber	MRC	per innerduct ft	\$0.006	\$0.005
95	Adjacent Cable Rack Shared Space - Coaxial	MRC	per linear f t	\$0.010	\$0.010
	Miscellaneous NRC Rate Elements				
96	BITS Timing	NRC	per project	\$209.66	\$209.66
97	Collocation Premise Space Report - Optional	NRC	per co request	\$1,354.56	\$1,354.56
98	Engineering/Major Augment - Microwave	NRC	per occurrence	\$1,091.17	\$1,091.17
99	Microwave Facility Pull - Labor	NRC	per linear f t	\$1.15	\$1.15
100	Facility Cable-DSO Cable (Connectorized) 100 pair	NRC	per cable run	\$265.43	\$265.43
101	Facility Cable-DS1 Cable (Connectorized)	NRC	per cable run	\$121.70	\$121.70
102	Facility Cable-DS3 Coaxial Cable	NRC	per cable run	\$36.12	\$36.12
103	Facility Cable-Category 5 Connectorized	NRC	per linear f t	\$1.14	\$1.14

APPENDIX D – RATE COMPARISON – VERIZON & STAFF						
#	Rate Element	NRC/MRC	Increment	Verizon's Proposed Rates	Staff's Recommended Rates	
104	Power Cable-Wire Power 1/0	NRC	per cable run	\$32.83	\$32.83	
105	Power Cable-Wire Power 2/0	NRC	per cable run	\$40.20	\$40.20	
106	Power Cable-Wire Power 3/0	NRC	per cable run	\$49.58	\$49.58	
107	Power Cable-Wire Power 4/0	NRC	per cable run	\$62.98	\$62.98	
108	Power Cable-Wire Power 350 MCM	NRC	per cable run	\$111.89	\$111.89	
109	Power Cable-Wire Power 500 MCM	NRC	per cable run	\$219.09	\$219.09	
110	Power Cable-Wire Power 750 MCM	NRC	per cable run	\$337.68	\$337.68	
111	Fiber Optic Patchcord-24 Fiber (Connectorized)	NRC	per cable run	\$775.15	\$775.15	
112	Misc Svcs-Labor-Basic Bus Day-First 1/2 Hr	NRC	per technician	\$48.31	\$48.31	
113	Misc Svcs-Labor-Basic Bus Day-Each Additional 1/2 Hr	NRC	per technician	\$24.15	\$24.15	
114	Misc Svcs-Labor-OT Non-Bus Day - First 1/2 Hr	NRC	per technician	\$100.00	\$100.00	
115	Misc Svcs-Labor-OT Non-Bus Day - Each Addtl 1/2 Hr	NRC	per technician	\$75.00	\$75.00	
116	Misc Svcs-Labor-Premium Non-Bus Day - First 1/2 Hr	NRC	per technician	\$150.00	\$150.00	
117	Misc Svcs-Labor-Premium Non-Bus Day - Each Addtl 1/2 Hr	NRC	per technician	\$125.00	\$125.00	
	Miscellaneous MRC Rate Elements					
118	Microwave Rooftop Space	MRC	per sq ft	\$3.25	\$1.78	
119	BITS Timing	MRC	per port	\$11.26	\$8.58	
120	Facility Termination - Fiber Optic Patchcord	MRC	per connector	\$0.49	\$0.37	
121	Cable Duct Space - Fiber Optic Patchcord	MRC	per fiber strand	\$0.15	\$0.11	
	ICBs for Microwave Collocation					
122	Building Penetration for Cable			ICB	ICB	
123	Special Work			ICB	ICB	
	Dedicated Transit Service -DSO					
124	Service Order-Semi-Mechanized	NRC	per order	\$42.46	\$42.46	
125	Service Order-Manual	NRC	per order	\$74.99	\$74.99	
126	Service Connection-CO Wiring	NRC	per circuit	\$18.24	\$18.24	
127	Service Connection-Provisioning	NRC	per order	\$133.60	\$133.60	

APPENDIX D – RATE COMPARISON – VERIZON & STAFF						
#	Rate Element	NRC/MRC	Increment	Verizon's Proposed Rates	Staff's Recommended Rates	
128	Service Order-Disconnect-Semi-Mechanized	NRC	per order	\$38.01	\$38.01	
129	Service Order-Disconnect-Manual	NRC	per order	\$67.58	\$67.58	
130	Service Connection-Disconnect-Provisioning	NRC	per order	\$46.67	\$46.67	
131	Service Connection-Disconnect-CO Wiring	NRC	per circuit	\$2.94	\$2.94	
	Dedicated Transit Service -DS1/DS3					
132	Service Order-Semi-Mechanized	NRC	per order	\$42.46	\$42.46	
133	Service Order-Manual	NRC	per order	\$74.99	\$74.99	
134	Service Connection-CO Wiring - DS1	NRC	per circuit	\$19.29	\$19.29	
135	Service Connection-CO Wiring - DS3	NRC	per circuit	\$65.59	\$65.59	
136	Service Connection-Provisioning	NRC	per order	\$132.73	\$132.73	
137	Service Order- Disconnect-Semi- Mechanized	NRC	per order	\$40.30	\$40.30	
138	Service Order-Disconnect-Manual	NRC	per order	\$69.87	\$69.87	
139	Service Connection-Disconnect-Provisioning	NRC	per order	\$46.67	\$46.67	
140	Service Connection-Disconnect-CO Wiring	NRC	per circuit	\$2.94	\$ 2.94	
	Dedicated Transit Service - Dark Fiber					
141	Service Order-Semi-Mechanized	NRC	per order	\$71.47	\$71.47	
142	Service Order-Manual	NRC	per order	\$74.43	\$74.43	
143	Service Connection-CO Wiring	NRC	per circuit	\$60.29	\$60.29	
144	Service Connection-Provisioning	NRC	per order	\$36.20	\$36.20	
145	Service Order-Disconnect-Semi-Mechanized	NRC	per order	\$39.53	\$39.53	
146	Service Order-Disconnect-Manual	NRC	per order	\$39.53	\$39.53	
147	Service Connection-Disconnect-Provisioning	NRC	per order	\$36.20	\$36.20	
148	Service Connection-Disconnect-CO Wiring	NRC	per circuit	\$2.94	\$2.94	