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3	In the Matter o	of		
4	DETITION OF COMPETIT	TIVE CADDIEDS	DOCVET N	0. 981834-TP
5	PETITION OF COMPETITION OF COMPETITION ACTION IN	ON TO SUPPORT	DUCKLI N	0. 901034-11
6	LOCAL COMPETITION IN TELECOMMUNICATIONS,	INC.'S		
7	SERVICE TERRITORY.		DOCKET N	0 000221 TD
8	PETITION OF ACI CORF ACCELERATED CONNECTI GENERIC INVESTIGATION	IONS, INC. FOR	DOCKET N	0. 990321-TP
9	BELLSOUTH TELECOMMUN SPRINT-FLORIDA, INCO	NICATIONS, INC.,		
10	GTE FLORIDA INCORPOR OBLIGATION TO PROVID	RATED COMPLY WITH		
11	EXCHANGE CARRIERS W	ITH FLEXIBLE, TIMELY, PHYSICAL COLLOCATION.		
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20	PROCEEDINGS:	HEARING		
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22	BEFORE:	CHAIRMAN LILA A. JAB		
23		COMMISSIONER J. TERR COMMISSIONER BRAULIC COMMISSIONER RUDOLPH	) BAEZ	DANIEV
24		COMMISSIONER CHARLES		
25	DATE:	Monday, August 11, 2	2003	DOCUMENT NUMBER (
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FPSC-COMMISSION CLERK

TIME: Commenced at 9:30 a.m. Betty Easley Conference Center Room 148 4075 Esplanade Way Tallahassee, Florida PLACE: REPORTED BY: JANE FAUROT, RPR Chief, Office of Hearing Reporter Services FPSC Division of Commission Clerk and Administrative Services (850) 413-6732 APPEARANCES: (As heretofore noted.) 

PAGE NO.

NAME:

## INDEX

# WITNESSES

W. KEITH MILNER	
Direct Examination by Ms. White Prefiled Direct Testimony Inserted Prefiled Rebuttal Testimony Inserted Cross Examination by Mr. Watkins Cross Examination by Mr. Feil Cross Examination by Mr. Hatch Cross Examination by Mr. Teitzman Redirect Examination by Ms. White	121 124 143 160 210 214 258 262

1	PROCEEDINGS
2	CHAIRMAN JABER: Call your next witness.
3	MS. WHITE: We call Keith Milner to the stand.
4	W. KEITH MILNER
5	was called as a witness on behalf of BellSouth
6	Telecommunications, Inc., and, having been duly sworn,
7	testified as follows:
8	DIRECT EXAMINATION
9	BY MS. WHITE:
10	Q Mr. Milner, could you please state your name and
11	address for the record?
12	A Yes. My name is W. Keith Milner. My business
13	address is 675 West Peachtree Street, Atlanta, Georgia.
14	Q By whom are you employed and in what capacity?
15	A My employer is BellSouth Telecommunications,
16	Incorporated, and my title is Assistant Vice President,
17	Interconnections Operations.
18	Q Have you caused to be prefiled in this case direct
19	testimony consisting of 19 pages?
20	A Yes, ma'am.
21	Q Do you have any changes to that testimony?
22	A No.
23	Q If I were to ask you those same questions that are
24	contained in your direct testimony today, would your answers be
25	the same?

1	A Yes, they would.
2	MS. WHITE: I would ask that the direct testimony of
3	Mr. Milner be entered into the record as though read.
4	CHAIRMAN JABER: The prefiled direct testimony of W.
5	Keith Milner shall be inserted into the record as though read.
6	BY MS. WHITE:
7	Q And surprisingly, again, Mr. Milner, you have no
8	exhibits to your direct testimony?
9	A That is correct.
10	MS. WHITE: I think this is the first time in ages
11	that I have had two witnesses that have no exhibits.
12	CHAIRMAN JABER: I would think so.
13	BY MS. WHITE:
14	Q Mr. Milner, you also caused to be prefiled in this
15	case rebuttal testimony consisting of 12 pages?
16	A Yes.
17	Q And do you have any changes to that testimony?
18	A No, I don't.
19	Q And if I were to ask you the questions in your
20	rebuttal testimony today, would your answers be the same?
21	A They would.
22	MS. WHITE: I would ask that Mr. Milner's rebuttal
23	testimony be entered into the record.
24	CHAIRMAN JABER: The prefiled rebuttal testimony of
25	W. Keith Milner shall be inserted into the record as though

1 read.

FLORIDA PUBLIC SERVICE COMMISSION

1	BELLSOUTH TELECOMMUNICATIONS, INC.
2	DIRECT TESTIMONY OF W. KEITH MILNER
3	BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION
4	DOCKET NOS. 981834-TP and 990321-TP
5	DECEMBER 19, 2002
6	
7 Q.	PLEASE STATE YOUR NAME, ADDRESS, AND POSITION WITH BELLSOUTH
8	TELECOMMUNICATIONS, INC.
9	
10 A.	My name is W. Keith Milner. My business address is 675 West Peachtree Street
11	Atlanta, Georgia 30375. I am Assistant Vice President - Interconnection
12	Operations for BellSouth Telecommunications, Inc. ("BellSouth"). I have served
13	in my current role since February 1996 and have been involved with the
14	management of certain issues related to local interconnection and unbundling.
15	
16 Q.	PLEASE SUMMARIZE YOUR BACKGROUND AND EXPERIENCE.
17	
18 A.	My career in the telecommunications industry spans over 32 years and includes
19	responsibilities in the areas of network planning, engineering, training,
20	administration, and operations. I have held positions of responsibility with a local
21	exchange telephone company, a long distance company, and a research and
22	development company. I have extensive experience in all phases of
23	telecommunications network planning, deployment, and operations in both the
24	domestic and international arenas.
25	

1	I graduated from Fayetteville Technical Institute in Fayetteville, North Carolina, in
2	1970, with an Associate of Applied Science in Business Administration degree. I
3	graduated from Georgia State University in 1992 with a Master of Business
4	Administration degree.
5	
6 Q.	HAVE YOU TESTIFIED PREVIOUSLY BEFORE ANY STATE PUBLIC
7	SERVICE COMMISSION? IF SO, BRIEFLY DESCRIBE THE SUBJECT OF
8	YOUR TESTIMONY.
9	
10 A.	Yes, I have testified before the state Public Service Commissions in Alabama,
11	Florida, Georgia, Kentucky, Louisiana, Mississippi, and South Carolina, the
12	Tennessee Regulatory Authority, and the North Carolina Utilities Commission on
13	the technical capabilities of the switching and facilities network, introduction of
14	new service offerings, expanded calling areas, unbundling, and network
15	interconnection.
16	
17 Q.	WHAT IS THE PURPOSE OF YOUR TESTIMONY TODAY?
18 (	
19 A.	My testimony will address unresolved collocation issues brought forth in Petitions
20	for Reconsideration and Clarification by various parties of record pursuant to
21	Order No. PSC-00-2190-PCO-TP issued November 17, 2000, by the Florida
22	Public Service Commission ("Commission") regarding Docket Nos. 981834-TP
23	and 990321-TP. Specifically, I will address issues 4, 5, 6A, 6B, 6C, 7 and 8.
24	
25	

1 Issue 4: Should the ILEC be required to provide copper entrance facilities within 2 the context of a collocation inside the central office? 3 4 Q. HAS THE FCC TAKEN A POSITION REGARDING A LOCAL EXCHANGE COMPANY'S OBLIGATIONS TO PROVIDE FOR SUCH NON-FIBER OPTIC 5 FACILITIES? 6 7 8 A. Yes, the FCC's *First Report and Order* in CC Docket 96-98, August 8, 1996, 9 Paragraph 565, adopted the existing Expanded Interconnection requirements. with some modifications, as the rules applicable for collocation under section 251 10 of the Telecommunications Act of 1996. More specifically, this issue was 11 12 addressed in the FCC's Second Report and Order, In the Matter of Expanded Interconnection with Local Telephone Company Facilities in CC Docket 91-141, 13 Transport Phase I, released September 2, 1993. Paragraph 69 of that Report 14 15 and Order states: "LECs are not required to provide expanded interconnection for switched transport for non-fiber optic cable facilities (e.g., coaxial cable). In the 16 Special Access Order, we [that is, the FCC] concluded that given the potential 17 18 adverse effects of interconnection on the availability of conduit or riser space, interconnection should be permitted only upon Common Carrier Bureau approval 19 of a showing that such interconnection would serve the public interest in a 20 21 particular case. We adopt this approach for switched transport expanded interconnection." 22 23 24 Further, the FCC's Report and Order, In the Matter of Expanded Interconnection with Local Telephone Company Facilities, CC Docket 91-141, Released October 25

1	19, 1992, at Paragraph 99 states: "At least one party supported interconnection
2	of non-fiber optic cable facilities (e.g., copper coaxial cable) provided by third
3	parties. A number of the LECs, however, have argued that such a requirement is
4	undesirable because it would make limited conduit and riser space available to
5	technologies that are much less space efficient than fiber. Given the potential
6	adverse effects of such interconnection on the availability of conduit and riser
7	space, we [that is, the FCC] believe that interconnection of non-fiber optic cable
8	should be permitted only upon Commission approval of a showing that such
9	interconnection would serve the public interest in a particular case."
10	
11	Currently, the FCC's Rule 51.323 (d)(3) addresses this issue:
12	
13	(d) When an incumbent LEC provides physical collocation, virtual
14	collocation, or both, the incumbent LEC shall:
15	(3) Permit interconnection of copper or coaxial cable if such
16	interconnection is first approved by the state commission.
17 <sub>6 1999</sub>	
18 Q.	WHAT DID THIS COMMISSION'S ORDER OF MAY 11, 2000, RULE ON THIS
19	SPECIFIC ISSUE?
20	
21 A.	This Commission stated "We have considered the fact that entrance facilities
22	have a certain capacity per central office and that allowing copper cabling could
23	accelerate the entrance facility exhaust interval. Therefore, ILECs shall be
24	allowed to require an ALEC to use fiber entrance cabling after providing the
25	ALEC with an opportunity to review evidence that demonstrates entrance

capacity is near exhaustion at a particular central office. The evidence of record 1 2 is insufficient to determine what percentage of entrance facility should be in use 3 before requiring fiber optic cabling; however, factors for consideration should include, but not be limited to, subscriber growth, "off-site collocation" growth and 4 cabling request, and cabling requirements of the ILEC." Order, pp. 25-26. 5 6 7 Q. WHAT IS BELLSOUTH'S BASIC POSITION REGARDING THE TYPE OF 8 ALEC-OWNED OR ALEC-LEASED ENTRANCE FACILITIES AN ALEC MAY PLACE IN ITS COLLOCATION SPACE? 9 10 11 A. ALECs have suggested that they be allowed to bring copper cables through 12 BellSouth's entrance facilities in order to interconnect with BellSouth's network. The trend in the telecommunications industry is for cables and equipment to be 13 reduced in size, not increased in size. For example, yesterday's 3,600 pair 14 copper cable required its own four inch conduit. The capacity provided by that 15 copper cable could now easily be provided by a fiber optic cable, which is a little 16 17 more than one-half inch in diameter, an eight-fold reduction simply in terms of cable diameter. In terms of capacity that may be derived over fiber optic cable. 18 the differences are even more significant. Synchronous Optical Network 19 ("SONET") transmission facilities handling 48 DS-3s (each with 672 channels) 20 21 are common. Thus, a single SONET OC-48 system has 896% the capacity [that is, (48\*672) / 3,600] of a 3,600 pair copper cable while requiring only one-eighth 22 the space in the entrance duct. 23 24 25

Accommodation of ALECs' requests to use BellSouth's entrance facilities to bring new copper cables into BellSouth's central offices would accelerate the exhaust of entrance facilities at its central offices at an unacceptable rate, as compared to current technologies such as fiber optic cable.

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One notable exception is the situation in which BellSouth will permit an ALEC to use copper entrance cabling. That exception is limited to the situation involving an ALEC's use of a controlled environmental vault ("CEV") or similar structure constructed or otherwise provided by the ALEC on the same parcel of land as BellSouth's central office (what BellSouth calls adjacent collocation). The rationale for this exception is simple. Only in an adjacent collocation situation is an ALEC unable to use fiber entrance facilities and must use copper. The FCC stated in Paragraph 44 of the FCC's Order on Reconsideration and Second Further Notice of Proposed Rulemaking in CC Docket No. 98-147 and Fifth Further Notice of Proposed Rulemaking in CC Docket No. 96-98, released August 10, 2000 ("Collocation Reconsideration Order"), that adjacent collocation is available to ALECs when space inside the central office is legitimately exhausted. Fiber optic entrance cabling must be connected to a fiber optic terminal (multiplexer or other of the ALEC's equipment in the ALEC's physical collocation arrangement) inside the central office in order to connect with BellSouth's network. The predicate, however, for the ALEC to obtain adjacent collocation is that space for physical collocation within the central office is exhausted. If space is exhausted, there is no room for the installation of the ALEC's fiber optic terminal or other equipment in the central office. Therefore, in an adjacent collocation situation, BellSouth will allow the ALEC to use copper

1		entrance cabling between the adjacently located arrangement and the inside of
2		BellSouth's central office in keeping with the context of collocation outside of the
3		central office, not inside the central office.
4		
5	Q.	HOW DOES BELLSOUTH WANT THE COMMISSION TO RESOLVE THIS
6		ISSUE?
7		
8	A.	This Commission should affirm that, consistent with the FCC's Rules in CC
9		Dockets 96-98 and 91-141, BellSouth is not required to accommodate requests
10		for non-fiber optic facilities placed in BellSouth's entrance facilities unless the
11		Commission determines in a particular case that it is necessary, and the
12		Commission's Order should be clarified on this issue.
13		
	Issue	5: Should an ILEC be required to offer, at a minimum, power in standardized
14		5: Should an ILEC be required to offer, at a minimum, power in standardized ments? If so, what should the standardized power increments be?
14		
14 15 16		
14 15 16	increi	ments? If so, what should the standardized power increments be?
14 15 16 17	increi	ments? If so, what should the standardized power increments be?
14 15 16 17 18	increi	ments? If so, what should the standardized power increments be?  WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?
14 15 16 17 18	increi	ments? If so, what should the standardized power increments be?  WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?  There are three options under which an ALEC may order power for its collocation
14 15 16 17 18 19 20	increi	ments? If so, what should the standardized power increments be?  WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?  There are three options under which an ALEC may order power for its collocation space from BellSouth. First, an ALEC may request power from BellSouth's
14 15 16 17 18 19 20 21	increi	ments? If so, what should the standardized power increments be?  WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?  There are three options under which an ALEC may order power for its collocation space from BellSouth. First, an ALEC may request power from BellSouth's Battery Distribution Fuse Board ("BDFB") in all available power increments that
14 15 16 17 18 19 20 21 22	increi	ments? If so, what should the standardized power increments be?  WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?  There are three options under which an ALEC may order power for its collocation space from BellSouth. First, an ALEC may request power from BellSouth's Battery Distribution Fuse Board ("BDFB") in all available power increments that range from as low as 10 amps all the way up to 100 amps, or any combination

BellSouth's BDFB. This is by far the most common means by which ALECs request power for their collocation arrangements.

As a second option, an ALEC may install its own BDFB inside its collocation space and order power directly from BellSouth's main power board. The main power board is part of the power plant and is the main DC power distribution source for all of the equipment and all of the BDFBs — both BellSouth's and the ALECs' — in the central office. A standard 225-amp power feed is required to connect the ALEC's BDFB to BellSouth's main power board.

BellSouth does not support smaller protection devices than 225 amps at the main power board because there are inherent standardization and interval improvements associated with the 225-amp fused power capacity<sup>1</sup> and this complies with specific National Electric Code ("NEC") requirements for electrical system coordination (Article 240-12). The NEC requires coordination to properly localize a fault condition to restrict outages to the equipment affected. In other words, a short circuit condition should affect the operation of the downstream fuse serving just that piece of equipment, rather than the upstream circuit breaker serving the entire BDFB. Manufacturers' time-current curves, let-through and withstand capacities, and unlatching times are used to determine proper over-

the potential for fire in its central offices.

BellSouth's standard size circuit breaker protection device of 225 amps was developed before collocation (in TR73503, circa 1993) based on BellSouth's interpretation of findings from a Telcordia/Bellcore study on arcing in central offices resulting from the Hinsdale incident (*i.e.*, a devastating fire in a Chicago central office). Prior to the Hinsdale incident, BellSouth typically installed standard size circuit breaker protection devices of 225 amps and 400 amps at the main power board. The Telcordia/Bellcore study found that: 1) arcing may occur in central offices. usually due to poor workmanship in H-tap and other connectors and 2) while no protection device will operate 100% of the time due to the physical nature of a DC arc, 225 amp protection devices experience a significantly higher chance of operating during an arc than 400 amp or larger protection devices. So BellSouth's 225-amp circuit breaker standard was developed three years before the Act was issued and is an attempt by BellSouth to minimize

current protection coordination. For TPS type fuses (which are the most common fuses used in BellSouth's central offices), a three to one ratio for upstream protection devices versus downstream protection devices is required. Therefore, if there are 60-amp fuses in the BDFB serving equipment bays, at least a 180-amp upstream device is required to serve the BDFB. Thus, it would be a violation of the NEC for BellSouth to serve an ALEC's BDFB with a smaller protection device (such as 125 fused amps), when it is common for equipment bays to require a 40-amp drain and a 60-amp protection device at the BDFB.

In response to concerns expressed by ALECs in the BellSouth/ALEC Collocation User Group forum and several of the state 271 proceedings, BellSouth has

In response to concerns expressed by ALECs in the BellSouth/ALEC Collocation User Group forum and several of the state 271 proceedings, BellSouth has worked with various electrical manufacturing vendors ("vendors") to determine the feasibility of implementing additional power options greater than 60 amps from the BellSouth BDFBs by means of retrofitting the BDFBs that BellSouth currently have in-service to support larger fuse sizes. As a result, BellSouth now offers TPL type fuses in 70, 80, 90, and 100 amps from a BellSouth BDFB (not from the main power board). Although TPL type fuses are larger fuses that were originally designed for power boards instead of BDFBs, a vendor has been able to design a field retrofit to its existing BDFB products to replace two (2) TPS fuse positions with a TPL fuse block. Consequently, BellSouth now offers the 70, 80, 90, and 100 amp TPL type fuses to all ALECs on single redundant power feeds at the BellSouth BDFB. These additional power options will be deployed in all of BellSouth's central offices on an as-ordered basis.

Time-current curves for TPL fuses that are larger than 100 amps indicate the possibility of an overload condition that can cause the 225-amp circuit breaker to operate before the TPL fuse would operate. Therefore, to allow the deployment of a TPL fuse larger than 100 amps would constitute a NEC violation and could result in the loss of service not only to the ALEC who had originally requested the 100+ amp fuse, but to all of the ALECs being served by the BellSouth BDFB (and perhaps BellSouth, as well). For this reason, BellSouth cannot support the use of TPL type fuses larger than 100 amps. As the carrier of last resort, it is BellSouth's responsibility to protect the integrity of the public switched network, as well as ensure the safety of all BellSouth and ALEC employees working in and around its central offices. Thus, BellSouth can only offer ALECs the ability to order DC power capacity up to 100 amps from a BellSouth BDFB using a single redundant power feed. The ALEC is responsible for installing the power cable between its BDFB and BellSouth's main power board. BellSouth provisions DC power to an ALECowned BDFB in the same manner in which it provisions DC power to its own BDFBs in the central office. DC power to all BDFBs, whether owned by BellSouth or the ALEC, is fed from the main power board using a 225-amp protection device. This means of obtaining power is used by some ALECs, but is less common than the first scenario.

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The third option allows the ALEC to install its own BDFB in its collocation space

and request power from BellSouth's BDFB, again in available power increments

that range from 10 amps to 100 amps. In this instance, the ALEC's agent installs

1		power cabling between its own BDFB (located in its collocation space) and
2		BellSouth's BDFB, enabling the ALEC to connect each piece of its equipment to
3		its own BDFB for power. This is the least common method of requesting power.
4		Each ALEC must make its own determination as to which option it wishes to use
5		for obtaining DC power into its collocation space. As described above, all ALECs
6		have the ability to obtain small units of DC power (i.e., in as low as 10 amps)
7		from BellSouth.
8		
9		Prior to the Telecommunications Act of 1996 (the "Act") and the requirement for
10		the ILECs to allow collocation in their respective central offices, BellSouth
. 11		implemented standard equipment configurations or models. In the case of power
12		boards, the standard configuration consists of a power board fully equipped with
13		225-amp circuit breakers. This standardization has allowed BellSouth to reduce
14		its power provisioning intervals by 33%. The ALECs have enjoyed the interval
15		reductions derived from standardization, which would not have been possible
16		absent standard circuit breaker sizes. <sup>2</sup>
17		
18	Issue	6A: Should an ILEC's per ampere (amp) rate for the provisioning of DC
19	power	r to an ALEC's collocation space apply to amps used or fused capacity?
20		
21	Q.	WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?
22		
23	A.	BellSouth maintains that the per amp charge should apply to the fused capacity
24		for the equipment an ALEC installs in its collocation space.

<sup>&</sup>lt;sup>2</sup> Another benefit of fully equipping the power boards with standard-size circuit breakers (225 amps) is to minimize the impact of any manufacturing shortages, which have occurred in the past when one manufacturer owned the patent for DC circuit breakers.

The manner in which BellSouth charges for DC power capacity is based on the power requirements of the telecommunications equipment being served. Fuse type protection devices are sized at 1.5 times the anticipated drain to ensure that the equipment can be operated at its full capacity without operating the protection device while allowing the protection device to safely clear any fault conditions (short circuits or overloads) that may occur. For purposes of billing, the recurring power rate assessed by BellSouth includes a 0.6667 multiplier to take into account the fact that an ALEC would not normally use the full capacity of the protection device. In other words, although telecommunications circuits for DC power are engineered to match the power requirements of the equipment served, with a fused protection device that is sized at 1.5 times the anticipated load (or drain), the recurring rate per fused amp is also ratcheted down by a 0.6667 multiplier (which is calculated as 1.0 divided by 1.5) to take into account the fact that an ALEC does not normally use the full capacity of the protection device (and therefore, should not be charged for the additional capacity). So, the ALEC is not paying for any more power capacity than what the equipment requires. Some ALECs have demanded that power billing be based on usage. They cite the example of commercial AC electric service provided to a home or business. Key components of the commercial electric utility industry, and its usage-based billing system, include meters located at the side of a house or business and an army of meter readers to record usage. Inside a central office, however, there are no meters attached to individual power circuits from a BDFB, just as there are no meters on each individual AC outlet in a home or business. Usage based billing and the measuring system required would result in increased power costs for the ALECs. Therefore, in BellSouth's view, the metering of central office

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power to each ALEC's collocation arrangement is not economically feasible for an ALEC, assuming that the ALEC is engineering its power circuits to match its equipment demand. In addition, recurring power rates include the power plant construction cost for components such as batteries and rectifiers. These components must be sized to satisfy the full power requirements requested by the ALEC, regardless of actual power usage by the ALEC. Under a usage based billing system, if the ALEC requested a large amount of power capacity, the ILEC would be forced to incur a significant expense to provide the requested capacity. Then, if actual usage were less than what was requested, the ILEC would never receive adequate compensation for this investment.

The issue of billing ALECs using fused amps versus actual power drain has already been addressed by the Commission in Docket No. 000649-TP ("MCI Arbitration Case"). The Commission released its final ruling in the MCI Arbitration Case in Order No. PSC-01-0824-FOF-TP on March 30, 2001, on this very same issue. On Page 126 of this Order, the Commission states:

We believe that the per ampere rate for the provision of DC power to WorldCom's collocation space should apply to fused capacity for two reasons. First, it appears that WorldCom witness Messina agrees that BellSouth's power plant must be capable of accommodating 150 percent of the requested amount of power. However, it appears that witness Messina contends that the fuse feeding WorldCom's collocation space should be sized at WorldCom's requested amperage, but the infrastructure behind that

space should be capable of carrying 150 percent of the requested 1 amperage. We find that if BellSouth must construct its overall 2 3 power plant to accommodate 150 percent of the aggregate amperage requested by collocators then it should be compensated 4 for this level of capacity. Furthermore, both parties believe that it is 5 6 a generally accepted power engineering practice to fuse capacity in excess of the amperage needed. 7 8 Second, we agree with BellSouth witness Milner that metering 9 WorldCom's actual usage would be costly and time-consuming. 10 While specific numbers were not provided, we suspect that the 11 costs of metering could exceed the difference in costs of applying 12 13 the rate to fused capacity versus amperes used. Therefore, we find that the per ampere rate for the provision of DC power to 14 WorldCom's collocation space shall apply to fused capacity. 15 16 (Emphasis added) 17 Therefore, the Commission has previously determined that the billing of DC power on a fused amp basis, instead of a per-load basis, is appropriate. The 19 20 Alabama, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, and South 21 Carolina Commissions have taken similar positions. 22 23 Issue 6B: If power is charged on a per-amp-used basis or on a fused capacity 24 basis, how should the charge be calculated and applied? 25

## 1 Q. WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?

3 A.

The rate for DC power should be calculated and applied on a per fused amp basis. As a result, BellSouth would develop the recurring cost for power based on the assumption that the charge would be applied on a per fused amp basis. In other words, BellSouth's cost study would account for the difference between fused capacity and rated capacity using an adjustment factor of .67 (that is, 1 / 1.5). This adjustment factor reflects the relationship between fused and rated capacities (Fused = 1.5 \* Rated). The average investment per amp and the average monthly cost per kilowatt hour are both adjusted downward, for billing purposes, to reflect the application of a per fused amp charge. To develop a per used amp charge, BellSouth would not apply the adjustment factor to the investment per amp or the monthly cost per kilowatt hour. This would produce a per used amp cost. Further discussion on this charge will also be addressed by BellSouth in its February 4, 2003, filing under issue 9B regarding proper rates.

To illustrate how an ALEC would be assessed for DC power, let's assume an ALEC's equipment bay requires 40 amps of power and the ALEC requests a pair of redundant (Load A and Load B) 60 amp fuses (i.e. the fused amps, which is 1.5 times the anticipated load). The formula for calculating the recurring cost assuming a per fused amp rate of \$7.80 would be:

Calculation 1: (\$7.80 \* 60) = \$468.00

The equivalent per used amp rate is calculated by multiplying \$7.80 by 1.5, which is \$11.70 (this removes the 0.6667 multiplier used to develop the per fused amp rate). By comparing the total per fused charge to the total per used charge,

 $(\$7.80 \times 60 = \$468; \$11.70 \times 40 = \$468)$ , it is evident that BellSouth is truly 1 2 charging the ALEC for power on a per-load-amp basis. However, for billing 3 purposes, BellSouth calculates the ALEC's collocation power cost by multiplying the per-fused-amp rate of \$7.80 by the number of fused amps (60), as shown 4 above under Calculation 1. While both formulas yield the same result, it is 5 appropriate to calculate such a charge on a per-fused-amp basis since the fused 6 amperage is what BellSouth is obligated to provide for the ALEC's use. 7 BellSouth should not be the party that bears the loss if the ALEC elects not to 8 utilize the full capacity the ALEC demanded and for which BellSouth had to 9 provision. 10

11

## 12 Issue 6C: When should an ILEC be allowed to begin billing an ALEC for power?

13

#### 14 Q. WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?

15

16 A. Since DC power is assessed by BellSouth as a recurring monthly charge, billing should begin as stated in BellSouth Witness A. Wayne Gray's Testimony in 17 regard to Issue 1B. If an ALEC conducts an acceptance walkthrough of the 19 collocation space within fifteen (15) calendar days of the Space Ready Date. then the monthly recurring charges will begin on the date that the ALEC accepts 20 21 the space ("Space Acceptance Date"). If the ALEC fails to conduct the acceptance walkthrough within this fifteen calendar day period, the monthly 22 23 recurring charges will begin on the Space Ready Date. If the ALEC requests, 24 and is granted by BellSouth, the right to occupy its collocation space prior to the Space Ready Date, BellSouth will begin billing the monthly recurring charges on 25

the date the ALEC occupies the space. The ILEC should be allowed to begin 1 2 billing an ALEC for power at Space Ready Date. On Space Ready Date, 3 BellSouth will turn the requested collocation space over to the requesting ALEC. 4 The Space Ready Date for physical collocation is the date that BellSouth finishes 5 6 construction in accordance with the requesting ALEC's application and turns functional space, including adequate power capacity to satisfy the ALEC's 7 request, over to the requesting ALEC. The Commission ordered standard 8 9 recurring power rates in the Florida Covad Arbitration Order in Docket No. 001797-TP. Standard recurring power rates include the power plant 10 construction costs for components such as batteries and rectifiers. Thus, the 11 12 ILEC incurs the cost to provide the batteries and rectifiers at some point prior to the Space Ready Date to ensure adequate capacity exists to serve the power 13 demand requested by the ALEC. BellSouth has experienced instances in which 14 15 ALECs that requested collocation space and associated power, for which BellSouth prepared the collocation space and associated power by the ALEC 16 17 requested date, delayed physically occupying the space for several months thus depriving BellSouth a return on the costs it expended at the ALEC's request. In 18 the case of both space preparation and power construction, BellSouth has 19 incurred significant up-front expense. BellSouth has a right to reimbursement for 20 21 power starting at the date the ALEC accepts the space or on the Space Ready 22 Date, as specified above.

24 Issue 7: Should an ALEC have the option of an AC power feed to its collocation 25 space?

1	Q	<b>)</b> .	WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?
2			
3	Α	۸.	At the ALEC's option, and where the local authority having jurisdiction permits,
4			BellSouth will provide an AC power source in accordance with the requirements
5			of the National Electrical Code
6			
7			BellSouth already allows the ALEC to order AC power feeds for its collocation
8			space, both for convenience outlets as well as to power any AC equipment. AC
9			feeds that serve ALEC equipment are fed from the essential bus, meaning that
10			they are backed up via the standby AC plant (that is, back-up generators or
11			alternators). There are separate recurring AC power recurring rates that apply to
12			these AC feeds. Several ALECs have ordered AC power feeds from BellSouth.
13			
14	İs	ssue	8: What are the responsibilities of the ILEC, if any, when an ALEC requests
15	C	olloc	ation space at a remote terminal where space is not available or space is
16	n	earir	ng exhaustion?
17	أيدانها	Israe	
18	Q		WHAT IS BELLSOUTH'S POLICY REGARDING COLLOCATION IN REMOTE
19			TERMINALS?
20			
21	Α		BellSouth permits the collocation of any type of equipment necessary for
22			interconnection to BellSouth's network or for access to unbundled network
23			elements in the provision of telecommunications services. BellSouth's policy
24			regarding collocation at DLC remote terminals is this: If sufficient space exists
25			within the DLC remote terminal, BellSouth will allow the ALEC to collocate its

1 equipment, including Digital Subscriber Line Access Multiplexer ("DSLAM") equipment, regardless of whether BellSouth has installed its own equipment or 2 3 DSLAM at that remote terminal location. Second, if sufficient space does not exist within the DLC and BellSouth has not installed its own DSLAM equipment 4 at that DLC remote terminal location, then BellSouth may deny the request and 5 6 file a collocation waiver request with this Commission for that DLC remote terminal site. Third, if sufficient space does not exist within the DLC and 7 BellSouth has installed its own DSLAM equipment at that DLC remote terminal 8 location, then BellSouth will take whatever action is required to augment the 9 space at that DLC remote terminal such that the ALEC can install its own 10 equipment, including a DSLAM, at that DLC remote terminal. In the unlikely 11 event that BellSouth is not able to augment the space at that DLC remote 12 terminal, then BellSouth will provide the ALEC unbundled packet switching at 13 that DLC remote terminal pursuant to the FCC's requirements. FCC Rule 51.319 14 15 (c)(5)16 17 Q. DOES THIS CONCLUDE YOUR TESTIMONY? 18 19 A. Yes. 20 21 22 23 24 25

1		BELLSOUTH TELECOMMUNICATIONS, INC.
2		REBUTTAL TESTIMONY OF W. KEITH MILNER
3		BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION
4		DOCKET NOS. 981834-TP and 990321-TP
5		JANUARY 21, 2003
6		
7	Q.	STATE YOUR NAME, YOUR BUSINESS ADDRESS, AND YOUR
8		POSITION WITH BELLSOUTH TELECOMMUNICATIONS, INC.
9		("BELLSOUTH").
10		
11	A.	My name is W. Keith Milner. My business address is 675 West Peachtree
12		Street, Atlanta, Georgia 30375. I am Assistant Vice President -
13		Interconnection Operations for BellSouth Telecommunications, Inc.
14		("BellSouth"). I have served in my present role since February 1996.
15		
16	Q.	ARE YOU THE SAME W. KEITH MILNER WHO EARLIER FILED
17		DIRECT TESTIMONY IN THIS DOCKET?
18		
9	A.	Yes.
20		
21	Q.	WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?
22		
23	A.	I respond to portions of the direct testimonies of Mr. Jeffrey King on behalf
24		of AT&T Communications of the Southern States, LLC, and TCG South
25		Florida, Inc. (collectively referred to as "AT&T") and Mr. Jimmy Davis on

1		behalf of Sprint – Florida, Inc. and Sprint Communications Limited
2		Partnership (collectively referred to as "Sprint") with regard to issues 4, 5
3		6A, 6B, 6C, 7, and 8.
4		
5	Issue	e 4: Should the ILEC be required to provide copper entrance facilities
6	withi	n the context of a collocation inside the central office?
7		
8	Q.	ON PAGE 8 OF HIS DIRECT TESTIMONY, MR. KING STATES THAT
9		ALECS SHOULD BE ALLOWED TO USE COPPER PLANT FOR
10		COLLOCATION WITHIN THE CENTRAL OFFICE BECAUSE "COPPER
11		TECHNOLOGY, INCLUDING COPPER ENTRANCE FACILITIES, IS
12		STILL AN INTEGRAL PART OF THE TELECOMMUNICATIONS
13		INDUSTRY." PLEASE RESPOND.
14		
15	A.	Mr. King is correct only in the sense that some copper cables currently
16		enter BellSouth central offices. However, Mr. King fails to acknowledge
17		that these older copper cables are associated with BellSouth's loop
18		distribution facilities rather than interoffice facilities or interconnection
19		facilities. Entrance facilities are for interconnection trunks, and all of
20		BellSouth's interconnection trunk cables entering BellSouth central offices
21		are provisioned over optical fiber facilities. Furthermore, the FCC rules
22		regarding an ILEC's collocation obligations under the Telecommunications
23		Act of 1996 (the "Act") state that the ILEC should only accommodate
24		copper entrance facilities if such interconnection is first ordered by the
25		state commission. See 47 C.F.R. 51.323 (d)(3). The FCC clearly

anticipated that this authority to place non-fiber optic entrance facilities would be granted by a state commission on a location by location basis. For any state commission to permit copper entrance facilities universally would undermine the importance the FCC attributed to this issue and would be to the detriment of other ALECs desiring to collocate in an office with limited entrance space available. Neither AT&T nor any other ALEC should be permitted to place copper entrance facilities in a premises until this Commission has reviewed the particular circumstances of the premises, the specific needs of the requesting ALEC at that location, and has determined that the ALEC's needs override BellSouth's and other ALEC's concerns, if any, with entrance space availability in those premises. To my knowledge, no ALEC in BellSouth's nine-state region, including Florida, has made such a showing to a state Public Service Commission. Issue 5: Should an ILEC be required to offer, at a minimum, power in standardized increments? If so, what should the standardized power increments be? Q. ON PAGE 8 OF HIS DIRECT TESTIMONY, MR. KING SUGGESTS THAT ILECS SHOULD BE REQUIRED TO PROVISION POWER IN ONE (1) AMP INCREMENTS AND IN FUSE SIZE INCREMENTS BEGINNING WITH 5 AMPS TO 225 AMPS AND ABOVE AS AVAILABLE FROM THE

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MARKET; AND IF REQUESTED BY AN ALEC, FUSE SIZES OF 70

AMPS OR GREATER SHOULD BE PROVISIONED FROM THE ILEC

### POWER DISTRIBUTION BOARD. PLEASE COMMENT.

Α.

An ALEC may require different quantities of power and as such, the ALEC has the ability to order fused power in increments as small as 10 amps and as large as 225 amps, when the ALEC uses combinations of industry standard fuse size protection devices (*i.e.*, TPS type fuses) from a BellSouth Battery Distribution Fuse Board ("BDFB"). There are single industry standard fuse sizes that range from 10 to 60 amps (*i.e.*, BellSouth uses industry standard 10, 15, 30, 45 and 60 amp fuses). Anything higher than 60 amps would require the combination of various fuse sizes to achieve the desired total.

As to the suggestion for fuse sizes of 70 amps or greater provisioned from the ILEC power distribution board at the request of the ALEC, as I stated in my direct testimony in this docket, BellSouth now offers TPL type fuses in 70, 80, 90, and 100 amps from a BellSouth BDFB (not from the main power board). Although TPL type fuses are larger fuses that were originally designed for power boards instead of BDFBs, at least one vendor has been able to design a field retrofit to its existing BDFB products to replace two (2) TPS fuse positions with a TPL fuse block. Consequently, BellSouth now offers the 70, 80, 90, and 100 amp TPL type fuses to all ALECs on single redundant power feeds at the BellSouth BDFB. These additional power options will be deployed in all of BellSouth's central offices on an as-ordered basis.

1		As I stated in my direct testimony, BellSouth does not support smaller
2		protection devices than 225 amps at the main power board because there
3		are inherent standardization and provisioning interval improvements
4		associated with the use of 225-amp fused power capacity <sup>1</sup> and this
5		complies with specific National Electric Code ("NEC") requirements for
6		electrical system coordination (Article 240-12). The NEC requires
7		coordination to properly localize a fault condition to restrict outages to the
8		equipment affected.
9		
10	Issue	6A: Should an ILEC's per ampere (amp) rate for the provisioning of
11	DC p	ower to an ALEC's collocation space apply to amps used or fused
12	capa	city?
13		
14	Q.	MR. KING, ON PAGE 9 OF HIS DIRECT TESTIMONY, STATES "THE
15		ILECS 'PER AMPERE' POWER RATE SHOULD BE BASED ON THE
16		ALEC'S ACTUAL USAGE SUCH AS THE SPECIFIED LOAD OR AMPS
17		USED." PLEASE COMMENT.
18		
19	A.	When this Commission issued its ruling in the Florida MCI Arbitration
20		Order, FPSC Docket No. 000649-TP, released March 30, 2001, regarding

<sup>1</sup> BellSouth's standard size circuit breaker protection device of 225 amps was developed before collocation (in TR73503, circa 1993) based on BellSouth's interpretation of findings from a Telcordia/Bellcore study on arcing in central offices resulting from the Hinsdale incident (*i.e.*, a devastating fire in a Chicago central office). Prior to the Hinsdale incident, BellSouth typically installed standard size circuit breaker protection devices of 225 amps and 400 amps at the main power board. The Telcordia/Bellcore study found that: 1) arcing may occur in central offices, usually due to poor workmanship in H-tap and other connectors and 2) while no protection device will operate 100% of the time due to the physical nature of a DC arc, 225 amp protection devices experience a significantly higher chance of operating properly during an arc than 400 amp or larger protection devices. So BellSouth's 225-amp circuit breaker standard was developed three years before the Act was issued and is an attempt by BellSouth to minimize the potential for fire in its central offices.

1		the proper assessment of power capacity, the Commission ruled in favor
2 3		of BellSouth concluding:
4 5 6 7 8 9		we agree with BellSouth witness Milner that metering WorldCom's actual usage would be costly and time consuming. While specific numbers were not provided, we suspect that the costs of metering could exceed the difference in costs of applying the rate to fused capacity versus amperes used. Therefore, we find that the per ampere rate for the provision of DC power to WorldCom's collocation space shall apply to fused capacity. <sup>2</sup>
1		Therefore, the Commission has previously determined that the billing of
12		DC power on a fused amp basis, instead of a per-load basis, is
13		appropriate. Mr. King has offered nothing new in this regard that should
14		cause the Commission to reach a conclusion different than in the MCI
15		Arbitration cited above.
16		
17	Q.	MR. DAVIS, ON PAGES 7-8 OF HIS DIRECT TESTIMONY, STATES
18		"THE MOST FEASIBLE METHOD OF BILLING FOR DC POWER
19		CONSUMPTION IS TO BILL BASED ON THE AMOUNT OF POWER
20		THE ALEC DECLARES ON ITS APPLICATION THAT IT NEEDS TO
21		POWER ITS EQUIPMENT IN THE COLLOCATION SPACE. THIS
22		APPROACH EQUATES TO BILLING ON THE BASIS OF 'AMPS' USED
23		WITHOUT THE ADDED COST FOR THE ILEC TO METER OR
24		OTHERWISE ESTIMATE POWER USAGE ON A MONTHLY BASIS." DO
25		YOU AGREE WITH THIS APPROACH?
16		

<sup>&</sup>lt;sup>2</sup>Petition by MCImetro Access Transmission Services LLC and MCI WorldCom Communications, Inc. for arbitration of certain terms and conditions of a proposed agreement with BellSouth Telecommunications, Inc. concerning interconnection and resale under the Telecommunications Act of 1996, Order No. PSC-01-0824-FOF-TP at 126, FPSC Docket No. 000649-TP, (rel. Mar. 30, 2001) ("Florida MCI Arbitration Order").

1 Α. No. To use an analogy, this would be the same as if the customer of a 2 power company, in regard to their monthly bill, said "Trust me, I'll tell you 3 what my monthly usage will be." This approach would fall far short of 4 providing an accurate, reasonable, or credible account of usage and 5 should be rejected. Additionally, because there would be no means of determining the validity of the ALEC's stated usage, adopting Mr. Davis' 6 7 proposal would require the metering that Mr. Davis apparently opposes. 8 9 Issue 6B: If power is charged on a per-amp-used basis or on a fused 10 capacity basis, how should the charge be calculated and applied? 11 Q. 12 ON PAGE 9 OF HIS DIRECT TESTIMONY, MR. KING STATES THAT 13 POWER CHARGES SHOULD BE BASED ON ACTUAL USAGE AS ATTEMPTS TO CHARGE ON A "PER FUSED" BASIS CREATES 14 OPPORTUNITIES FOR SIGNIFICANT OVER RECOVERY OF THE 15 16 ILEC'S TRUE COST. PLEASE COMMENT. 17 18 A. The manner in which BellSouth charges for DC power capacity is based 19 on the power requirements of the telecommunications equipment being served. Fuse type protection devices are sized at 1.5 times the 20 21 anticipated drain to ensure that the equipment can be operated at its full 22 capacity without "blowing" the fuse device. However, for purposes of 23 billing, the recurring power rate assessed by BellSouth includes a 0.67 multiplier (that is, 1.0 divided by 1.5) to take into account the fact that an 24

ALEC would not normally use the full capacity of the protection device.

1 BellSouth provisions power based on a "per fused amp" basis, but actually 2 bills the ALECs for power based on usage. Even though BellSouth sizes 3 the requested power usage at 1.5 times the anticipated drain (or use) by the ALEC's equipment, BellSouth then backs down the rate by the 0.67 5 multiplier, which is used in the calculation of the billing. Thus, there is no 6 over-recovery as Mr. King suggests. 7 8 Further, BellSouth provides a redundant power feed defined as a pair of 9 power feeds, usually designated as A and B feeds, that can carry DC 10 current individually and simultaneously to power a bay, shelf, or individual 11 piece of collocation equipment in an ALEC's collocation space. The 12 equipment manufacturer designs its equipment such that if there is a 13 failure on one of the feeds, the other feed will operate the equipment 14 without the occurrence of a power outage or failure. BellSouth does not 15 charge the ALEC on the individual amount of power available on each 16 feed. Instead, BellSouth assesses power based on a redundant power 17 feed (A and B feed). In other words, BellSouth does not charge ALECs 18 extra for the redundancy in the power feed. 19 20 Issue 6C: When should an ILEC be allowed to begin billing an ALEC for 21 power? 22 Q. 23 MR. KING, ON PAGE 11 OF HIS DIRECT TESTIMONY, STATES "AN 24 ALEC SHOULD BE BILLED FOR POWER ONCE POWER IS BEING 25 PROVIDED AND USED BY THE ALEC." DO YOU AGREE?

No. As stated in my direct testimony, since DC power is assessed by BellSouth as a recurring monthly charge, and if the ALEC requests, and is granted by BellSouth, the right to occupy its collocation space prior to the Space Ready Date, BellSouth begins billing the monthly recurring charges on the date the ALEC accepts the space. The ILEC should be allowed to begin billing an ALEC for power at the Space Ready Date. On the Space Ready Date, BellSouth turns the requested collocation space over to the requesting ALEC, at which time the ALEC has the capability to begin using power. At the Space Ready Date, BellSouth has performed work on the ALEC's behalf for power plant construction and associated components such as batteries and rectifiers as well as circuit breaker positions at the main power board.

Α.

On May 11, 2000, This Commission issued Order No. PSC-00-0941-FOF-TP requiring BellSouth to respond to applications for physical collocation within 15 calendar days. This interval was premised upon the use of standard rates for physical collocation space preparation. BellSouth has developed such rates reflecting the intervals and requirements contained in that Order. Pursuant to the Order, on June 26, 2000, BellSouth issued a Carrier Notification SN91081846 indicating that space preparation will be billed on a recurring basis using flat rates rather than billing up-front nonrecurring individual case basis ("ICB") charges. The recurring power element was modified to include all power-related space preparation as well as usage. As a result, BellSouth should be allowed to begin recovering those costs in the form of recurring power rates in accordance

1 with the rate structure as discussed above. To allow otherwise, might 2 encourage ALECs to "game" the process by requesting that BellSouth 3 perform work to provide the ALEC DC power but then delay paying 4 BellSouth for its work simply because the ALEC's business plans or needs 5 have changed. 6 7 Issue 7: Should an ALEC have the option of an AC power feed to its 8 collocation space? 9 10 Q. MR, KING, ON PAGE 11 OF HIS DIRECT TESTIMONY, STATES THAT AN ALEC SHOULD HAVE THE OPTION OF AN AC POWER FEED TO 11 12 ITS COLLOCATION SPACE BECAUSE IT WOULD ENABLE THE ALEC 13 TO PLACE AC POWERED EQUIPMENT IN ITS COLLOCATION SPACE; 14 ADDITIONALLY, THE ALEC CAN ALSO CONVERT AC POWER TO DC 15 POWER AS NECESSARY. PLEASE COMMENT. 16 17 BellSouth already allows an ALEC to order AC power feeds for its Α. 18 collocation space, both for convenience outlets as well as to power any 19 AC equipment for testing purposes. However, the convenience outlets are 20 not for use in converting AC power to DC power for powering the ALEC's 21 collocation equipment. BellSouth already provides DC power in its central 22 offices for collocation to enable the ALECs to power their equipment. 23 Rectifiers convert AC power from the commercial electric utility to DC 24 power. Batteries and generators provide back-up DC power in the event 25 of a loss of AC power from both the commercial electric utility and AC

system or from rectifier failure. An ALEC that used AC power would 1 2 require that the ALEC provide and maintain its own back-up power supply, 3 which would have to be located in an area of the central office that meets 4 strict code requirements for power equipment. The collocation area of the 5 central office is not an area that would comply with these strict code 6 requirements. Thus, the installation of rectifiers and/or backup power 7 equipment is not allowed in typical collocation arrangements. 8 9 Issue 8: What are the responsibilities of the ILEC, if any, when an ALEC 10 requests collocation space at a remote terminal where space is not 11 available or space is nearing exhaustion? 12 13 Q. ON PAGES 11-12 OF HIS DIRECT TESTIMONY, MR. KING SUGGESTS 14 THAT ILECS SHOULD BE RESPONSIBLE FOR NOTIFYING ALECS OF THE REMOTE TERMINAL SITES THAT ARE EXHAUSTED VIA 15 WEBSITE POSTINGS OR CARRIER NOTIFICATION LETTERS, AS 16 17 WELL AS A PLAN OF ACTION AS TO WHEN NEW CONSTRUCTION 18 OF A REMOTE TERMINAL WILL BE COMPLETED. PLEASE COMMENT. 19 20 21 Α. As stated in my direct testimony, BellSouth permits the collocation of any 22 type of equipment necessary for interconnection to BellSouth's network or 23 for access to unbundled network elements in the provision of 24 telecommunications services and will do so in accordance with the 25 alternatives outlined in my direct testimony in regards to space availability.

While this Commission has addressed processes for postings and waivers for central offices, a requirement that BellSouth notify ALECs every time a remote terminal site becomes exhausted, particularly when there are over 10,000 remote sites in Florida, compared to over 200 central offices in Florida, or when new construction of a remote terminal will be completed is not only impractical but would impose an enormous and costly administrative burden on BellSouth without significantly increasing the level of access that ALECs can realize. Further, such administratively and financially burdensome requirements should not be imposed, especially given that there are no pending requests for remote site collocation in Florida. Finally, since BellSouth is not privy to ALECs' plans to collocate equipment in particular remote terminals, BellSouth cannot determine with precision where and when space within remote terminals will be exhausted.

Q. DOES THIS COMPLETE YOUR REBUTTAL TESTIMONY?

18 A. Yes.

BY MS. WHITE:

Q And you had no exhibits to your rebuttal testimony, correct?

A Correct.

Q I would ask that Mr. Milner please give his summary, then.

A Thank you. Good morning, Madam Chair, Commissioners.

CHAIRMAN JABER: Good morning.

A (Continuing) My testimony addresses unresolved collocation Issues 4, 5, 6A, 6B, 6C, 7, and 8, and I will discuss each of those individually. My testimony also responds to portions of the direct testimony of Mr. King on behalf of AT&T, and Mr. Davidson on behalf of Sprint.

Turning to Issue 4, which deals with copper entrance facilities. First, the FCC's rules do not require an incumbent such as BellSouth to allow non-fiberoptic cable to be brought into incumbent central offices absent a showing by the requesting party, that is, the ALEC, and approval by the appropriate state commission.

Some ALECs have suggested that they be allowed to bring copper cable through BellSouth's entrance facilities in order to interconnect with BellSouth's network. The trend in telecommunications in the industry is for cables and equipment to be reduced in size, not increased. Accommodation of ALECs' requests to use BellSouth entrance facilities to bring new

copper cables into BellSouth's central offices would accelerate the exhaust of entrance facilities at the central offices at an unacceptable rate compared to the rate at which those facilities would be consumed using fiberoptic cables.

BellSouth requests that this Commission affirm that consistent with FCC rules in Dockets 96-98 and 91-141, BellSouth is not required to accommodate requests for non-fiberoptic facilities unless this Commission decides in a particular case that it is necessary to do so.

Turning to Issue 5, which deals with power and standard increments, the question raised is what are the standardized power increments to be. First, BellSouth has three options that it offers ALECs. The options allow provision of power to collocation arrangements in a variety of power increments.

First, an ALEC may request power from BellSouth's battery distribution fuse bay, or BDFB as we call it, in power increments that range from as few as 10 amps to as many as 100 amps.

Secondly, the ALEC may install its own BDFB in its collocation space and acquire power directly from BellSouth's main power board. In this configuration, the ALEC would acquire power in standardized increments of 225 amps.

And then the third option is that the ALEC may install its own BDFB, but rather than connecting that BDFB to

the power board, it connects it instead to a BellSouth BDFB.

And if it does that, it can acquire power in the ranges of as

little as 10 to as many as 100 amps. So BellSouth believes it

has a variety of powering options available to ALECs already.

Turning to Issue 6A. It is BellSouth's belief that the per amp charge assessed to ALECs should be on the basis of fused capacity for the equipment that the ALEC installs. You have already looked at this issue once in an MCI arbitration case, we request that you affirm that decision here.

Some ALECs have requested that power billing be based on the actual usage. They cite the example of commercial power usage to businesses or homes. There are key differences. First of all, you know that at your house there is a meter that measures the total amount of power that you consume. Inside a central office, though, there are not separate meters that measure the usage or the power consumed on individual feeds, just as inside your house there are not separate power meters for the bedroom versus the kitchen. Usage based on billing, the measuring system and the billing system that we use would have to be changed in order to accommodate actual measurement of power used. And in BellSouth's view, that is not economical compared to the methods we use for calculating those charges today.

Turning to Issue 6B. And this asks the question if power is charged on a per amp basis or on a fused basis how

should the charge be calculated. Well, BellSouth does believe it should be on the fused basis, as I just discussed, and then for the billing purpose, we use a factor of 1.5 which is in our view the relationship between the fused capacity and the actual used capacity.

And so in terms of rendering the bill, we take the amount of fused capacity, you can either divide it by 1.5 or multiply it times .667 and you get the same mathematical answer, but in either event that is how we propose that the actual usage or the bills for usage consumed be rendered.

Issue 6C asks the question when should an ILEC be allowed to begin billing an ALEC for power. And our position here is pretty much as Mr. Gray described for Issue B for other types of billing for collocation; that is, if the ALEC participates in a walk-through test within 15 days of the space ready date, then the date that we commence billing should be on the date that they accepted it. If they don't want a walk-through, then the billing should commence on the space ready date. In some cases we provide access to the space early where that is possible, and if the ALEC occupies the space earlier than the space ready date, then we would expect to be paid, or would expect to commence billing on that earlier date.

Issue 7 asks the question should ALECs have the option of having an AC power feed to the collocation space.

BellSouth's position is that if an ALEC wants that and where

the local authority allows such a thing, we don't have a problem with it so long as that configuration is done meeting the requirements of the National Electrical Code. In fact, BellSouth already provides AC feeds to collocation. We do that for temporary use of test equipment, lighting, that sort of thing.

It is not -- our belief is rather that those AC feeds are there for those purposes rather than for providing the ALEC an opportunity to convert the AC to DC since most of the equipment does run off of DC. Our belief is based on the fact that we provide DC to the collocation arrangement. The backup systems, such as the batteries and the generators are meant to provide DC power, not AC power. But if the ALEC wants an AC system in its collocation arrangement and it can do so consistent with the code requirements, BellSouth doesn't have a quarrel with that.

And then, finally, the last issue I address is Issue 8, and it deals with what BellSouth's responsibilities are when an ALEC requests collocation in a remote terminal. BellSouth's policy is this: If sufficient space exists within the remote terminal, then the ALEC can collocate its equipment including things such as digital subscriber line access multiplexers or DSLAMs regardless of whether BellSouth has installed its own DSLAM at that remote terminal or not.

Second, if sufficient space does not exist within

1 that remote terminal, and BellSouth has not installed its own 2 DSLAM, then BellSouth would file a waiver with this Commission 3 as it would for central office exhaust. 4 And, third, if sufficient space does not exist, and 5 BellSouth has installed its DSLAM, first, BellSouth will do 6 whatever it takes to make space available. In the unlikely event that BellSouth cannot make space, then according to FCC 7 8 rules, BellSouth would provide unbundled packet switching to 9 the ALEC at that location. Thank you. That concludes my summary. 10 CHAIRMAN JABER: Mr. Feil. 11 MR. FEIL: With your permission, Madam Chairman, Mr. 12 13 Watkins asked to go first, and his questions may eliminate some 14 of mine. 15 CHAIRMAN JABER: And, Ms. White, I jumped the gun. 16 You tender the witness for cross, right? 17 MS. WHITE: I just wanted to say it. 18 CHAIRMAN JABER: I know. I won't take the opportunity away from you. 19 20 Mr. Watkins. MR. WATKINS: Thank you, Madam Chairman. 21 22 CROSS EXAMINATION 23 BY MR. WATKINS: Good morning, Mr. Milner. My name is Gene Watkins 24 25 with Covad Communications.

1	A Good morning, sir.
2	Q We've talked before.
3	A We have. Good morning.
4	Q Let me just run through the issues that you have come
5	here to testify about today. On Issue Number 5, should an ILEC
6	be required to offer at a minimum power in Standard S
7	increments, it is BellSouth's position that it should be
8	required at most to offer it in increments of 10 amps, is that
9	correct?
10	A Yes.
11	Q Is there anything technically impossible or not
12	feasible about offering it in 5-amp increments?
13	A No, except that the smallest fuse size that BellSouth
14	generally uses is a 10 amp fuse. There are smaller sized amps.
15	But there is not a technical reason for that. I think it is
16	one of practicality.
17	Q If I cut you off, please let me know, if you pause
18	and I start asking another question.
19	As far as getting an amp I mean, a fuse that has
20	increments of five amps, though, that is just going down to the
21	electrical store, isn't it?
22	A Yes, I agree there are 5-amp fuses.
23	Q With regard to Issue 4, should an ILEC be required to
24	provide copper entrance facilities in the context of
25	collocation inside a central office, you would agree that

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copper entrance facilities are necessary for DSL, isn't that right?

Α Well, yes, copper cables are used for DSL. BellSouth historically has used copper cables in its outside plant Going forward BellSouth does not place new copper cables in its entrance facilities, but, yes, DSL, digital subscriber line service does require an all-copper loop.

0 Okay. That gets us to Issue 6A. Should an ILEC per ampere (amp) rate for the provisioning of DC power to a CLEC's collocation space apply to amps used or fused capacity? It is BellSouth's position that it should be based on fused capacity, is that correct?

Yes. Α

And it is BellSouth's position or understanding that 0 Covad Communications does not actually use the fused amount that it requests, it used something less than that, at most what it requests. And you actually multiply what you charge so that it comes -- the actual, the rate comes down by a third to recognize that it is fused for far more than we actually could use. is that correct?

You're correct. I hate to use analogies because Α there is always a flaw in them, but the analogy is the wiring in your house. When the electrician came, he or she provided wire of a certain gauge in the kitchen to the stove that was larger than to the bathroom. I will call all of that

infrastructure. And so all of those things are generally sized based on the notion that there will be moments, very small moments in time where the actual power used or whatever will be larger than the appliance, the stove, for example, might ordinarily operate at. So to prevent fires, you size the gauge of the wire larger than what you really think it is going to operate at most of the time. So the history that BellSouth has experienced is that that ratio generally is one and a half times the run rate, the steady state load that the device creates.

Q Sure. There is nothing nefarious about asking people to fuse more than they think they are going to be drawing?

A I'm sorry?

Q There is nothing nefarious about asking us to fuse at one and a half times, that is perfectly fine.

A No, we think that makes sense. We think it provides a safe working environment.

Q To work within the analogy of the house, so that we can get a good idea about what we are being charged as CLECs, if Florida Power and Light went down to your fuse box and counted up the number of fuses that you had, they would be charging you at 100 percent of the usage of all of those fuses, and then dividing by -- knocking that by a third and then charging you the standard power rate for that, to analogize that to what we are paying in a collocation arrangement, is

that right?

A Well, not exactly. If I turned on all the appliances in my house and they ran continuously at the same rate and there were no peaks or valleys in their demand, and if all of that had been done, you know, the way I have described, then if they counted up the fused capacity in my circuit breaker box, and then measured the load on all of those leads, they would find that there was a relationship of one-and-a-half to one.

But, you know, the difference or the analogy starts to break down in that typically devices in the central office are not turned on and off during the day. The requirements do change over time as, you know, plug-in cards are added to existing equipment which may cause there to be a change in the amount of power drawn. So, again, I hate to analogize, because the analogy starts to break down.

But, yes, the long answer to your question, if all of those things had been equal, I had turned on all the appliances and they ran the way I thought they would, then that is the relationship you would expect to see.

- Q Do you have your direct testimony handy?
- A Yes, sir.
- Q Do you mind turning to Page 12 of your direct testimony?
  - A Okay, I'm there.
  - Q At Lines 7 to 9 and again at 13 to 14, you point out

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that BellSouth multiplies the fused capacity times the per amp rate and then multiplies by .6667 to take into account the fact that the ALEC would not normally use the full capacity for the

- That's what we have been talking about?
- I'm sorry, yes. I didn't mean to cut you off.
- If you look down at Lines 15 to 16, it says so the ALEC is not paying for any more power capacity than what the equipment requires. That testimony has some assumptions built
- One of the assumptions that that testimony has built into it is that the network that we built when we request collocation space is for actual usage, isn't it? That we are going to have all the equipment in that collocation space drawing a total of the amount of power we ask for?
- Α That is one of the assumptions, yes. And BellSouth builds a power plant to accommodate what the ALEC says it needs, yes.
- With regards to the building of telecommunication 0 networks, is that a fair assumption or is that an assumption that BellSouth uses when it builds its networks?
- I believe it is a fair assumption for this reason: Just as when the electrician, you know, wires that house, he or

she wires it the way you requested it to be done. Now, later on if you are the electrician and you wire my house with oversized power feeds and I decide never to use that, or let's say I never used that, it is still fair in that the electrician was paid for the work that he or she did. The breakdown may come in the way the bill comes from Florida Power and Light or Georgia Power for how much AC power was actually consumed than what I paid for. But in terms of the infrastructure, I think it is appropriate.

Q When BellSouth decides that it is going to augment or build additions to its network, does it build for the actual demand at that time or does it build out for anticipated demand?

A It depends on which device you are referring to. There are batteries, there are rectifiers, there are power bars. You know, it all depends. So some of those are built for the ultimate size of the power plant, the power bars, the shunts, those sorts of things. Other devices, the batteries, the rectifiers are built in smaller increments recognizing the amount of steady state load that we think will be used.

Q BellSouth does not build a -- when they are adding onto their network, they do not build a network for the existing actual usage, they build for the anticipated demand because it is expensive to augment and you can't have customers coming to you saying I would like that service and you saying,

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wait a minute, I've got to augment my network to serve you, can you hold on a few months. Isn't that right?

Α That is only partially right. Let me try my previous answer again, maybe I wasn't clear. When we say said power systems, there are lots of different elements of that. Let's think about one of those things being a fuse in one power feed. another being the backup generator. Obviously, you know, big ticket items such at generators, you obviously don't want to say, I'm sorry, customer, I can't provide you phone service because I need to get a bigger generator to put on the roof. So you size that device for the ultimate size of the power plant.

Other pieces of the plant are provided in smaller increments. And so to your question, that part of your answer is yes, some devices are sort of sized, you know, in smaller time horizons than others. So the bigger ticket the item, the more likely it is that that item is going to be provided for the ultimate capacity of the power system.

CHAIRMAN JABER: Mr. Milner, I think this is the point that Mr. Watkins is trying to make. If not, I'm going to give you an opportunity to clarify. But at some point you must do projections to anticipate demand and you must look at economies of scale and you compare costs of putting in infrastructure today. This is for your own needs today versus what it might cost you a year from now. Is it fair for me to

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think that all of that goes into your determination on the size of the generator, how many generators, the size of your CO, what you put in your CO?

THE WITNESS: Well, certainly, yes. Yes, we do forecasts of what power we are consuming now. We also try, to the best of our knowledge, to include the ALEC's requirements. And even more nebulous, to the extent that we can forecast what devices we are going to use in the future compared to what devices we use now and how that changes, we factor that in as well.

CHAIRMAN JABER: And am I correct in assuming you also look at labor costs and costs of putting -- actually placing the infrastructure in today versus a year from now?

THE WITNESS: Yes, absolutely. Our planners look out at a planning horizon, you know, sometimes as few as one or two years to as much as ten years. Other factors such as whether building additions are even possible in a given location, when those building additions are going to be required to accommodate new switching equipment, let's say, those are all triggers for our re-evaluation of the power plant and its efficiency to carry us into the future.

CHAIRMAN JABER: And is it also fair for me to assume, without getting into the costs, I have had my share of cost discussions in these cases, I am not interested in that, but is it fair for me to assume that the costs may actually

cause you to overbuild in some areas? And, personally I think that is responsible. I think to the degree that costs are cheaper today than it would be a year from now, I would be disappointed if you didn't take that into account. But is it fair for me to assume that costs may drive you to overbuild in certain areas?

THE WITNESS: Yes. I mean, if our anticipation is that a device is going to cost more in the future than it does now, we would be foolish not to take advantage of that, but balanced against the time value of money and how long is that investment going to sit there and we would not earn on it. But a fair conclusion to draw is that we would consider all of those things and hopefully make the best choice as to the best use of our money.

CHAIRMAN JABER: Mr. Watkins.

## BY MR. WATKINS:

Q Mr. Milner, would it surprise you that Covad requests the amount of power when it builds a collocation space that it expects it may need 18 months out?

A That would not surprise me, no.

Q If we are requesting a certain amount of power in a collocation space for that anticipated demand that we do not have at the day the collocation space opens, does it surprise you that we are not actually using that fully requested amount of power?

Well. I guess my guarrel is with your use of the word 1 Α 2 using. You are using -- let me go back and maybe we can create 3 an example here. Let's say that Covad accurately forecast its needs 18 months out, and let's say that was for 100 amps. And 4 5 BellSouth builds a power distribution network that provides 100 6 amps to Covad's collocation arrangement. On day one, you know, it is certainly plausible that Covad would not have all the 7 equipment in its collocations arrangement to demand and use 100 8 amps of power. But your question was does Covad use that 9 10 investment. Yes, it does. BellSouth provided it at Covad's request. So in that sense, yes, BellSouth provided something. 11 You are not using the ultimate capacity of that infrastructure, 12 but you are using the infrastructure that you asked for. 13

Q Well, let's talk about real quickly the physics of electricity. If I do not draw the electricity, it does not flow through the wires, isn't that right?

A Certainly.

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Q So in terms of whether BellSouth is incurring the cost of the electricity that it is charging us for, until we draw it, BellSouth is not incurring the cost of the electricity itself. I understand the batteries and the rectifiers you have incurred some cost for.

A I would agree with that to a certain extent. As long as we can carefully separate infrastructure and how that is going to -- how the costs of that will be recovered from the

1 amount of commercial power that BellSouth might buy from 2 Florida Power, then, yes, I agree with you. To the extent that you start melding all of those things together into one monthly 3 4 rate and that that rate is paid as a recurring charge, that is 5 where the difficulty comes in. 6 COMMISSIONER DAVIDSON: I have a question following 7 up on the Chairman's question and this line of questioning. 8 Does BellSouth separate out infrastructure cost from actual 9 power used cost? 10 THE WITNESS: Well, I'm not a cost witness, so I 11 can't give you the precise answer perhaps you are looking for, 12 but the answer is generally yes. The recurring rate is a 13 combination of both the infrastructure items and the 14 amortization of those fixed assets along with an amount to 15 recover our costs of being billed from Florida Power and Light, 16 for example.

COMMISSIONER DAVIDSON: And that amount. BellSouth is recovering their actual cost?

THE WITNESS: On the part that we are billed from Florida Power and Light, yes. I mean, our intent is to pass that charge on directly.

COMMISSIONER DAVIDSON: Thank you.

## BY MR. WATKINS:

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Mr. Milner, you have in front of you a little chart here that we are going to just talk about in hypothetical

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terms. There is 32 Miami collocations identified in there by CILLI code. The two first rows of numbers are the dual feeds going into those collocations. I just want you to assume these facts for the purpose of the questions here.

Totalling the total amps used in the third row of numbers, the price currently per fused amp is that 7.80 charge. The fused amps are the row of mostly 60s. If you multiply the 7.8 times the number of fused amps delivered and then divide by or multiply times .6667 you arrive at the total monthly recurring charge for power. If you multiply the total amps used for feed times 11.70, which I believe in your testimony 11.70 is the appropriate price for per used amp charge, is that correct?

- A Yes. correct.
- Q I just want to make sure I multiplied by the right number.
  - A Right.
- Q I'm no good at math. So 11.70 times the total amps used for feed gives you the number on the far right. And does it surprise you that Covad has requested more available power than it was using at the time hypothetically that these readings were taken?
  - A That does not surprise me, no.
- Q Indeed, if Covad's line count in Florida has increased 51 percent so far this year, it was a wise thing to

do for Covad to actually ask for more power than it was actually using at the time so that it didn't have to turn away those customers that would not have been serviceable at an actual power usage rate had we asked for power at the actual amount we were using at the time we set up these collo spaces?

A Well, I think the root of your question was was it wise for Covad to do it this way. Since I'm not privy to, you know, what interest rates Covad pays for money it borrows and all those things, I can't say with precision whether that was the wisest thing to do or not. To know with precision, I would have to see, you know, what all your decision inputs were. How often you -- what rates you pay for equipment from your own vendors, what rate you can borrow money at and that sort of thing.

I don't quarrel with the general notion that equipment is provided in increments or in increments that will span a certain interval so two goods things happen. One is you are not in there constantly tearing up things and running the risk of disrupting service, and that you are minimizing, you know, your costs to the extent you can by buying in larger scale. I don't quarrel with either of those things.

Q And indeed if we ordered power at actual amounts that we were using at the time and had the need to augment, we would have to file a subsequent application with BellSouth to add that, you know, bump that fuse up another ten amps, isn't that

right?

A Well, sure it would be. In exactly that same way that if I decided to hire an electrician and I want the minimum sized power feeds, you know, and later on I decide I am going to use larger appliances or I want more air conditioning and that I have to have that wiring augmented, you know, I am deciding, you know, or the decision is do I minimize my up front payment and then absorb that charge later on or am I better over time to have, you know, bought the larger, you know, power feeds initially and not incurred that second. And so it all gets back to the time value of money and what I paid, what I am going to pay in the future.

Q Indeed, if I choose to augment a collocation space to increase the available power for equipment that I am going to need immediately, what is the normal time period that it would take BellSouth to be able to provision an increase in collocation power, do you know?

A I don't know. Perhaps Mr. Gray is a lot closer to that. We are getting better and better. And I would say, you know, in a good situation where large rearrangements of power plants were not required, that is new backup generators didn't have to be installed, I would image those things could be done somewhere between 30 and 90 days.

Q So given the time intervals to augment and the \$2,236 to just apply to augment that BellSouth wants per collocation

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24 25 space, it is a wise decision by Covad to ask for more power than is actually using at the time, isn't that right?

Again, you have asked your question a different way. Α I will try to answer in the same way, and that is what is best for Covad is arrived at by looking at, you know, what money you would have to borrow, where you would acquire that money from, what the carrying charges on the money would be, how long you would expect the investment to be idle versus when it is used, all of those things. So I can't sit here and decide what is wise or not for Covad.

CHAIRMAN JABER: Mr. Milner, I agree with you. Obviously to put yourself in the business decision that Covad might have made is just probably not appropriate and it calls for speculation. But let me pose the question to you this way as a decision-maker. The same questions I posed to you I think I should hold the CLECs to the same standard. While I would expect a company such as yours to act responsibly by thinking ahead, looking at projections, determining what your costs should be and making the business decision of whether to install a certain infrastructure and the size of the infrastructure today versus a year from now, I should hold the CLECs to the same standard. Don't you agree with that?

THE WITNESS: Oh, absolutely I do.

CHAIRMAN JABER: So if the CLECs have asked for a certain capacity because they have looked at projections and demand and cost characteristics, that is a good thing, that is not a bad thing.

THE WITNESS: That is not a bad thing at all.

BellSouth's quarrel is only when an ALEC asks for one thing,
their business plans don't pan out the way they thought, and
then said, you know what, I have got way too much power
equipment. You put way too much stuff in here. I really only
want to pay you for the lesser amount that I am actually
consuming. That is my guarrel.

CHAIRMAN JABER: Right. And that is my final question. I'm trying to bring focus back to this issue, and I want you to help me get there. It seems to me the issue was not how much capacity they have asked for, or what went into their business decision, but how much you should assess them for that capacity and holding their feet to the fire in terms of the use of the capacity.

What kinds of principles should I be looking at in making that decision is my first question; and the second question is what have you done today -- help me understand what you have done today in terms of interconnection agreements when these issues have come up? Because I know you must have agreements already in place on this very issue. You mentioned MCI, I think it was you in your summary.

THE WITNESS: Yes.

CHAIRMAN JABER: So those are the two questions.

What should I be looking at in terms of principles for what you can assess them in terms of charges and holding their feet to the fire; and the second question is help me understand what is in place right now.

THE WITNESS: Okay. Let me take the first part first. As a public policymaker, I think your duty is to, in your words, figure out how to hold their feet to the fire when BellSouth takes an action that is directly related to their original request. And I'm not saying that ALECs can predict the future with precision anymore than BellSouth can. Neither of us can.

So the question then gets to be what happens when a company's business plans don't pan out exactly the way they thought. Well, the electrician certainly wants to be paid for wiring your house. But then the question gets to be is some or all of that transferable to another entity, in this context another ALEC that has collocation, or not? If the answer is yes, some of those things can be reused, then that would argue for a more lenient, you know, set of requirements, less holding of the feet to the fire than if those assets are not transferable. You know, a wire that runs from here to one collocation arrangement if it is not used for that, it is not useful for anything else. So to the extent that things are dedicated to one ALEC and they don't use those, in my opinion they should have to pay for them anyway.

CHAIRMAN JABER: I have to tell you this smacks of a water regulatory concept called used and useful, and I just --your comment sort of sends chills up my spine as I start to make analogies to used and useful, because it is a regulatory concept, not a deregulatory concept. Saying that, is there a way to set up a pricing structure that you can live with that has an up front charge for what is requested only?

THE WITNESS: Absolutely.

CHAIRMAN JABER: Okay. And then whether they use and power flows through it or not is their problem, not yours. But you have collected the charge and to the degree there is gaming or irresponsible CLEC activity, then that charge acts as a disincentive.

THE WITNESS: Absolutely. And here is how I think you might uncouple those two things. And, again, in my very bad analogy, the electrician should be paid for what he or she wired into your house. The breaker box, the wires, the circuit breakers themselves. All of those things, that is the infrastructure. If ALECs want meters on their equipment to figure out how much actual power was consumed, that's fine. I mean, I think it is expensive. I wonder if the cost savings, you know, actually will pan out or not, but be that as it may.

If that is what they want, if they want meters on each individual feed and they are willing to pay meter readers and change the billing process so that is all worked into

there, that is fine so long as we uncouple what I provide -what BellSouth provides as infrastructure and that I am able to
recover, you know, not only when they make good decisions, but
when they make bad decisions from the actual power that I buy
from Florida Power and Light and pass on to them.

So if we have got that uncoupled, I don't have a problem with that, and I think that does go a ways toward preventing any gaming of the process by an ALEC that might say, you know, I'm not really sure, but if I don't -- I'm not sure if the answer is 50 amps or 500 amps, let me ask for 500 and if I don't use it that will be on BellSouth's ticket, not mine. So you can eliminate a lot of that gaming potential by saying whatever you order and is installed for you in terms of infrastructure you are going to pay for directly. And by directly I mean that may be as nonrecurring, or you might work out some formula for how that is amortized and recovered monthly. But as long as --

CHAIRMAN JABER: But a one-time fee for that 500 amps you would not object to. And maybe it is a payment plan or whatever that you accommodate in terms of billing, but you would not object to a one-time fee. And if they use it, great. If they don't use it, that is fine, too, because you have recovered what you believe your expenses are.

THE WITNESS: Absolutely. And you may recall that at one time that was BellSouth's posture that all of this

infrastructure be recovered in the nonrecurring. Over time some commissions decided that that economically was a big hurdle for new entrants and so those charges would be recovered over time in the recurring. But we certainly would not be opposed to being paid up front for that infrastructure in one lump, or as it is now with recurring payments made against it.

CHAIRMAN JABER: And then my second question related to what you have in place today.

THE WITNESS: I'm sorry. Oh, okay. I'm sorry. By and large, you know, I don't recall a whole lot of complaint cases that have breached state commissions or even the FCC about power. There are some notable ones. And I will try to be fair and present both sides of this, but one is with a company called NewSouth. NewSouth took a power feed directly from the power distribution board in 225 amps.

Later they discovered they didn't need nearly so much power, and so we are in a quarrel over, you know, do we get -- do we, BellSouth, get to recover the full cost of that 225-amp feed or, you know, did we sell them a bill of goods somehow and they should only pay for the amount they actually use. So that is the sort of dispute that has arisen is where there is a difference between, you know, what an ALEC thought its demands were going to be and what actually materialized some time later. But by and large there has not been a whole lot of complaints. I have been involved in most or all of the ones

that BellSouth has been involved in, there just haven't been 1 2 that many. CHAIRMAN JABER: Thank you. Mr. Watkins, I 3 4 interrupted you. 5 COMMISSIONER DAVIDSON: And, Chairman, I am going to 6 continue your interruption. I have a follow-up to your question. 7 CHAIRMAN JABER: Commissioner Davidson. 8 9 COMMISSIONER DAVIDSON: Mr. Milner, I had asked you early on could you separate out your fixed costs from power 10 costs and you had answered yes. Is BellSouth doing that now in 11 its billing? 12 13 THE WITNESS: Well, in a complicated way, yes, we are. In other words, the --14 15 COMMISSIONER DAVIDSON: Well, simply it, if you 16 could, for me. I mean, how are you all separating out billing for power versus billing for say what the electrician does at 17 18 the outset? 19 THE WITNESS: Well, all of those are different, let 20 me call them, line items in the way that all of those power 21 charges are calculated. Generally, all of the charges, whether 22 for infrastructure or for the power company bills, are all recovered on a monthly basis, that is in the recurring part. 23 So there are different parts of those recurring bills that go 24

towards infrastructure than for the amount of cost per amp or

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kilowatt hour actually that we have to pay the power company.

COMMISSIONER DAVIDSON: In BellSouth's experience, can you give me examples of instances in which BellSouth claims that CLECs have not wanted to pay for what you are calling infrastructure?

THE WITNESS: Do you mean court cases, or do you mean

COMMISSIONER DAVIDSON: No, I'm trying to get some instances. I mean, I'm trying to figure out what the dispute is here. And we have talked to about, you know, CLECs meeting their obligations and BellSouth meeting its obligations. But I want to understand. Are there examples where CLECs have said we are not supposed to pay for that and where BellSouth would claim that is an infrastructure item specifically requested by a CLEC that they should pay for.

THE WITNESS: Well, let me say first that the number of legal disputes and complaint cases have been fairly small. The only one that comes to my mind is the NewSouth complaint that has been up in the air for sometime.

COMMISSIONER DAVIDSON: And you don't have to name names, but give me an example. Yes, we have a CLEC that did not want to pay for what this electrician did specifically in request to that. I am just not understanding what the scope of this dispute is on the infrastructure side.

THE WITNESS: Okay. Well, the disagreements in my

experience have always been in the context of some rate setting proceeding such as this one. Either in a cost docket or a collocation case where you, the commissions, are asked to decide what should be the right formula for assessing these charges. After your decisions, there is usually not a whole lot of disputes, you know, complaint cases that go back before a commission.

COMMISSIONER DAVIDSON: Well, there have been collocation issues -- I'm sorry to interrupt -- as I understand it that have developed for years now since the '96 Act came about, and as commissions have continuously implemented the Act. Has BellSouth had a bad experience at all with -- and I'm not trying to suggest that they have, but I'm trying to understand what -- on the infrastructure side have you had CLECs that are simply not paying or saying that they don't have to pay for infrastructure requested as part of a collocation agreement.

THE WITNESS: No, there have not. You know, I'm not saying that any of the ALECs here or elsewhere in BellSouth's region have tried to manipulate the process by saying give me all this capacity, but I know in my heart that I am going to try to pay you for a lesser amount.

COMMISSIONER DAVIDSON: Perfect. I mean, I just wanted to get at that understanding because we are looking at something going forward or trying to remedy a past problem, and

I haven't heard much of a past problem to date. I do have a specific question for you, though, and I will state it first as Covad's counsel put it and then I will rephrase it. Covad's counsel had asked if Covad asks for more power than it is currently using at the time -- well, actually I don't know if Covad asked -- they started that phrase, but let me just go to my question.

If a CLEC asked for, quote, more power, close quote, at time zero than it is using at time zero in anticipation of using that more power at T1, does BellSouth incur a power related cost for that request?

THE WITNESS: Yes. we do.

COMMISSIONER DAVIDSON: And is that cost passed on to the CLEC?

THE WITNESS: Yes, it is. And those are the things I have been describing as infrastructure. Where Covad says at some future point I am going to need this much power, at time T12. At T0 or T1 their demand or their actual use will be much less than that. However, BellSouth has invested in power plants sufficient to handle that demand at T12. So, yes, they have asked for something greater than they are using at the moment, BellSouth believes they should be billed for that and over time that BellSouth would collect all the money expended on their behalf.

COMMISSIONER DAVIDSON: And BellSouth would be -- if

for some reason the infrastructure could be used with another CLEC, would be willing to bill that other CLEC as opposed to the requesting CLEC?

THE WITNESS: Yes. To the extent that those things can happen at about the same time, in other words, let's say BellSouth builds up its power plant, you know, by orders of magnitude for Covad, and Covad's demands never reach that level, and at sometime in the future AT&T says, you know what, in four years I will come in and use that spare capacity, then that is not a fair swap of Covad's obligations for AT&T's because there is a period of four years in there during which BellSouth will recover its costs from no one. But so long as those things could be coordinated and BellSouth kept whole in terms of what it spent and seeks to recover, then I don't have an issue with that.

COMMISSIONER DAVIDSON: One final question. If a CLEC asks for more power now than it will be using now, is there any cost associated with that request for more power that BellSouth doesn't pass on to the CLEC?

THE WITNESS: Is there a --

COMMISSIONER DAVIDSON: Is there a cost associated with that CLEC's request for more power that BellSouth does not pass on to the CLEC?

THE WITNESS: No.

COMMISSIONER DAVIDSON: Thank you.

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THE WITNESS: Yes, sir.

BY MR. WATKINS:

Q Just to follow-up on Commissioner Davidson's second to last question. When he said power issue, if he meant electrical charge -- and let's just take the first line of this chart. If we were actually using 24.3 amps, we have requested -- no, that is fused, so we actually requested 40 amps. The difference between that 40 and that 24 is not electricity that BellSouth -- apart from the infrastructure to cover the batteries and the rectifiers, it is not electricity that BellSouth is paying anybody for.

A That is correct. We are not paying Florida Power and Light for that difference, yes.

Q Even though the amount that we are being charged assumes that that electricity is being paid for by BellSouth, right?

A Yes, because most of those charges relate to the infrastructure which do directly relate to that number.

COMMISSIONER DAVIDSON: But now we are getting to it, and I am glad you asked that question. I think this is what we have all been asking here. I want to understand better whether a CLEC is being charged on the basis of we are assuming it is using 40 amps when, in fact, it is using 24, or is it actually just being charged for 24. Is it being -- is it receiving a power bill, a utility bill through you saying you owe for 40

amps of power used as opposed to you owe for 24 amps of power 1 2 used? THE WITNESS: The former. When BellSouth creates all 3 these bills, you know, they are for the fused amount, that is 4 5 the 40 amps that was requested. COMMISSIONER DAVIDSON: Is BellSouth incurring a cost 6 for the 40 amps? 7 THE WITNESS: For all of the infrastructure the 8 9 answer is yes. COMMISSIONER DAVIDSON: For the power, though? 10 THE WITNESS: For the amount of power that we would 11 buy from Florida Power and Light at that moment, perhaps not. 12 13 COMMISSIONER DAVIDSON: And is BellSouth billing, however, the CLEC for 40 amps of power used? 14 15 THE WITNESS: Yes. 16 COMMISSIONER DAVIDSON: Why? 17 THE WITNESS: Because the method that was used in the 18 cost dockets to arrive at that level, again, the amount of 19 power that we -- or the charges that we pay Florida Power and 20 Light compared to the infrastructure are fairly small, so they 21 are all just sort of wrapped in there together. 22 CHAIRMAN JABER: Well, I thought you just, in 23 response to Commissioner Davidson -- Mr. Milner, let me start out by saying this isn't hard. We understand what you mean by 24 infrastructure and we understand what you mean by the flow of 25

electricity charge.

THE WITNESS: Correct.

CHAIRMAN JABER: We do happen to regulate that other industry, as well. So please be clear in your answers.

THE WITNESS: I will do my best.

CHAIRMAN JABER: This will go a lot faster. I thought in response to Commissioner Davidson's questions you said you are working on a way to separate the infrastructure costs from the flow of electricity charge.

THE WITNESS: Yes. One way that we could do that would be to meter the actual leads to collocation arrangements.

CHAIRMAN JABER: So then respond again to the question why are you charging the CLECs for the incremental flow of electricity charge when that is not being used?

THE WITNESS: Because at the present we don't have a means to measure those individual power feeds.

CHAIRMAN JABER: And what is it -- have you ever talked to FP&L about coming up with a way to flow the -- to measure the flow?

THE WITNESS: Well, there are devices that could be bought and installed that would measure the flow down to individual leads. It is not so much FPL's issue as it would be an issue between BellSouth and all the users of power in a given central office, because it is BellSouth and Covad and all the other users of all the other ALECs in that central office

that collectively cause a power bill to be generated from FPL. 1 2 CHAIRMAN JABER: Okay. And I see Commissioner Deason 3 has a question. Let me switch gears on you just a little bit and bring yourselves into it. We have established early on 4 5 that you, too, have put in infrastructure and power to 6 anticipate a demand larger than what you have today. I am 7 assuming FPL doesn't charge you for power not used. 8 THE WITNESS: No, that is correct, they do not charge 9 us for power we don't consume. 10 CHAIRMAN JABER: And then my final question relates 11 to how you prorate among CLECs. The example that was given to us by Covad was 12.8 versus the 24.3, and then I guess you used 12 13 40 as the total. 14 MR. WATKINS: 40 is the requested. 15 CHAIRMAN JABER: Total requested would be 40 amps. 16 When you charged Covad, as an example, for infrastructure and 17 power costs recognizing they haven't used the incremental 18 power, is it just Covad you are assessing that charge to, or is 19 there a possibility of collecting costs associated with 20 electricity flow from other CLECs?

THE WITNESS: Well, the same methodology is applied to all ALECs.

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CHAIRMAN JABER: So you must be prorating somehow.

THE WITNESS: Well, we are gathering the entire bills of what we pay for the input and that is one element that goes

1 into what actual bill gets rendered. In other words, that is 2 some of the things you considered in setting the rate per amp. 3 CHAIRMAN JABER: Commissioner Deason had some 4 questions for you. COMMISSIONER DEASON: Yes, thank you. I'm trying to 5 6 understand the rate that is applied, and I believe in answer to 7 previous questions you have indicated that the rate includes a 8 component not only for the energy, but also for the infrastructure which you, as the collocation provider, has 9 10 installed, is that correct? 11 THE WITNESS: Yes. 12 COMMISSIONER DEASON: So I'm going to analogize again 13 to an electric consumer at a residence. When they get their 14 bill from Florida Power and Light, there is an energy component 15 of that bill, but there is also normally a customer charge that 16 is on that bill. 17 THE WITNESS: Yes. 18 COMMISSIONER DEASON: And that customer charge generally is to recover costs of meter reading, the drop, that 19 20 being from the main distribution system to the actual 21 residence, recurring costs which are relatively fixed in nature 22 regardless of consumption. Would you accept that? 23 THE WITNESS: Yes, I'm with you.

COMMISSIONER DEASON: Do you see any likeness here to

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what you are charging? You are not charging a customer charge,

you are just recovering everything in the monthly recurring rate, is that correct?

THE WITNESS: Yes.

COMMISSIONER DEASON: So if you were going to separate out the infrastructure recovery from the energy charge, you would need a recurring monthly rate in addition to the pure energy charge, correct?

THE WITNESS: Yes, you would need the pure energy charge as you are calling it, you would need some rate to recover the cost of reading the meetings, generating the bill differently and that sort of thing. So, yes, there would be a differential in there above the energy cost itself to provide for installing the meters, reading the meters, all of that sort of thing.

commissioner deason: I am going to draw another analogy to the electric industry. This may be a concept you are familiar with or you may not, but residential customers are not normally charged a demand charge. All of their costs are either recovered through a customer charge or a per kilowatt hour charge. Larger industrial customers are often billed on a demand charge rate where they have not only the customer charge, but an energy consumption charge, but a demand charge based upon the consumption, the demand they place upon the system which basically is to recover generation infrastructure which is there to meet their demand when they demand it.

Do you see any similarity to the infrastructure that you have in place, that it is infrastructure you have put in place for them to meet when they demand it or grow into? Is there any similarity there or is that just two dissimilar concepts?

THE WITNESS: I don't know that the concepts are dissimilar, and, you know, perhaps we could arrive at some mechanism like that. Covad's characteristics in terms of, you know, their horizon for how long they plan may be different from another ALEC, so you would have to recognize those differences in the recovery rate for those things. But there are -- you know, there are analogies like that. I mean, BellSouth itself has an arrangement with power companies for, you know, what we can do to take ourselves off the grid in terms of, you know, peak demands, emergency situations, and we get something back for that.

In other words, ostensibly we get a lower rate for electing to take our central offices off the grid, run our generators, even when there is not a loss of commercial power. So, yes, there may be some analogies like that that we could work into an agreement that says, you know, to the extent that we don't have to build all of that infrastructure at once or where you agree to limit yourself somehow to this amount of capacity which prevents us from having to make additional investment, just like our taking ourselves off the grid

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prevents FPL from having to create new power generation for those peak days or hours even, then that philosophy could be flowed through.

COMMISSIONER DEASON: But back to the original question, then. You are recovering not only pure energy charges, but infrastructure charges through your rate; that is correct?

THE WITNESS: Yes, that is correct.

COMMISSIONER DEASON: It could be separated out, but that would necessitate additional infrastructure costs in terms of monitoring or metering actual usage.

THE WITNESS: Yes.

COMMISSIONER DEASON: And it is your belief that the potential savings may not justify the additional front end costs of the metering?

THE WITNESS: That is our belief. In terms of the human power to read the meters, different ALECs may choose different devices, you know, how those things will be installed. But those are all questions that can be worked through, they are not insurmountable. But, yes, those devices don't exist today to measure those actual consumed power amounts. They could be installed, but, you know --

COMMISSIONER DEASON: Has BellSouth considered an option to CLECs where they can choose one energy charge which includes recovery of infrastructure and an option where they

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are willing to pay the up-front infrastructure costs and the recurring metering cost for a more pure energy charge, if you |will?

THE WITNESS: There have been some discussions between BellSouth and at least two different ALECs that can I know of, and that was sort of the basis. Frankly, those discussions have taken guite awhile, and even now are not, you know, are not complete. But those are the type things that BellSouth is willing to entertain, and that is, you know, what can we do mutually that is going to reduce our costs and reduce your costs at the same time. Right now we sort of have a one-size-fits-all, sort of, approach.

If we want to go to a more tailored approach that says if you want these measuring devices let's figure out how to get them in and in place, then that may be mutually beneficial. Right now it is BellSouth's belief based on the look we have made of it that the amount of savings by measuring all of this will not overcome the cost of installing and monitoring those devices.

COMMISSIONER DEASON: And I want to ask you to refer. again, to the table that was distributed to you earlier. I don't think it has been identified as an exhibit yet. What is your understanding of the second and third column, Power Reading Fuse A and Power Reading Fuse B, what do those numbers generally represent in your understanding?

1	THE WITNESS: Well, BellSouth usually provides two
2	different power feeds to a collocation arrangement which we
3	just arbitrarily call Leads A and B. I believe what Covad is
4	showing here is that they have somehow measured the power over
5	each lead and it adds to a total of 24.3.
6	COMMISSIONER DEASON: So in this hypothetical example
7	it is your understanding that the representation is that that
8	has been for Fuse A and Fuse B that there has been some type
9	of measurement of actual consumption?
10	THE WITNESS: I believe that is the predicate for
11	this exhibit.
12	COMMISSIONER DEASON: For this line of questioning.
13	THE WITNESS: Yes.
14	COMMISSIONER DEASON: Okay. Thank you.
15	CHAIRMAN JABER: Commissioners, what I would like to
16	do is take a ten-minute break. We will come back and try to
17	finish up with this witness before we go to lunch. Thank you.
18	MR. HATCH: Madam Chair, we are not going to finish
19	with Mr. Milner before lunch. I have quite a bit.
20	CHAIRMAN JABER: You need to be more optimistic, Mr.
21	Hatch.
22	MR. HATCH: I am, Madam Chairman.
23	CHAIRMAN JABER: You've got ten minutes to get more
24	optimistic. (Laughter.)
25	(Recess.)

Covad.

CHAIRMAN JABER: We are back on the record. 1 2 you were cross-examining Mr. Milner, I think. 3 COMMISSIONER DAVIDSON: A few more --CHAIRMAN JABER: Oh. Commissioner Davidson, I'm 4 5 sorry, you had a question? 6 COMMISSIONER DAVIDSON: One follow-up, and I promise 7 it is my last guestion for this round with this attorney, 8 because lunch depends on it. If a CLEC predicted that it would need 20 amps, but it actually over each period of time used 30 9 amps, would BellSouth know that? 10 THE WITNESS: Ordinarily not unless the protection 11 devices like fuses started blowing in response to that demand 12 of actual usage over predicted usage. 13 14 BY MR. WATKINS: Indeed they would, wouldn't they? I mean, if you 15 0 16 asked for 20, it would be fused for 30. If you started using 30 you would start tripping your fuses, wouldn't you? 17 That would be how we would know it, yes. 18 Α Which is a very good reason for telling BellSouth 19 Q precisely the kind of power that you are going to wind up 20 21 using, because otherwise you are going to have protection 22 devices that are going to be popping constantly while you are trying to serve your customers? 23

Yes, and you are going to create fire hazards potentially. I mean, lots of bad things could happen if you

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don't, you know, accurately predict the amount of capacity you 1 2 need. 3 In fact, when you do an application, you list the 0 equipment and the List 1 draw for that equipment to avoid that 4 5 very possibility, isn't that right? 6 Yes. Α 7 Q When we were discussing some of the metering issues. 8 you said that the meters don't exist for that. What you mean 9 by that is the meter isn't there now? 10 Α That is what I mean, yes. 11 In fact, if Covad wanted to know what the equipment 0 12 was drawing to actually populate those two columns in this 13 chart, there is equipment that you can come in and clamp on the 14 line that will measure the draw running through that line. 15 right? It will measure the draw at that moment. If you want 16 17 to know -- you know, if you want the analog to the meter on 18 your house, you have to have some device to accumulate, you 19 know, how many hours of load you have drawn. 20 And BellSouth has those types of meters on its 21 equipment between it and Florida Power and Light, right? 22 Do you mean for the AC feeds? Α 23 Yes. Q

I mean, just like you do on your business or

There are meters to measure the total inflow of AC into

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house.

Yes.

1 | our buildings.

Q And the meters that BellSouth uses are actually remotely monitorable, so you are not paying for a meter reader, are you?

A Not on those, no. But if you were to extend that metering down to individual leads, then you would have to install needed devices and you would have to have a way of reading those devices.

Q All right. I want to come back to some of the questions that we had about the infrastructure costs that BellSouth incurs to provision power. If I asked for 40 amps and you build batteries and rectifiers to provide that power, are those batteries and rectifiers actually dedicated to Covad?

A No, they are not. Collectively they are available for whoever is using power, you know, served from that power supply.

Q So if Covad -- and if there is any press in the room, this is purely hypothetical -- but if Covad went out of business, those batteries and rectifiers don't go out of business with us, right?

A No.

Q So, there is a reutilization factor that is available for that equipment because BellSouth would pick that up and use it for its own purposes or reassign its capacity to another CLEC if a CLEC goes out of business and has a certain dedicated

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physical plant for it in the central office, right?

No. Maybe or maybe not. You know, let's say Covad -- let's not use the doomsday scenario of going out of business, let's say that Covad decides not to do business in Central Office A. You said, well, those batteries and all that equipment just somehow revert to BellSouth for BellSouth's future need. Well, BellSouth may not have a need in the future that is greater than it has right now. It may already have the full complement of equipment it wants there. So there may not be a need for those batteries and rectifiers that were put there for Covad once Covad leaves.

All right. With regards to the metering, I heard you 0 earlier say you don't have a problem if the CLEC looks at this chart and says, wow, it would be economically efficient for me to either buy and install meters or pay BellSouth to buy and install meters. You wouldn't -- your testimony seemed to have a problem with the costs associated with that. But if the efficiencies and the economic efficiencies are there for metering, BellSouth has no opposition to that as an option?

No. Let me clarify just one point. I have no opposition to that so long as you are not trying to leverage the infrastructure investment by reading the meter of actual power consumed from one moment to another.

Okay. Commissioner Deason proposed one way to address that problem. The one last thing I wanted to get to with regards to the question that went on was the --

CHAIRMAN JABER: Can I interrupt you?

MR. WATKINS: Please.

CHAIRMAN JABER: What Commissioner Deason proposed -- I don't know how to ask this without asking you to testify.

That is not my intent.

MR. WATKINS: No, I can tell you what my memory was of what --

CHAIRMAN JABER: Here is what I'm getting at, I think I would like to hear some feedback from the ALECs with regard to whether that is a proposal that is acceptable. And I know Mr. King is testifying later, so if you all want him to address that, that's fine.

## BY MR. WATKINS:

Q Well, I can ask one question here that might clarify what my beliefs are about some of that stuff, and that is Covad did most of its collocations in about 1999, so to the degree that you are recovering some of the in-plant factors, or in-plant costs by charging us this \$780 per fused amp, you have been recovering those costs for a long period of time, and to the degree that there is now a new charge that is higher than the incremental charge or a nonrecurring charge, you would almost double-recover from a company that has had a collocation space for a long period of time, isn't that right?

A Well, not necessarily. I mean, if we are going to go

to a new method of doing this, there does not necessarily have 1 2 to follow that there is going to be some double recovery. You 3 know, we could account for what number of years Covad has been 4 in business and had collocation, and not -- I don't mean in any way this would be, you know, a negative statement about Covad, 5 6 but four years is not very long in the life of a power plant. 7 I mean, those things are built for the long-term. 8 Now, the last question I wanted to get to was there 0 9 was some implication in one of your answers, I think, to 10 Commissioner Davidson that the 7.80 current per fused amp price

was some implication in one of your answers, I think, to Commissioner Davidson that the 7.80 current per fused amp price had something more than a majority of it associated with recovering the infrastructure cost as opposed to the actual power electrical charge that you pay to Florida Power and Light. Do you know what percentage of the 7.80 is dedicated to infrastructure versus electrical power?

A No, not with precision. I would expect it to be fairly high, at least in the range of 70 or 80 percent.

Q Of the 7.80 is for power or -- is for infrastructure or for electricity?

A It is for infrastructure.

Q Do you know what the industrial rate for electricity in Florida is on a per kilowatt hour basis?

A No, sir.

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Q With regards to Question 6C, when should an ILEC be allowed to begin billing a CLEC for power, it is BellSouth's

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position that that should begin at the space ready date, isn't that right?

Generally. There are cases where an ALEC wants to Α get in early, and if it is safe to do so we allow you to be in And if you start using power, then we would like to start billing you for that.

Well, the other side of that if statement, though, 0 also applies, and that is if we are not using power you still want to start charging us for power, isn't that right?

Α That is right, yes.

And if you go back to our building example, it would 0 be like your house being framed out and the fuse panel is there, but there is no light bulbs screwed in, there is no dishwasher, there is no washing machine, and Florida Power and Light walks in and counts up your fuses and starts immediately charging you because they have done their infrastructure development, but you haven't started using or drawing the power, but they want to start charging you for it, isn't that right?

Well, let me just substitute the electrician as the contractor that put in the wiring rather than Florida Power and Light. But with that change, yes, I would agree.

0 Okay. Well, let's take the two possibilities. 0n the one hand, we start paying for electrical power at the space ready date. In that instance -- and let's further assume that

I don't actually have my equipment in there and running and plugged in at that moment. There is a certain period of time normally when that equipment is put in, plugged in, turned on, and have customers attached to it, right?

A Yes.

Q During that period of time, between the space ready date and the time that I start drawing power, if I am charged for that power, I am getting charge for a huge amount of stuff that at least in electrical charges I haven't used, isn't that right?

A If you will take out the word huge, I will agree with your question. There will be some difference, but I don't know how large that is.

- Q 7.80 times the requested amount of power?
- A Right.
- Q On the other hand, if BellSouth has to sit back and wait for that used capacity, or that used amount, or requested amount of electricity to be begin to be used, what it is not getting is the infrastructure costs that it would recover through that monthly recurring charge, right?

A Correct.

Q So it is that time value of money for those three months, let's say, for hypothetical purposes, that BellSouth does not enjoy. That it begins enjoying immediately upon the date that the CLEC begins to use the power, right?

A That is correct, yes.

Q So between those two different scenarios, one where BellSouth waits to charge, it loses a small time value of money, right?

A It loses some time value of money, yes.

Q But the CLEC on the other hand if we get charged from the beginning date while BellSouth gets that time value of money paid for, the CLEC pays \$7.80 times the fused amount of amps for X number of months that it is not using power, right?

A That is a possibility, yes.

Q So between the two there is a large amount of money going out the door for power not being used, or a small amount of money for the time value of the money that BellSouth is not enjoying that it will ultimately enjoy, correct?

A Well, you keep qualifying with huge and small, those are the things that I can't agree with. Yes, I agree with what you just said that the way we are doing it now there is a, you know, that period of time between when we have done all our work and turned that space over to you and when you ultimately occupy the full capacity, yes. All of those things are largely within your control as to high quickly you put equipment in, how quickly you ramp up and put customers on that equipment.

Q If BellSouth supports the metering concept, if the CLEC thinks that it is economical, you would not oppose holding off on the actual charges until there is actual usage, is that

||right?

A Well, to the extent that we are able to begin recovery on the infrastructure part, no, philosophically I don't have a problem with that.

Q And, finally, Issue 8, what are the responsibilities of the ILEC, if any, when an ALEC requests collocation space at a remote terminal where space is not available or space is nearing exhaustion. In Florida, under the current prices, terms, and conditions for remote terminal collocation, that question, or more accurately the answer to that question is a moot point, isn't it?

A I'm sorry, the answer to what question?

Q Issue 8. Well, answer me this. Has anybody ever requested remote terminal collocation from BellSouth in Florida?

A No, I don't believe so. I think there -- well, I can give you my opinion of why I think that is.

Q Well, let me ask you the question so the record reads correctly. What is your opinion for why that is?

- A Thank you for that opportunity.
- Q You're welcome.

A I think that ALECs are waiting to see what is going to happen in two places, in front of state commissions as to whether state commissions are going to impose on BellSouth an obligation to unbundle its DSLAMs, and I think ALECs are also

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waiting to see what is going to happen at the federal level in the triennial review. And both of those, I think, have to some degree encouraged ALECs to sit on the sidelines before they plunge in and take on risk in terms of deploying their DSLAMs at remote terminals.

Q The availability has been in existence for three years to request remote terminal collocation, hasn't it?

A I don't know precisely, but it has been out there for awhile, I will agree with that.

Q It was one of the prerequisites of ultimately getting to unbundling packetized switching was you had to ask for collocation space and be denied that, right?

A Yes.

Q Yet nobody has even asked for remote terminal collocation, much less been denied, isn't that right?

A Yes, but I believe in all nine states in BellSouth's region there have been requests of the commissions to impose a requirement to unbundle BellSouth's DSLAMs rather than for the ALECs to proactively go out and install their own in remote terminals.

Q Do you know a guy named Jim Johnson, a BellSouth employee?

A I know Jim, yes.

Q If Mr. Johnson testified before the House committee here in Florida that BellSouth had 3,596 remote terminals

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deployed with DSLAMs in them, does that number sound right for Florida?

I don't know the right number, but it is a large Α number, because BellSouth has been very proactive in deploying its DSLAMs in remote terminals where there was not copper cable in the feeder part of the loop. So, yes, I am not surprised at all that that is a very large number. We made a business decision that that is the business we wanted to be in. Where there is fiber in the loop feeder part of our plant, then we said, okay, we recognize that, and we will put our DSLAMs in remote terminals.

BellSouth recognizes there would be enormous cost 0 savings if they took the big trunk line that runs from the central office to the remote terminal that is copper and has a high maintenance cost and pulled that out and replaced it with fiber, it would save a lot of money, right?

No, sir. BellSouth takes a different approach, and that is it looks at a number of different triggers for replacing copper cables. Road moves, whether the cable has been hit by lightning and costs too much to maintain. So, no, we have not done any cost study that I am aware of that just says let's look at replacing each and every copper cable in our network because ultimately it may be cheaper to operate that. That would be a huge investment for us to make. Instead, we look at it in terms of the situation. You know, what are we

required to do by departments of transportation in terms of
what capacity is there, what our future needs might be, what is
the serviceability of what we are already own. So our first
choice is always to use what we have rather than go out and

build new plant.

Q But a fiber trunk line running -- I shouldn't even call it a trunk line. A fiber line running from the central office to a remote terminal is cheaper to maintain than copper, though, right?

A Generally. But it's not -- that is only one aspect of a cost study to figure out whether economically it makes sense to replace a copper cable that is entirely serviceable and, you know, you are recovering or have already recovered your cost and you are making money on it.

Q If you have a sole fiber running out to that remote terminal, in order for BellSouth to be able to serve people with DSL on the far end of that fiber line they have got to put a DSLAM in the remote terminal, right?

A That's right, yes.

Q Do you know what percentage of your remote terminals in Florida are fiber-only fed?

A I don't know that number, no. The --

CHAIRMAN JABER: Mr. Milner, the question was do you know that number. It doesn't call for elaboration. I will be flexible when the question calls for elaboration. And this is

1 where I get to remind you your attorney will do redirect.

THE WITNESS: Yes, ma'am. Thank you. I don't know that number.

## BY MR. WATKINS:

- Q Do you have any idea? Is it 50 percent, 70 percent, or 5 percent?
  - A I don't know the number.
- Q Okay. If there is a large percentage, I will just use a Tennessee number of 50 percent of the remote terminals are fiber fed only, the only way for a DSL competitor to serve those customers on the far side of that remote terminal is collocation at that remote terminal, assuming there is no copper line parallel to the fiber line, right?
  - A Correct, yes.
- Q So if the percentage is anywhere remotely close to that, and that is the only way to serve those customers at all, does it surprise you that nobody has even asked to collocate at that remote terminal if there is potentially tens of thousands, if not hundreds of thousands of customers on the back side of that remote terminal that that competitor cannot serve without being collocated at that remote terminal?
  - A And your question was am I surprised by that?
- Q If there are thousands of customers on the back side of remote terminals that DSL competitors cannot serve without collocation, does it surprise you that nobody has asked to

1 collocate? 2 I don't know if I am surprised or not. I have 3 explained that my understanding of why that has occurred is 4 reaction to the regulatory climate, not to the technological 5 environment. 6 To clarify, you believe that we are waiting for 0 7 regulatory certainty from the FCC? 8 Α From the FCC as well as from this Commission and 9 others, yes. 10 MR. WATKINS: I have no further questions. CHAIRMAN JABER: 11 Mr. Feil. 12 MR. FEIL: Madam Chair, for planning purposes I have 13 maybe five minutes worth of questions. I think Mr. Hatch has 14 significantly more than that, so I will go next if that is the order you desire. 15 16 CHAIRMAN JABER: Yes. 17 CROSS EXAMINATION 18 BY MR. FFIL: 19 0 20

Mr. Milner, isn't it correct that for ALEC collocated equipment to be certified under applicable standards such as NEBS, which stands for network equipment building standards, if I've got that right?

Α Yes.

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It is supposed to have redundant power feeds? Q

Yes, that is right. Α

FLORIDA PUBLIC SERVICE COMMISSION

1	Q	Does NEBS also require battery backup?
2	A	I don't believe it does.
3	Q	But it does require redundant power feeds?
4	Α	It requires redundant power feeds, but
5	Q	So if an ALEC has equipment that draws 40 amps of DC
6	power, th	nat equipment must have a 40-amp A feed fused
7	appropria	ately and a 40-amp B feed, correct?
8	Α	Yes.
9	Q	And the idea here as you mention in your rebuttal
10	testimony	is that if one feed fails at the fuse or otherwise,
11	then the	other feed can fully power the equipment, correct?
12	А	That's right.
13	Q	So in my hypothetical, I'm talking about that 40-amp
14	equipment	t, that equipment will not draw 40 amps of power over
15	both feed	Is at the same time, correct?
16	A	That is correct.
17	Q	And to the extent that the feeds were not redundant
18	in terms	of sizing, the standards would not be met, the NEBS
19	standards	would not be met, correct?
20	A	If they were not redundant?
21	Q	If they were not.
22	A	Then you would not meet NEBS standards, that is
23	correct.	
24	Q	On Page 8 of your rebuttal you state that BellSouth
25	does not	charge ALFCs for redundancy That recognizes I'm

1	sorry, Page 8, starting at Line 14 of your rebuttal. You say
2	that BellSouth does not charge for redundancy. This
3	recognizes, does it not, that the equipment will not draw the
4	required load over both feeds at the same time, correct?
5	A That is the point I was trying to get across, yes.
6	Q Okay. So to the extent that an ILEC billed for the
7	total amount that could be drawn over both feeds at the same
8	time, then they would be overbilling, is that correct?
9	A I'm sorry, you lost me with that. Could you try it
10	again?
11	Q I'm sorry, perhaps I didn't phrase the question
12	correctly. To the extent that an ILEC billed disparately from
13	the way you bill, from the way BellSouth bills, they would be
14	overcharging, is that correct?
15	A Are you saying that they billed differently from the
16	way
17	Q They billed disparately. In other words, they bill
18	for the full power load over both feeds?
19	A Well, if that is what they did, and all other things
20	being equal in the way the charges were arrived at, then I
21	would probably agree with that.
22	MR. FEIL: Okay. I don't have anything further.
23	CHAIRMAN JABER: Commissioners, let's take a one-hour
24	lunch break, and we will start with Mr. Hatch's
25	cross-examination.

(Lunch recess.)

CHAIRMAN JABER: Let's get back on the record. You had an exhibit -- before we get to Mr. Hatch, you had an exhibit that we did not identify. Did you want to identify that?

MR. WATKINS: Yes, Madam Chair. Covad would like to mark this chart, and we are calling it Hypothetical Exhibit 1. We can call it Exhibit 1. I'm going to mark on it in real print hypothetical and then change the word overcharge to total MRC minus amps used at 1,170. And I think with those changes there is no objection from any of the ILECs. Is that right, ILECs?

CHAIRMAN JABER: As I understand it, it is going to be renamed hypothetical exhibit, and there is going to be a change deleting the word overcharge and replacing it with total MRC minus amp used?

MR. WATKINS: That is correct, ma'am.

MS. WHITE: And is my understanding still correct that you are not going to move this into the record?

MR. WATKINS: This is not a piece of evidence. This was simply to aid anybody reading the record to know what we were talking about. They can have this in front of them as an exhibit. It is hypothetical, and we are not introducing it as evidence.

MS. WHITE: And BellSouth is okay with that.

CHAIRMAN JABER: So we will identify it for purposes 1 2 of the record and that will be Exhibit 14. 3 (Exhibit 14 marked for identification.) CHAIRMAN JABER: Covad hypothetical exhibit. 4 5 Okay. Mr. Hatch. 6 CROSS EXAMINATION 7 BY MR. HATCH: 8 Good afternoon, Mr. Milner. My name is Tracy Hatch, 0 9 I will be asking you a series of questions for AT&T. 10 Α Good afternoon. To follow up on -- before I forget about it from your 11 0 12 earlier cross this morning, do you remember the house analogy 13 that was discussed? 14 Yes. Α 15 And I believe it was your statement, correct me if 0 I'm wrong, that the house is created, it is all framed out, 16 there's no appliances in it, there's no lights in it, and the 17 analogy was that, say, FPL isn't charging you power at that 18 19 point. Is that correct? 20 Α Yes. 21 And I believe that you added to that analogy that the 0 22 electrician had run all the wiring in the house and that the 23 electrician needed to be paid, is that correct? 24 Α Yes. 25 Now, in the collo context -- to carry that analogy Q

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further, in the collo context when we get collo space and we ask for power, we actually pay for that cabling that is done from your power board or from the BDFB, your BDFB to our space, is that correct?

- Yes. you do.
- So in that instance we have already paid the 0 electrician?
  - Α Right.
- But what hasn't been done is that FPL isn't charging 0 us for some increment of their power grid that feeds the house, such as their nuke plants or their coal-fired plant, is that correct?
  - Α That is one of the things, yes.
- We have been talking a lot about fuses and amps and 0 so forth, and I want to just bear down a little bit and make sure that we are all talking on the same page technically. When you size the cabling in your central office, what do you size that cabling -- how do you size that cable? How do you know whether it is a four-ought cable or a ten-gauge wire or what?
- Well, we look at the expected drain, that is the steady state amount of consumption that there would be, and generally multiply that by one and a half times to figure the size of the power feeders and the other devices that we would install.

- Q The one and a half size, that would be to size the fuse that would protect that piece of cable, is that correct?
  - A And the other devices that go along with it, yes.
- Q Right. And the devices downstream that feed off of that cable?
  - A That is correct, yes.
- Q When you size cable, as I understand it, your sizing of cable is a function of both the expected electrical flow through that cable plus the length of that wire, is that correct?
  - A Yes.
- Q And you use -- and the size or the thickness of the wire gets bigger for longer distances and so forth, is that correct?
  - A That is right.
- Q And then you will put a fuse on that that will protect that cable based on whatever fuse size, based on the expected load demand times one and a half, is that correct?
- A Yes. And the equipment that is attached to that. Not only is it protecting the cable itself, but the device that is on the end of it.
- Q And what the fuse does, as I understand it, is that it protects the electrical current in that cable from exceeding that cable's carrying limitations, is that correct?
  - A Correct, yes.

Q If the fuse were not there and it started carrying too much cable, it would essentially make it too hot, and probably melt the sheath and then cause a fire potentially?

A Yes, exactly.

Q Now, let's talk for a minute -- are you familiar with the term List 2 drain?

A Yes.

Q Can you tell me what that means?

A Yes. Generally, the List 2 drains are drains that are experienced, what we call peak loads. Sometimes they also occur when equipment is first turned on. You might have noticed that your television makes noises when you first turn it on, so List 2 drains are peak loads or those above the steady state.

Q Would it be accurate to say in a telco context that a List 2 drain is the maximum amount of power that a piece of equipment will draw when the power plant is in distress, would that be accurate?

A That is one of the occasions that they might occur.

On power up and some other times, as well, but that's fair.

Q And when a power plant is in distress, that would be when the AC power from, say, Florida Power and Light has gone off, and your generator isn't running, and your equipment is running off the batteries, that would be a power plant in distress, would that be correct?

- That is one occasion, yes.
- Would that essentially be what you would consider to be a worst operating condition?

I mean, when you are running on your batteries and your generators have not yet kicked in, there is a possibility that the batteries are going to expire before either the power is restored or the generator starts. So, yes, that is the worst case.

- Now, would it be correct to stay that List 2 drain is determined through testing on a piece of equipment by lowering the voltage to the point where that equipment fails?
- That is how most manufacturers do it. And, by the way, some manufacturers don't even provide that, but --
- Now, is it also correct that as the voltage on a piece of equipment is lowered, that piece of equipment will attempt to draw more power in terms of amps?
  - Yes. it will.

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- And that is because if you measure power consumption in watts as the voltage drops, then the amperage has to go up to equal the same amount of watts for that piece of equipment to actually operate?
  - Α According to Ohms' law, yes.
- Now, List 2 drain is essentially that point at which 0 the equipment will fail when the voltage drops at that point, is that correct?

It will fail at that point or some higher point, yes. And I say some higher point, that is sort of a theoretical approximation. In some cases it's not all that precise.

How often would you guess, or at least in your experience with BellSouth, that either the -- that you have experienced or that BellSouth will have experienced a power plant distress, how often does that occur?

It is very infrequent.

And the fuse size that would be put on a piece of equipment would be sized according to List 2 drain, is that

Now, that formula essentially is consistent with BellSouth's internal standards, is that correct?

And by those standards I am referring to TR73503-10.

Yes. That is our standard, yes.

Now, when you calculate a load on a piece of equipment and it will come up with some number, it might be, say, 32.1, call it a List 2 drain, for example. When you are fusing for something like that, you would round up to the next biggest fuse, is that correct?

Α I'm sorry.

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Q When you calculate a load, you would round up to the

1 next sized fuse --2 Yes. 3 0 -- based on that one and a half percent? 4 Α That's right, yes. 5 Or 150 percent, I'm sorry. Now, these fusing and 0 6 cable sizes apply to the power cabling from your power 7 distribution board down to the BellSouth BDFB, is that correct? 8 Α In some cases, yes. I understand AT&T says that is how most of their collocations are powered. Other ALECs get 9 10 their power from tapping in not at the power distribution 11 board, but at the battery distribution fuse bay. The 12 principles are the same. 13 The relationship between cabling and fuse Gotcha. 14 sizing applies both between the power distribution board and a 15 BellSouth BDFB and also the equipment feeding off that BDFB? 16 Α Generally. 17 Now, when a CLEC installs equipment in its 0 18 collocation space, it will put in, say, one bay. And when it 19 orders power, it will order power based on what it expects that 20 bay fully equipped and fully operational to draw, is that 21 correct? 22 Not necessarily. If the ALEC, for example, never Α figured it would use all the capacity of that, that it might 23 24 not plug in all the cards that that device, you know, might 25 have in it, it might choose -- you know, the ALEC might specify

1 a lower amount. But if it intended to fully use that equipment 2 one day, then, yes, I would agree with your statement. 3 0 And that would be based on a List 2 drain, is that 4 correct? 5 Α Yes. 6 Now, we have talked about List 2. Are you familiar Q 7 with the term List 1 drain? 8 Α Yes. 9 What is your understanding of List 1 drain? Q 10 Well, it is a layman's term. List 1 is a steady Α 11 state power consumption of a device. 12 Would it be accurate to the say that a List 1 drain 0 13 is the maximum amount of power that a piece of equipment will 14 consume when it is fully equipped, meaning all the cards that 15 it could hold are there, all the features and functions of that 16 equipment are fully engaged and all operational, and that would be the maximum that that equipment could draw, that would be an 17 18 accurate definition of List 1? 19 Α That is the anticipation, yes. 20 0 Now, using that definition, would you expect a piece 21 of equipment in a central office to operate at List 1 22 continuously? Continuously, no. Not continuously, but it operates 23 Α 24 most of the time at or close to its List 1 drain. 25 If a piece of equipment is not fully equipped 0

meaning, for example, it only has half the number of cards, it will not be running at List 1 drain on a steady state basis, will it?

A Presuming that that is the way the manufacturer specified List 1 drains, yes.

Q Now, are you familiar with the term coordinated shutdown?

A Yes.

Q Could you describe what that is, please?

CHAIRMAN JABER: Mr. Hatch, I need you to remove your hand away from your face so I can hear you.

MR. HATCH: My apologies.

## BY MR. HATCH:

- Q You are familiar with the term coordinated shutdown?
- A Yes.
- Q Could you describe what that is, please?

A Yes. The electrical code describes ways in which devices are shut down in sort of a hierarchical order. The notion or the goal is that individual devices will have their fuse blown before larger fuses that effect more equipment are blown. So that is the coordination part, is that the lower you are in the food chain the more likely your fuse is going to blow and you won't affect other adjacent equipment or unrelated equipment.

Q Now, in a coordinated shutdown, as I understand it,

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and correct me if I'm wrong, the upstream fuses are going to be sized larger than the downstream fuses, is that correct?

Α Correct.

0 And what is that ratio that is used to size the upstream fuse from the downstream fuses?

Α Well, it depends on the fuse type. For the more common TPS fuse, it is a ratio of three-to-one. That is the aggregate amount of fusing at the higher level in the hierarchy will be three times what the fused amount is at the lower level.

I'm going to be handing you out a document here that 0 is provided to me in discovery by BellSouth. It is essentially the document we referred to earlier, that 73503-10. section out of your BellSouth standards.

All right. Thank you. Α

MR. HATCH: Just to alert everybody, I had a discussion with counsel for BellSouth. I am going to attempt not to elicit any proprietary information. I think the basic problem is that the document itself is proprietary and personal to BellSouth in terms of it is their document, they don't want it in the public domain, and I am alerting counsel. She will warn me if I am going too far with any of these questions, but I will attempt not to violate anything.

CHAIRMAN JABER: Thank you.

BY MR. HATCH:

1	Q Now, if you look at that section, Page 2, and I
2	believe it is paragraph let me find it, hang on. 4.5.
3	A Do you mean Section 4.5?
4	Q Yes, Section 4.5.
5	A Well, my sections go from 4.4 to 5, so I'm not
6	following you.
7	MR. HATCH: May I approach with my copy to make sure
8	his copy is the same as mine?
9	CHAIRMAN JABER: Yes. And, Mr. Hatch, I'm looking at
10	Page 6 of the document you handed out, and Page 6 of the
11	document goes from 4.4 to 5. Now, maybe you are looking at a
12	whole different section. Does that help you?
13	MR. HATCH: No. The front page of the document looks
14	like that. Power frame. There are several documents in the
15	folder, I apologize.
16	THE WITNESS: Oh, I'm sorry. I didn't see the other
17	document.
18	MR. HATCH: I guess for the record to be really
19	clear, this would be a section from BellSouth's internal
20	standards titled TR73503-10. It is identified in the upper
21	right-hand corner on the face, Issue G, October 1997.
22	CHAIRMAN JABER: Okay. And you are looking at Page
23	2, Section 4.5.
24	MR. HATCH: Right.
25	CHAIRMAN JABER: Do you have that, Mr. Milner?

1	THE WITNESS: I have that, yes. Thank you.
2	MR. HATCH: I probably ought to go ahead and get this
3	marked for identification, Madam Chairman, while we're at it.
4	CHAIRMAN JABER: This is Confidential Exhibit 15.
5	And, Ms. White, we tell me what to title it so that I preserve
6	the confidentiality.
7	MS. WHITE: Well, we could just call it technical
8	reference, BellSouth Technical Reference 73503-10.
9	CHAIRMAN JABER: So identified as Exhibit 15,
10	confidential.
11	(Exhibit 15 marked for identification.)
12	BY MR. HATCH:
13	Q Now that we are all talking on the same document
14	hopefully. Looking at Paragraph 4.8, I guess, is the way I
15	want it to be?
16	A 4.8. Okay.
17	Q Now, that indicates the maximum size of a protection
18	device, is that correct?
19	A Of a secondary, yes. Of a secondary fuse, yes.
20	Q Right. And would that be a higher ratio than what
21	your 3-to-1 ratio is that we talked about before?
22	A That is, yes.
23	Q And so that your 3-to-1 ratio isn't strictly adheren
24	to this standard, is that correct?
25	A No. I will note that this was issued in 1997 and

1	there hav	e been changes since then.
2	Q	And we will talk about that in a little bit. Now, if
3	you will	turn to your direct testimony on Page 7.
4	A	Okay, I'm there.
5	Q	If you look at the bottom where it says Lines 19
6	through 2	4, and it says there that BellSouth provides power at
7	the ALEC'	s request from the BDFB in increments as low as 10 all
8	the way u	p to 100 amps, is that correct?
9	A	I'm sorry, I'm not did you say on Page 7 of my
10	direct?	
11	Q	Page 7 of your direct.
12	А	I'm sorry, I was in my rebuttal. I apologize.
13	Q	I know, I do it all the time.
14		COMMISSIONER BRADLEY: Which line?
15		CHAIRMAN JABER: Mr. Hatch, ask your question again,
16	because I	think we had trouble hearing it, as well. You were
L7	trying to	direct the witness to Page 7.
18	BY MR. HA	TCH:
L9	Q	Page 7, Lines 19 through 23. It indicates there that
20	BellSouth	provides power from its BDFB in increments from as
21	low as 10	all the way up to 100 amps.
22	Α	It says that, yes.
23		COMMISSIONER BRADLEY: Is that in his direct
24	testimony?	?
25		MR. HATCH: That is in his direct testimony, that is

1 correct. 2 COMMISSIONER BRADLEY: Okay. 3 BY MR. HATCH: 4 Now, prior to this change you would offer power up to Q 5 60 amps. is that correct? 6 Α That is right. 7 What was the reason for that change? 8 Α Well, primarily we found a way, or the vendor found a 9 way to use a different fuse type on the BDFB than had been used 10 heretofore. 11 Now, if an ILEC used a 100-amp fuse, would it not 0 violate the coordinated shutdown standards that we talked about 12 earlier where the downstream fuse is one-third the size of the 13 upstream fuse? 14 15 I'm sorry, I didn't follow your question. Could you Α 16 ask me again. 17 If a CLEC wants a 100-amp fuse off the BDFB, Yes. 0 18 you will supply that? 19 Α Yes. 20 Now, BellSouth at its power board will have a circuit Q 21 breaker of 225 amps that feeds that BDFB, is that correct? 22 Α That is correct. 23 Q Now, if a CLEC has a 100-amp fuse and you have got a 24 225-amp breaker on the power board, doesn't that violate that 3-to-1 ratio that we talked about earlier with respect to your 25

A No. At the risk of giving a fairly complicated answer, the ratios are different by the type fuse. The 3-to-1 ratio that I mentioned earlier refers to so-called TPS fuses. A lower ratio is appropriate for TPL type fuses.

Q And so it is the fuse type that creates that ratio, but these are reflected anywhere in your standards at this point?

A Well, I will answer your first part, yes. The ratio is a function of the fuse type, and I didn't hear the second part of your question.

Q That your current standards don't reflect this change in fuse technology?

A This document does not, that is correct.

Q Now, could you have a larger fuse on your power board than 225?

A Yes, physically larger fuses can be accommodated at the power board. In light of what happened in Hinsdale, Illinois, we decided that that was a bad practice and decided to limit it to 225-amp fuses.

Q And Hinsdale was not a problem of a fuse failure so much as it was a problem of poor workmanship on tightening lugs on an H-tap, is that correct?

A Well, I think it was really a combination of both.

The poor workmanship exposed a potential problem in a condition

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called arcing, which is what ultimately started the fires. 1 2 Now, based on your coordinated shutdown and the ratio 3 of fuse sizing, could a CLEC have a 150-amp fuse on your primary power board? 4 5 Not on one single feed, no. 6 0 And why is that? 7 Because of the relationship between -- well. because Α 8 of the requirements for coordinated shutdown. 9 If I had a -- for example, take AT&T as an example. AT&T puts it own BDFB. It fuses that BDFB at 50 amps, or even 10 11 40 amps just to be clear. Even using your 3-to-1 ratio, then I 12 could still utilize a 150-amp fuse on the main power board? 13 Α That is correct. 14 0 But BellSouth doesn't do that because that is not its 15 practice, is that correct? 16 I think we are getting confused. Are we talking Α 17 about the main power board? 18 0 On the main power board you will not put in a 150-amp fuse on the main power board? 19 I don't know that there is such a thing as one 20 Α 21 150-amp fuse, but we will put fuses up to 225 amps on a single 22 feed. 23 Now, that is in a BDFB, is that correct? 0 24 Yes. Α 25 0 Now, on the main power board if AT&T puts in its own

1	BDFB	
2	Α	Okay.
3	Q	it has no choice under BellSouth's current
4	practices	except a 225-amp fuse?
5	A	Correct.
6	Q	Even though it could based on what it has its BDFI
7	use fused	at, could use a lower fuse on the primary power
8	board?	
9	A	That is correct.
10	Q	Now, based on your policy of charging by fused amps,
11	then what	happens is I only need a 150-amp fuse, but you are
12	charging r	me for 225, is that correct?
13	A	If you take it from the power board. But you could
14	take your	same BDFB and attach it to a BellSouth BDFB and buy
15	smaller in	ncrements of power.
16	Q	Now turn over to Page 8 of your direct testimony.
17	A	Okay, I'm there.
18	Q	On Line 14 you make reference to the National
19	Electrical	Code?
20	А	Yes.
21	Q	Is it your contention there that the National
22	Electric (	Code requires a 225-amp fuse?
23	А	No. What the code requires is coordinated shutdown.
24	Q	And so that 225-amp fuse is not dictated by the code
25	one way or	the other as long as the relationship between your

1	upstream and downstream fuses remains at a 3-to-1 ratio?
2	A If you only look at that in isolation, then you would
3	come to that conclusion. If you look at the question of what
4	the maximum fuse size ought to be and, again, referring back to
5	the Hinsdale incident, then you use both of those criteria.
6	Q Are you familiar with a document that is titled
7	electrical system coordination primer for collocation?
8	A Yes.
9	Q Okay. I'll be handing that document out.
10	MR. HATCH: Madam Chairman, could I request a number
11	for identification.
12	CHAIRMAN JABER: Get it distributed first, and
13	then you are not done with this document, with this folder?
14	MR. HATCH: Not entirely. I may not be.
15	CHAIRMAN JABER: Okay. Electrical system
16	coordination primer for collocation is identified as Hearing
17	Exhibit 16.
18	(Exhibit 16 marked for identification.)
19	BY MR. HATCH:
20	Q Do you know when this document was drafted?
21	A No. I have seen the current version fairly recently,
22	but I'm not sure when the first iteration was produced.
23	Q I think in response to discovery it was identified as
24	having been written in January of 2003. Would that be
25	accurate?

1	A That sounds right, yes.
2	Q When did you file your testimony, your direct
3	testimony would have been filed in December of 2002?
4	A That's right, yes.
5	Q And in our discovery request we asked you for support
6	for your coordinated shutdown and your fuse sizing and you
7	identified this document as support. How is it that this
8	document being drafted after you filed your testimony supports
9	the testimony that you filed? It appears as though you were
.0	relying on a document that didn't exist.
1	A Well, I may have been looking at draft exhibits. I'm
.2	not sure precisely what date this document was released. Also
13	my testimony was written in conjunction with other subject
L4	matter experts at BellSouth who contributed to this document.
L5	Q Could you turn over to Page 5 of 10?
L6	A Yes, I'm there.
L7	Q And there is a discussion in the middle of that page
L8	dealing with the National Electrical Code, is that correct?
L9	A Yes.
20	Q Now, the National Electrical Code in its scope
21	statement exempts central office equipment, is that correct?
22	A It does. Although state PSCs in some cases have
23	created their own rules which require the code, such as here in
24	Florida.
25	Q But the National Electric Code itself doesn't apply?

The national code exempts telecommunications 1 Α 2 equipment. 3 Right. Now, there is a statement there basically in 0 4 a discussion regarding the potential for that exemption being 5 eliminated, and it says the wanton disregard of the NEC by the 6 CLEC community. Do you see that? 7 Α I see it. 8 Do you have any evidence or can you tell us for 0 9 BellSouth that that statement is accurate? 10 I will agree with you it is a fairly inflammatory Α 11 statement. I would have not made that statement, but unfortunately we have had incidences where the practices of 12 CLECs in our central offices did not conform to our own 13 14 practices and we had to step in and ask for changes to be made. 15 0 Now, down in there later in the substantiation paragraph there, do you see that? 16 17 I see it, yes. Α 18 It makes the statement there that almost every office 0 is no longer under the exclusive control of the communications 19 20 utility. Do you see that? 21 Α Yes. 22 Would you consider that statement to be accurate? Q 23 Yes and no, I guess. Α 24 Q Was that a yes or was that a no? 25 It was a yes and no. I mean, ultimately, BellSouth Α

1	according to the rules that this Commission has adopted and the
2	FCC rules has given certain rights exclusively to BellSouth.
3	For example, determining where in a central office collocation
4	will occur. In other cases those same regulatory agencies have
5	given some, you know, some amount of participative control to
6	ALECs. So it is not exclusively one way or the other.
7	COMMISSIONER DAVIDSON: Chairman, I have a question
8	here if I may ask.
9	CHAIRMAN JABER: Commissioner Davidson.
10	COMMISSIONER DAVIDSON: And you may have covered this
11	and I apologize if I missed it. Who prepared Hearing Exhibit
12	16?
13	THE WITNESS: Some of our subject matters experts at
14	BellSouth. I did not.
15	COMMISSIONER DAVIDSON: So this is a pure BellSouth
16	document?
17	THE WITNESS: It is, yes.
18	COMMISSIONER DAVIDSON: And when was it prepared?
19	THE WITNESS: Well, it was issued, I believe, the
20	early part of this year, January or so.
21	COMMISSIONER DAVIDSON: January you say of 2003?
22	THE WITNESS: Yes, sir.
23	COMMISSIONER DAVIDSON: Thank you.
24	BY MR. HATCH:
25	Q Now, if you will turn over to actually I will be

<sub>1</sub>		:th Dana 7 of 10 and also 0 of 10 Dut turn to 0 of
1	dealing w	ith Page 7 of 10 and also 8 of 10. But turn to 8 of
2	10 for the	e moment?
3	A	Page 8 did you say?
4	Q	Page 8, yes, of 10.
5	А	Okay, I'm there.
6	Q	Now, there about midway down it talks about the
7	3-to-1 ra	tio that we mentioned before, is that correct? Do you
8	see that?	
9	A	Yes.
10	Q	And that discussion throughout that whole page
11	basically	is of the various fuse types that now essentially
12	because o	f their time current characteristics will comply with
13	coordinate	ed shutdown requirements, is that correct?
14	A	Yes, you are correct.
15	Q	And that is what allows you to offer up to a 100-amp
16	fuse on a	BDFB, is that correct?
17	А	That's right.
18	Q	Because that 100-amp fuse, that TPL fuse has a
19	essential	ly its mechanical characteristics give it a 2-to-1
20	ratio?	
21	A	It is more tolerant of small or not small, but
22	short ove	rloads.
23	Q	Now, go to Page 9 of your direct testimony.
24	A	Okay.

Q Now, at Line 5 you make the reference there that

25

1	there is a 60-amp fuse in a BDFB serving equivalent bays and
2	that you need at least a 180-amp stream device to serve that
3	BDFB?
4	A Yes.
5	Q And that is because of your 3-to-1 ratio, right?
6	A That's right. This whole paragraph is talking about
7	TPS fuse types, yes.
8	Q Okay. Now, if you and that is because the TPS
9	fuse type is different from your old NON fuse type, right?
10	A That's right, yes.
11	Q Now, if you had a 60-amp NON fuse, then would you
12	have to comply with that 400 percent requirement, the old
13	4-to-1 ratio in your standards?
14	A Yes. If you were using NON type fuses, yes.
15	Q Look at Line 8 on Page 9 for just a moment.
16	A Line 8, did you say?
17	Q Line 8, that is correct.
18	A All right.
19	Q And it says common support equipment require a 40-amp
20	drain. That would be a List 2 drain, would that be correct?
21	A Yes.
22	Q Okay. Going to Page 12 of your direct testimony.
23	A Okay.
24	Q Now, there it says, again, the protection device is
25	sized at one and a half times the anticipated drain, which

1	would be the List 2 drain, correct?
2	A Yes.
3	Q And then you explain how you compensate in your power
4	charge for the fuse versus the List 2 drain by multiplying that
5	times .6667, is that correct?
6	A Correct, yes, to mathematically correct for that.
7	Q Now, when you make that adjustment, it adjusts it
8	down to the List 2 drain, isn't it true that the ALEC on normal
9	operations will only experience or typically will experience
10	List 1 at most?
11	A That is correct.
12	Q And List 1 is always less than List 2?
13	A Yes.
14	MR. HATCH: The pregnant pause is because I am
15	killing things that have already been done, so I'm saving us
16	all time.
17	CHAIRMAN JABER: Thank you.
18	BY MR. HATCH:
19	Q Now, go down to Line 16. Starting at the end of Line
20	15 and onto to 16 you make the statement that the ALEC is not
21	paying for any more power capacity than what the equipment
22	requires. Do you see that?
23	A Yes.
24	Q Now, at a normal operational scenario the steady
25	state load will be at most a list 1 drain is that correct?

1	A It will be close to that if not exactly that, yes.
2	Q And you are charging us a fused amp based on List 2
3	drain, which is larger than a List 1 drain?
4	A Yes.
5	Q So that statement isn't completely accurate?
6	A Well, I believe it is. What the statement says is
7	what the equipment requires. The equipment requires a power
8	feed that is sized at one and a half times those drains, so I
9	stand by the statement.
10	Q The equipment will not, under normal circumstances,
11	draw any more than List 1, but we are paying for List 2 which
12	is larger?
13	A Correct. Because to conform with safety codes, like
14	the NEC, you will size power feeders larger than the steady
15	state drain that a piece of equipment actually has at a moment
16	Q And at List 2 the equipment will actually fail, is
17	that correct?
18	A At some point at that level or above that level, yes
19	Q Now, move on down to Line 22 for me, please.
20	A I'm there.
21	Q Okay. It says there are no meters attached to
22	individual power circuits from a BDFB, is that correct?
23	A That's what it says, yes.
24	Q That is the metering that we kind of talked about a
25	little bit earlier in this discussion?

1	A rest recently that could show accumulated usage	ΟI
2	power on that lead, yes.	
3	Q I have another document to hand out.	
4	A Thank you.	
5	Q Now, before we get to this document I'm sorry,	, you
6	are reading it, so if you want to	
7	A I am familiar with it, yes.	
8	Q Is it correct that BDFBs are equipped with meters	s so
9	that you can check the power consumption on a BDFB?	
10	A You can check it an instantaneous power demand at	: the
11	BDFB with the metering that is there. What you cannot chec	k is
12	the amount of usage over time.	
13	Q It is not a cumulative meter?	
14	A Exactly. It is not like the meter on the side of	=
15	your house that has little clocks that show you how much po	wer
16	has been consumed.	
17	Q You are aware, of course, that the State of Tenne	ssee
18	has required BellSouth to meter power on a usage basis?	
19	A Yes, I am familiar with that.	
20	Q And Georgia has recently done the same thing, is	that
21	correct?	
22	A That is correct.	
23	Q Are you aware that Illinois has also done that?	
24	A I heard that this morning. I was not aware of th	nat,
25	no.	

Α

Well, per device. I don't know if that is per CLEC

1	or not because there are limits to how much equipment can be
2	monitored by that one device.
3	Q Now, turning to this document
4	MR. HATCH: Madam Chairman, could I have a number for
5	identification, please? This would be BellSouth's response to
6	AT&T's Interrogatory Number 37.
7	CHAIRMAN JABER: And that will be identified as
8	Hearing Exhibit 17.
9	(Exhibit 17 marked for identification.)
10	BY MR. HATCH:
11	Q Now, this interrogatory response indicates that all
12	BellSouth central offices are equipped with power monitors that
13	are capable of measuring, storing current for all loads
14	connected to the power board, is that correct?
15	A Yes. At the aggregate amount, yes.
16	Q And so for each of your power boards you remotely
17	monitor essentially the electrical load on those boards?
18	A We have that capability, yes.
19	Q Do you do that today?
20	A I'm not sure who would. I don't know the answer to
21	that.
22	Q Now, this indicates that all of the monitors are
23	equipped for remote access. So that by remote access, would
24	that mean that an engineer sitting in his office, for example,
25	could access the monitors via computer from a data feed and

essentially review all of that information remotely? 1 2 With the right telemetry one might, yes. 3 Now, if AT&T has a BDFB, that BDFB would be fed by 0 4 one of your power boards, is that correct? Ultimately, either directly or through a different 5 6 BDFB. 7 And according to this interrogatory response, that 0 power board is equipped for monitoring today? 8 Yes, but what it is not capable of doing is splitting 9 out that monitored load by power feed and knowing exactly who 10 used what. It is at the aggregate level. 11 12 Explain to me what you mean by the aggregate level? Q 13 Well, the device, that monitor measures, you know, Α all the consumption at that power board. If that power board 14 15 serves a variety of different users, ALECs and BellSouth 16 combined, it doesn't split that out and say, BellSouth, you 17 used 10 percent of that and ALECs used 80 percent. It just 18 shows the aggregate, the total demand. 19 Go back to the document, the TR73503 for a moment, 0 please. 20 21 Α Okay. 22 Look at Paragraph 4.10. Q 23 Α Okay. I'm with you. Now, 4.10 says all breakers of 100 amperes or greater 24 0 25 must be 100 percent ampacity rated and be equipped with the

1	following. Now, Paragraph B under that says a shunt to
2	facilitate the remote reading of the drains associated with
3	that distribution unit, is that correct?
4	A Yes.
5	Q Now, if you turn over to 4.16?
6	CHAIRMAN JABER: Mr. Hatch, just because I don't know
7	what is and is not confidential in this document, is it okay
8	for you to be reading from it?
9	MR. HATCH: I am assuming, yes, because my
10	conversation with counsel for BellSouth said that while the
11	document shouldn't be in the public domain so that anybody
12	could pick up a copy of it, the basic content of the
13	information wasn't necessarily proprietary, and I was relying
14	on her to tell me when I was running astray.
15	MS. WHITE: He is all right so far.
16	CHAIRMAN JABER: Thank you.
17	MR. HATCH: And it won't go much further than the
18	next question.
19	CHAIRMAN JABER: That's fine, I didn't know. So what
20	was your next question?
21	BY MR. HATCH:
22	Q In 4.16, that one says that all fuses and circuit
23	breakers of greater than 100-ampere, except for the main
24	switch, such as a DMS, ESS, EWSD, which are switches, is that
25	correct?

1	Α	That is what it says, yes.
2	Q	And it says shall be monitored?
3	A	Correct.
4	Q	Now, if AT&T has its own BDFB and it feeds off of one
5	of BellSo	uth's power boards, it would be equipped with a
6	breaker o	f 225 amps, is that correct?
7	A	That's right.
8	Q	So according to your standards that breaker should be
9	monitored	today based on these standards?
10	А	Based on this standard, yes.
11	Q	Now, turning back to Exhibit 17 in your response to
12	AT&T's Fi	fth Set of Interrogatories, Number 37, the last
13	sentence	in the second paragraph says while power monitors are
14	not power	meters, they could be used to estimate power usage by
15	a busy ho	ur average current drain. Do you see that?
16	A	Yes.
17	Q	And so the monitoring capability that is there today
18	while not	a cumulative monitor, can be utilized to essentially
19	approximat	te actual usage, is that correct?
20	A	With some qualification, yes. If you want to sample
21	the usage	and the sample size is sufficient, then yes, you can
22	start to a	approximate the actual amount of power used. The
23	smaller t	ne sample size the less accurate that sampling
24	becomes.	
25 l	0	Does BellSouth routinely monitor all breakers of 100

1 amps and bigger in its offices today? 2 I don't know the answer to that. 3 Q Do your power engineers remotely monitor the 4 performance of your power plant in any fashion? 5 Α I don't know. 6 Doesn't it seem like that is something they should be 0 7 doing? 8 Well, your question was should they do it remotely or Α 9 not. They should be monitoring the drains on the power 10 equipment and they should be doing that routinely. Should they 11 be doing it remotely or not is a different question. 12 Wouldn't it be so much easier and more efficient to 0 13 do it remotely? 14 Α Not necessarily. 15 Even though your practices require it? 16 Α Well, the practices require that capability, yes. 17 What we are stuck with is practices that are -- we are looking at two or three different snapshots in time here. One as old 18 as 1997, and others that are just a few weeks or months old. 19 20 In a forward-looking TELRIC environment where you are 0 21 doing least cost, most efficient, wouldn't that suggest to you 22 that remote monitoring capability would be the most efficient? 23 Α Yes, so long as those costs are recognized in the 24 pricing formula itself, yes.

FLORIDA PUBLIC SERVICE COMMISSION

MR. HATCH: One quick moment. I think I can

25

1	eliminate a whole section here.							
2	CHAIRMAN JABER: Go ahead.							
3	MR. HATCH: I will be handing out another document							
4	here if I could get a number, please, as soon as you get it.							
5	This is actually an interactive exhibit. You will enjoy this							
6	one, I hope.							
7	CHAIRMAN JABER: Okay. I missed what you said, Mr.							
8	Hatch, about this exhibit.							
9	MR. HATCH: It will be an interactive exhibit.							
10	CHAIRMAN JABER: Okay. So we don't need to try to							
11	identify it right now.							
12	MR. HATCH: I would mark it for identification. It							
13	would be the power example for BellSouth would be the title.							
14	CHAIRMAN JABER: BellSouth Power Example, Hearing							
15	Exhibit 18.							
16	(Exhibit 18 marked for identification.)							
17	BY MR. HATCH:							
18	Q What this is designed to be is a simple example of							
19	what a CLEC might do in its collocation space currently.							
20	A Okay.							
21	Q And the box that says where you see the shelf							
22	equipped with cards and the equipment designation, consider							
23	that to be a bay, one bay in a collocation spot.							
24	A Okay.							
25	Q Now, as you can see, the first shelf would be							

1	equipped v	with cards. In this example, the second shelf would							
2	have a she	elf, but no cards are there yet, anticipating growth,							
3	and the se	econd two spaces would be vacant awaiting future							
4	equipment	to be installed.							
5		Now, based on a manufacturer's List 1 drain or							
6	List 2 drain, List 2 drain would be what we would report to you								
7	for power	, is that correct?							
8	Α	Yes, you would report that to us.							
9	Q	So, based on the numbers here for List 1 and List 2,							
10	what would	d be the reported drain?							
11	Α	The reported drain would be 10 amps.							
12	Q	Okay. You can fill in that blank with 10.							
13		$\ensuremath{MS}.$ WHITE: I'm sorry, I just didn't hear that. The							
14	reported o	drain would be what?							
15		THE WITNESS: Would be 10 amps.							
16	BY MR. HAT	TCH:							
17	Q	And what would be the usage?							
18	Α	The total usage?							
19	Q	Yes, for the first shelf.							
20	Α	Just for the first shelf would be 4 amps.							
21	Q	And there is no usage on any of the others. One is							
22	not equipp	ed with cards and there isn't any equipment there?							
23	A	In your example, yes.							
24	Q	Correct. Now, based on the reported drain of 10,							
25	what size	power cable would be ordered?							

1	A	I can't determine that because I don't know the
2	length of	the power cable.
3	Q	What size fuse would you order?
4	А	A fuse of 15 amps would be provided.
5	Q	Right. Now, this is all premised on this piece of
6	equipment	being served by a BellSouth BDFB.
7	Α	Okay.
8	Q	Now, if this same piece of equipment were being
9	served by	an well, let me step back. And so based on
10	BellSouth	's current billing policy, you would be billing us 15
11	times .660	67, is that correct?
12	А	Yes. Times the per amp rate, yes.
13	Q	Whatever the relevant rate is.
14	A	Correct.
15	Q	So if we assume just for let me see if the math is
16	correct.	I should have picked easier numbers so that the
17	numbers w	ould work out better. That would be 10. We would
18	get 10	amps is what we would be billed for, is that correct?
19	A	Yes.
20	Q	Now, if AT&T took this same example and it was served
21	from an A	T&T BDFB, then the BDFB that belongs to AT&T would be
22	fused at 2	225 amps, correct? We had talked about that earlier.
23	A	If it were attached to the power board, yes.
24	Q	Attached to the power board. Now, based on this
25	example, a	assuming an AT&T BDFB, then we would be billed for 225

1 amps?

A That's right.

Q Now, the usage in the first example served off a BellSouth BDFB is exactly the same as the usage in the AT&T BDFB example.

A Okay.

Q But the cost to AT&T is dramatically different. Would you agree with that?

A Yes, given AT&T's choice of powering that from the power board, yes.

Q Now, look at Page 16 of your direct testimony.

A Okay, I'm with you.

Q Now, at Lines 5 through 8, you make the statement that BellSouth is obligated to provide for the ALECs -- or fused amperage is what BellSouth is obligated to provide for the ALEC's use, is that correct?

A Yes.

Q That does not mean that you are required to bill on fused amperage, is that correct?

A It doesn't mean that. I mean, an economically rational would try to recover its costs, but it doesn't mean we are required to do that.

Q Let's talk about that for a second, because we are sort of straying into the second half of this proceeding and the cost study part, but we have made reference to recovery of

costs and so forth and I want to talk about that a little bit. 1 2 In general terms, when you construct the cost study for 3 collocation, you aggregate essentially all of your costs in 4 providing power, and that would be -- your AC power is one component we discussed earlier? 5 6 Α Yes. 7 You would have batteries, you would have rectifiers, 0 8 and some internal cabling to your primary power boards, is that 9 correct? 10 Α Yes. 11 Now, all of that is rolled up into a number Q 12 that is then spread across the total number of amps produced by 13 the plant? 14 Yes. There are other devices, as well, the backup 15 generator and such. But, yes, all of that is relevant. 16 The generator, I forgot to include that. And then Q all of that is recovered on a per amp basis? 17 18 Α That's right, yes. 19 So now if I pay you for 225 amps, or if I pay you for 0 20 one amp, every amp I pay you is recovering all the components 21 of your cost, and the only difference is the time over which you recover them, is that correct? 22 23 Α Yes.

capacity basis you are not deprived of any cost-recovery, it is

So if you bill on a usage basis instead of a fused

24

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Q

1	just you don't get it as fast as you might otherwise desire, is								
2	that correct?								
3	A Not entirely, no.								
4	Q What cost are you deprived of?								
5	A You are deprived of the time value of your money								
6	between when BellSouth installs the investment and when the								
7	ALEC starts to use it.								
8	Q Look at your rebuttal for just a second.								
9	A Okay.								
10	Q I'm getting actually close to the end, believe it or								
11	not. Hopefully. Page 4. I just have one quick question here.								
12	A All right, I'm with you.								
13	Q Where it says or down at Lines 9 through 11 you								
14	make the statement anything higher than 60 amps would require a								
15	combination of various sized fuses to achieve that desired								
16	total. Do you see that?								
17	A Yes.								
18	Q How would you accomplish that, what would that be?								
19	A What do you mean? Well, you would use more than one								
20	fuse device on a given power feed.								
21	Q To create a multiple to create a total fuse size								
22	increment, is that correct?								
23	A Yes. And so long as you don't mix and match fuse								
24	types, you're okay.								

Let me show you a copy of a piece of the National

25

Q

1	Electrical Code 240.8, do you have that?								
2	A Well, actually this is my own copy. This is not the								
3	2002 version.								
4	Q I've got a 2002. I'm not sure that this will have								
5	changed.								
6	A I don't know they would. What was the reference								
7	again?								
8	Q 240.8.								
9	A Okay.								
10	Q In my copy it is titled fuses or circuit breakers in								
11	parallel. Do you see that?								
12	A Yes.								
13	Q Now, it says at the bottom of that section,								
14	individual fuses, circuit breakers, or combinations thereof								
15	shall not otherwise be connected in parallel. Do you see that?								
16	A Yes.								
17	Q My question is if you do combinations of fuses, as								
18	per your testimony, doesn't that run afoul of this provision in								
19	the National Electric Code?								
20	A In my view, no. Not so long as the fuse holders are								
21	all manufactured to accommodate the same fuse type.								
22	Q Could you explain that a little bit for me?								
23	A Sure. The different fuses or different fuse types								
24	have different holders. And so long as the same fuses were								
25	used in the same kind of holder, that is the appropriate fuse								

was used in the right kind of holder, you can add the fuses together to reach the desired fusing level. And in my view that does not constitute a violation.

COMMISSIONER DEASON: I'm sorry, you said that does not constitute what?

THE WITNESS: Does not constitute a violation of the NEC.

## BY MR. HATCH:

- Q We are getting close to the end now. So, Page 10 of your rebuttal. I'm going to talk about AC power for just a second.
  - A Ten in the rebuttal, did you say, Mr. Hatch?
- Q Yes. That is the issue dealing with an ALEC's desiring to have AC power.
  - A I'm there, yes.
- Q You make the statement essentially that CLECs shouldn't have an AC power feed to their collo space for purpose of converting to DC power for their equipment, is that correct?
  - A Yes.
  - Q And could you explain why you believe that?
- A Sure. First, there are raised some safety issues. These devices that convert from AC to DC release heat, and so generally all of our rectifiers, which is the device that does that, are put in one place. And those power rooms are not in

the middle of the equipment line-up, so that is the first 1 2 3 4 5 6 7 8 9

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reason is that there are some safety issues raised. Second, I don't know that it is required, because we already provide DC feeds, and our DC feeds are backed up with batteries and generators. To accomplish that same result or to have that same level of redundancy the ALEC would have to invert the AC to DC and would also have to have batteries for temporary losses of commercial power and other sustainable means, such as generators if they wanted longer term backup in the case of loss of AC.

Now, assume this. A CLEC wants to convert AC power 0 to DC in its space and it can purchase a commercially available AC to DC converter to power his DC equipment in his space.

Α Okay.

And he doesn't want any kind of battery, doesn't want 0 any kind of power plant, he just wants an AC to DC converter. Would that be objectionable to you?

Α Not so long as you can do that in a way that conforms with the electrical codes and safety codes.

Isn't it correct that BellSouth is, in fact, doing 0 that for a CLEC in Louisiana?

Α That is my understanding, yes.

COMMISSIONER DAVIDSON: Chairman, I have one question on this line of guestioning. Does BellSouth have any AC powered equipment in their own central office space?

THE WITNESS: Yes, sir, inside our central offices, but the equipment that converts from AC to DC we put in our power rooms which are separate and apart from where the rest of the equipment is housed. They are either on a separate floor, sometimes in the basement, or at least in a separate part of the floor.

COMMISSIONER DAVIDSON: Thank you.

BY MR. HATCH:

Q Going back to the AC power versus your facilities that we talked about at great length this morning. In terms of billing from the space ready date for power, your reasoning was is you have made the capital investment and so, therefore, you should start your recovery immediately, is that correct?

A Yes.

Q Okay. In developing the cost study for this proceeding, was there built into it a utilization factor that accounts for the fact that your power plant will not be used at 100 percent all the time?

A I don't know, I doubt it.

Q Why would you not use the utilization factor?

A Well, because the utilization factor is going to change to influences outside of BellSouth's control. That utilization factor is a function of when the ALEC puts its equipment in, and when it powers it up, and how much equipment it puts there, and decisions that BellSouth has no direct

control over.

Q If you don't have a utilization factor in your cost study that yields, you know, whatever rate yields with that, then if you don't run your power plant at 100 percent all the time, then do you not risk underrecovery of your investment?

A Well, I am not the cost witness, and I didn't do the cost study, but I suppose, yes, I will agree with you that if there is not a utilization factor that is the inverse of what is actually being used, then that is a possibility. My understanding is that since we are presuming that all that you order is being used, then we are not underrecovering, we are recovering.

Q So if there is a utilization factor in there, just assuming that there is, then that difference between space ready date and when we actually start using power should be accounted for in the utilization factor?

MS. WHITE: Chairman Jaber, I'm going to object to any more questions along this line. First of all, I think it calls for speculation, because Mr. Milner has already said he is not the cost witness. And, second of all, I think we are going -- we have gone down this road, and I think we keep going further and further to what is going to be the subject of the hearings in November. So I would object to anymore questioning along this line.

MR. HATCH: Madam Chairman, there has been extensive

discussion about the time value of money, and he has got capital investment and he needs his money now versus waiting until we start drawing power. I think this is well within those bounds.

CHAIRMAN JABER: Ms. White, I have to tell you, I agree. I'm going to overrule your objection. This witness has time and time again, because I have heard you say as long as the costs are allowed there is the incremental time value of money, so I will allow the question. But, Mr. Hatch, I do need you to wrap up this line.

MR. HATCH: It's almost there.

CHAIRMAN JABER: Promises, promises. You have said that now.

MR. HATCH: Yes, but now I have a blank sheet to show you. We are almost there.

THE WITNESS: Could you repeat your last question, please.

## BY MR. HATCH:

Q I hate it when I forget a good question. I guess my question is assuming the cost study includes the utilization factor, then that utilization factor would account for the time value of money and the lack of your recovery between the point when space ready date is and you begin billing for actual usage?

A Well, that is a possibility. Let me explain just

1	very briefly that that would presume that all ALECs generally
2	start to use their equipment in the same time frame, that they
3	install it and start using it at the same general time frame;
4	that is, one ALEC doesn't wait a year and another one does it
5	in two days.
6	Q Now, one wrap up just to clarify something that
7	occurred to me from earlier in one of our conversations. In
8	terms of within a BellSouth central office when work is
9	performed, be it cabling, or installation of CLEC equipment,
10	all of that is done by BellSouth certified vendors, is that
11	correct?
12	A That is correct.
13	MR. HATCH: That's all I've got.
14	Thank you, Madam Chairman.
15	CHAIRMAN JABER: Before I get to staff, Ms.
16	Masterton, I was reading through the testimony again, and it
17	occurred to me you are in this docket as an ALEC and an ILEC.
18	I hope I haven't been leaving you out in terms of
19	cross-examination. I have been depending on you to tell me.
20	MS. MASTERTON: No, that's right, I would have said
21	something. Thank you, though.
22	CHAIRMAN JABER: Staff.
23	CROSS EXAMINATION
24	BY MR. TEITZMAN:
25	Q Good afternoon, Mr. Milner.

A Good afternoon.

Q I have been waiting patiently to ask you some questions. I'm afraid I only have three left. They are quite scattered.

I would like to start off with your direct testimony, the last sentence of Page 12 as it continues on to the top of Page 13. There you state that metering of central office power to each ALEC's collocation arrangement is not economically feasible for an ALEC, assuming that the ALEC is engineering its power circuits to match its equipment demands.

A Yes.

Q In your opinion, under what circumstances, if any, would it be economically feasible for a CLEC to meter central office power delivered to a CLEC's collocation arrangement?

A Okay. It would be -- it would be feasible if the cost of the monitoring equipment, the measuring device is the meter readers, the changes to the billing systems, and all of that was less than the differential that they might be paying for the difference between the expected level and what they are using at a given moment or day.

Q Thank you. To your knowledge, is BellSouth currently metering DC power for any CLECs?

A I don't think there are any arrangements like that in place. We are negotiating with a couple of CLECs. ALECs, rather.

1	Q And where would that be located, what state?
2	A One in Tennessee. The negotiations with the other
3	ALEC were not state specific, so potentially in any of our nine
4	states.
5	Q And my final question, in Florida does BellSouth
6	purchase power from electric company interruptible tariffs?
7	A I'm not positive either way.
8	CHAIRMAN JABER: I thought, Mr. Milner, when you were
9	describing I think in response to Commissioner Deason's
10	question earlier, I think it was Commissioner Deason, when you
11	were talking about agreeing to come off the grid for certain
12	periods of time during peak, I took your testimony to be that
13	you take advantage of the FPL interruptible rate.
L4	THE WITNESS: Yes. And I know we are doing that in
L5	Georgia. I'm just not sure if we are doing it here or not.
۱6	CHAIRMAN JABER: I see.
L7	MR. TEITZMAN: Thank you. No further questions.
L8	CHAIRMAN JABER: Commissioners, do you have
L9	questions? Commissioner Davidson.
20	COMMISSIONER DAVIDSON: Thank you. One question to
21	staff, and a follow-up question to the witness. To staff, if
22	you turn to Page 22 of the prehearing order, on Issue 4
23	BellSouth's position is that ILECs are not required to
24	accommodate requests for non-fiberoptic facilities to be placed
25	in the ILEC's entrance facilities unless the Commission

1 determines in a particular case that this placement is 2 necessary. 3 The first question, is that statement a proper and 4 thorough statement of the FCC rules in Dockets 96-98 and 5 91-141? 6 MS. KEATING: I'm sorry, Commissioner, you will have 7 to give us just a minute, if that is all right, to pull the 8 rule. 9 COMMISSIONER DAVIDSON: Okay. That is, and we can 10 come back to that. And I will ask the witness, I just have one 11 hypothetical question that Mr. Hatch basically stated, but I 12 would like to just make the record clear on this point. And 13 the hypothetical is if a CLEC sought an AC power feed to its 14 collocation space and agreed to pay the cost of installing that 15 power feed, would BellSouth have any objection to the CLEC 16 converting DC power to AC power, assuming such conversion was 17 done according to code and would not negatively impact 18 BellSouth's equipment? 19 THE WITNESS: No, we would have no objection to that. 20 COMMISSIONER DAVIDSON: Thank you. And with that, 21 Chairman --22 CHAIRMAN JABER: No other questions? 23 COMMISSIONER DAVIDSON: -- no other questions. 24 CHAIRMAN JABER: Ms. Keating, if you could just let 25 us know when you are ready, we will get back to that answer.

1	Commissioners, do you have any other questions?
2	Okay. Redirect.
3	MS. WHITE: Yes, I have just a couple of questions o
4	on redirect.
5	REDIRECT EXAMINATION
6	BY MS. WHITE:
7	Q Mr. Milner, on Page 9 of your direct testimony,
8	Line 8, I think this was in answer to a question by Mr. Hatch.
9	You all were discussing the 40-amp drain and the 60-amp
10	protection device at the BDFB?
11	A Yes.
12	Q It's on Line 8 of Page 9 of your direct.
13	A Right.
14	Q Is the 40-amp drain, the List 1?
15	A No, that would normally be List 2.
16	Q The List 2?
17	A Yes.
18	Q And 60-amp protection device would be
19	A Would be one and a half times that amount.
20	Q Okay. On Page 12 of your direct testimony, Line 3,
21	you talk about how fuse type protection devices are sized and
22	then how they are billed. When you say on line it is Page
23	12, Line 3.
24	A I'm there, yes.
25	Q When you say that they are sized at one and a half

	Trimes the anti-cipated drain, are you speaking or drain one or
2	drain two?
3	A Again, I am referring to two. It says operated at
4	its full capacity.
5	Q Okay. And the last question I had was actually a
6	nonpower question, and it is back to a question Mr. Watkins
7	asked you about copper entrance facilities. Are copper
8	entrance facilities required to provide DSL service?
9	A No, there are other ways of providing it rather than
10	all copper loops.
11	MS. WHITE: Thank you. And that's all I have.
12	CHAIRMAN JABER: Let's discuss exhibits. Covad
13	Exhibit 14, you agreed not to admit it into the record.
14	MR. HATCH: AT&T would move 15, 16, 17, and 18.
15	CHAIRMAN JABER: Hang on a second. Correct, Covad,
16	Exhibit 14 is the Covad hypothetical exhibit. You agreed not
17	to move it into the record, is that correct?
18	MR. WATKINS: Yes, Madam Chairman.
19	CHAIRMAN JABER: Okay. And AT&T Exhibit 15 is the
20	confidential exhibit?
21	MR. HATCH: That is correct.
22	CHAIRMAN JABER: Without objection, Exhibit 15 is
23	admitted into the record. Exhibits 16, 17, and 18 are public
24	documents, and without objection Exhibits 16 through 18 are
25	admitted into the record.

Mr. Milner, thank you for your testimony. 1 2 (Exhibit 15 through 18 admitted into the record.) 3 THE WITNESS: Thank you, Madam Chair. 4 CHAIRMAN JABER: That takes us to Edward Fox. 5 Commissioner Davidson. I don't know if your --6 MS. WHITE: May Mr. Milner be excused? 7 CHAIRMAN JABER: Hang onto that thought. I was just 8 asking Commissioner Davidson. I don't think your question 9 contemplated that Mr. Milner had to stay here? 10 COMMISSIONER DAVIDSON: Correct. Chairman. CHAIRMAN JABER: So, Mr. Milner, you may be excused. 11 MS. KEATING: Madam Chairman --12 13 CHAIRMAN JABER: Ready? 14 MS. KEATING: Well, I think so. We are having a little bit of difficulty finding that exact wording in the 15 16 rules themselves. As those orders have been codified in the 1.7 rules they don't -- they aren't phrased quite that way, let me 18 put it that way. I can read you the pertinent provisions. 19 Would that be of assistance? 20 COMMISSIONER DAVIDSON: I don't need to have the 21 statement read. I had a follow-up question, but it is really 22 for staff and they can address this in the staff 23 recommendation. One, I wanted to know the scope of those two proceedings, and I'm not surprised that they may be couched 24

somewhat differently than they are actually drafted. Parties

25

1 || sometimes do that.

But, second, have those provisions been applied in this state, or in other states to research the result that BellSouth contends they should reach? And that is really a question I think that can be addressed going forward in the recommendation as Legal proceeds.

CHAIRMAN JABER: And do you want parties to mention in the briefs, as well, briefs and the rec?

COMMISSIONER DAVIDSON: Good idea. Thanks.

CHAIRMAN JABER: I think everyone understands
Commissioner Davidson's question. Remind me what issue that
was, Commissioner.

COMMISSIONER DAVIDSON: Chairman, it was Issue 4, the BellSouth position on accommodating requests for non-fiberoptic facilities, and it was BellSouth's statement that the request -- or ILECs are not required to accommodate requests unless the Commission determines in a particular case that the placement is necessary. And my question went to the precise holding of the two dockets that were cited and whether those dockets have been applied using BellSouth's interpretation in any other state proceedings.

CHAIRMAN JABER: Ms. White, I think you have an opportunity to be more clear in your brief. And, staff, you have heard the request to address it in the recommendation.

MS. KEATING: Certainly, Madam Chairman,

1	Commission	ner.							
2		CHAIRMA	N JABER:	Thank	you.				
3		(The tr	anscript	contin	ues in	sequence	with	Volume	3.)
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1 2 STATE OF FLORIDA 3 CERTIFICATE OF REPORTER 4 COUNTY OF LEON 5 I, JANE FAUROT, RPR, Chief, Office of Hearing Reporter 6 Services. FPSC Division of Commission Clerk and Administrative Services, do hereby certify that the foregoing proceeding was heard at the time and place herein stated. 7 IT IS FURTHER CERTIFIED that I stenographically 8 reported the said proceedings; that the same has been 9 transcribed under my direct supervision; and that this transcript constitutes a true transcription of my notes of said 10 proceedings. I FURTHER CERTIFY that I am not a relative, employee, 11 attorney or counsel of any of the parties, nor am I a relative or employee of any of the parties' attorney or counsel connected with the action, nor am I financially interested in 12 13 the action. DATED THIS 19th day of August, 2003. 14 15 16 Chief, Office of Hearing Reporter Services FPSC Division of Commission Clerk and 17 18 Administrative Services (850) 413-6732 19 20 21 22 23 24 25