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Legal Department

December 19, 2002

Mrs. Blanca S. Bayó Director, Division of Records and Reporting Florida Public Service Commission 2540 Shumard Oak Boulevard Tallahassee, FL 32399-0850

## Re: Docket Nos. 981834-TP and 990321-TP (Generic Collocation)

Dear Ms. Bayó:

Enclosed please find an original and fifteen copies of BellSouth Telecommunications, Inc.'s Direct Testimony of A. Wayne Gray and W. Keith Milner, which we ask that you file in the captioned matter.

A copy of this letter is enclosed. Please mark it to indicate that the original was filed and return the copy to me. Copies have been served to the parties shown on the attached Certificate of Service.

Sincerely,

J. Phillip Carver

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cc: All Parties of Record FULWOUD Marshall M. Criser III 5 + 013 R. Douglas Lackey Nancy B. White B. Keating

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## CERTIFICATE OF SERVICE Docket No. 981834-TP and 990321-TP

I HEREBY CERTIFY that a true and correct copy of the foregoing was served via

Electronic Mail and U. S. Mail this 19th day of December, 2002 to the following:

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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.

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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.
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1 Issue 4: Should the ILEC be required to provide copper entrance facilities within2 the context of a collocation inside the central office?

3

4 Q. HAS THE FCC TAKEN A POSITION REGARDING A LOCAL EXCHANGE
5 COMPANY'S OBLIGATIONS TO PROVIDE FOR SUCH NON-FIBER OPTIC
6 FACILITIES?

7

Yes, the FCC's First Report and Order in CC Docket 96-98, August 8, 1996, 8 A. 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 addressed in the FCC's Second Report and Order, In the Matter of Expanded 12 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 and Order states: "LECs are not required to provide expanded interconnection for 15 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 adverse effects of interconnection on the availability of conduit or riser space, 18 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 particular case. We adopt this approach for switched transport expanded 21 interconnection." 22

23

Further, the <u>FCC's Report and Order, In the Matter of Expanded Interconnection</u>
 <u>with Local Telephone Company Facilities</u>, CC Docket 91-141, Released October

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	ſ
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	
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

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capacity is near exhaustion at a particular central office. The evidence of record
is insufficient to determine what percentage of entrance facility should be in use
before requiring fiber optic cabling; however, factors for consideration should
include, but not be limited to, subscriber growth, "off-site collocation" growth and
cabling request, and cabling requirements of the ILEC." Order, pp. 25-26.

6

7 Q. WHAT IS BELLSOUTH'S BASIC POSITION REGARDING THE TYPE OF
8 ALEC-OWNED OR ALEC-LEASED ENTRANCE FACILITIES AN ALEC MAY
9 PLACE IN ITS COLLOCATION SPACE?

10

ALECs have suggested that they be allowed to bring copper cables through 11 A. BellSouth's entrance facilities in order to interconnect with BellSouth's network. 12 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 more than one-half inch in diameter, an eight-fold reduction simply in terms of 17 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 are common. Thus, a single SONET OC-48 system has 896% the capacity [that 21 is, (48\*672) / 3,600] of a 3,600 pair copper cable while requiring only one-eighth 22 23 the space in the entrance duct.

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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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6 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 7 an ALEC's use of a controlled environmental vault ("CEV") or similar structure 8 constructed or otherwise provided by the ALEC on the same parcel of land as 9 10 BellSouth's central office (what BellSouth calls adjacent collocation). The rationale for this exception is simple. Only in an adjacent collocation situation is 11 an ALEC unable to use fiber entrance facilities and must use copper. The FCC 12 stated in Paragraph 44 of the FCC's Order on Reconsideration and Second 13 Further Notice of Proposed Rulemaking in CC Docket No. 98-147 and Fifth 14 Further Notice of Proposed Rulemaking in CC Docket No. 96-98, released 15 August 10, 2000 ("Collocation Reconsideration Order"), that adjacent collocation 16 is available to ALECs when space inside the central office is legitimately 17 exhausted. Fiber optic entrance cabling must be connected to a fiber optic 18 19 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 20 BellSouth's network. The predicate, however, for the ALEC to obtain adjacent 21 collocation is that space for physical collocation within the central office is 22 23 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 24 an adjacent collocation situation, BellSouth will allow the ALEC to use copper 25

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		
13 14	Issue	5: Should an ILEC be required to offer, at a minimum, power in standardized
13 14 15	Issue increi	5: Should an ILEC be required to offer, at a minimum, power in standardized ments? If so, what should the standardized power increments be?
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<ol> <li>13</li> <li>14</li> <li>15</li> <li>16</li> <li>17</li> <li>18</li> <li>19</li> <li>20</li> </ol>	Issue increi Q. A.	5: Should an ILEC be required to offer, at a minimum, power in standardized 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
<ol> <li>13</li> <li>14</li> <li>15</li> <li>16</li> <li>17</li> <li>18</li> <li>19</li> <li>20</li> <li>21</li> </ol>	<b>Issue</b> increi Q. A.	5: Should an ILEC be required to offer, at a minimum, power in standardized 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
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<ol> <li>13</li> <li>14</li> <li>15</li> <li>16</li> <li>17</li> <li>18</li> <li>19</li> <li>20</li> <li>21</li> <li>22</li> <li>23</li> </ol>	Issue increi Q. A.	5: Should an ILEC be required to offer, at a minimum, power in standardized 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 thereof, to each piece of equipment in its collocation space. In this scenario, an
<ol> <li>13</li> <li>14</li> <li>15</li> <li>16</li> <li>17</li> <li>18</li> <li>19</li> <li>20</li> <li>21</li> <li>22</li> <li>23</li> <li>24</li> </ol>	Issue increi Q. A.	5: Should an ILEC be required to offer, at a minimum, power in standardized 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 thereof, to each piece of equipment in its collocation space. In this scenario, an ALEC performs the power cabling from each piece of its collocated equipment to

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

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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.

10

BellSouth does not support smaller protection devices than 225 amps at the main 11 power board because there are inherent standardization and interval 12 improvements associated with the 225-amp fused power capacity<sup>1</sup> and this 13 complies with specific National Electric Code ("NEC") requirements for electrical 14 system coordination (Article 240-12). The NEC requires coordination to properly 15 localize a fault condition to restrict outages to the equipment affected. In other 16 words, a short circuit condition should affect the operation of the downstream 17 fuse serving just that piece of equipment, rather than the upstream circuit breaker 18 serving the entire BDFB. Manufacturers' time-current curves, let-through and 19 withstand capacities, and unlatching times are used to determine proper over-20

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22  $^{1}$  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 contral offices resulting from the Hinsdale incident (*i.e.*, a devastating fire in a Chicago central office). Prior to the

<sup>24</sup> 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

<sup>21</sup> 

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.

<sup>25</sup> 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 the potential for fire in its central offices.

current protection coordination. For TPS type fuses (which are the most 1 common fuses used in BellSouth's central offices), a three to one ratio for 2 upstream protection devices versus downstream protection devices is required. 3 Therefore, if there are 60-amp fuses in the BDFB serving equipment bays, at 4 least a 180-amp upstream device is required to serve the BDFB. Thus, it would 5 be a violation of the NEC for BellSouth to serve an ALEC's BDFB with a smaller 6 protection device (such as 125 fused amps), when it is common for equipment 7 bays to require a 40-amp drain and a 60-amp protection device at the BDFB. 8

9

10 In response to concerns expressed by ALECs in the BellSouth/ALEC Collocation User Group forum and several of the state 271 proceedings, BellSouth has 11 worked with various electrical manufacturing vendors ("vendors") to determine 12 the feasibility of implementing additional power options greater than 60 amps 13 from the BellSouth BDFBs by means of retrofitting the BDFBs that BellSouth 14 15 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 16 17 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 18 to design a field retrofit to its existing BDFB products to replace two (2) TPS fuse 19 positions with a TPL fuse block. Consequently, BellSouth now offers the 70, 80, 20 90, and 100 amp TPL type fuses to all ALECs on single redundant power feeds 21 at the BellSouth BDFB. These additional power options will be deployed in all of 22 23 BellSouth's central offices on an as-ordered basis.

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- 25

Time-current curves for TPL fuses that are larger than 100 amps indicate the 1 possibility of an overload condition that can cause the 225-amp circuit breaker to 2 operate before the TPL fuse would operate. Therefore, to allow the deployment 3 of a TPL fuse larger than 100 amps would constitute a NEC violation and could 4 result in the loss of service not only to the ALEC who had originally requested the 5 100+ amp fuse, but to all of the ALECs being served by the BellSouth BDFB (and 6 perhaps BellSouth, as well). For this reason, BellSouth cannot support the use 7 of TPL type fuses larger than 100 amps. As the carrier of last resort, it is 8 BellSouth's responsibility to protect the integrity of the public switched network, 9 10 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 11 order DC power capacity up to 100 amps from a BellSouth BDFB using a single 12 redundant power feed. 13

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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.

22

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

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

for the equipment an ALEC installs in its collocation space.

25 <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 1 2 power requirements of the telecommunications equipment being served. Fuse type protection devices are sized at 1.5 times the anticipated drain to ensure that 3 the equipment can be operated at its full capacity without operating the protection 4 device while allowing the protection device to safely clear any fault conditions 5 6 (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 7 account the fact that an ALEC would not normally use the full capacity of the 8 9 protection device. In other words, although telecommunications circuits for DC power are engineered to match the power requirements of the equipment served, 10 with a fused protection device that is sized at 1.5 times the anticipated load (or 11 drain), the recurring rate per fused amp is also ratcheted down by a 0.6667 12 multiplier (which is calculated as 1.0 divided by 1.5) to take into account the fact 13 that an ALEC does not normally use the full capacity of the protection device 14 (and therefore, should not be charged for the additional capacity). So, the ALEC 15 is not paying for any more power capacity than what the equipment requires. 16 Some ALECs have demanded that power billing be based on usage. They cite 17 the example of commercial AC electric service provided to a home or business. 18 Key components of the commercial electric utility industry, and its usage-based 19 20 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 21 are no meters attached to individual power circuits from a BDFB, just as there 22 23 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 24 for the ALECs. Therefore, in BellSouth's view, the metering of central office 25

power to each ALEC's collocation arrangement is not economically feasible for 1 an ALEC, assuming that the ALEC is engineering its power circuits to match its 2 3 equipment demand. In addition, recurring power rates include the power plant construction cost for components such as batteries and rectifiers. These 4 components must be sized to satisfy the full power requirements requested by 5 the ALEC, regardless of actual power usage by the ALEC. Under a usage based 6 billing system, if the ALEC requested a large amount of power capacity, the ILEC 7 would be forced to incur a significant expense to provide the requested capacity. 8 9 Then, if actual usage were less than what was requested, the ILEC would never receive adequate compensation for this investment. 10 11 12 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 13 Arbitration Case"). The Commission released its final ruling in the MCI 14 Arbitration Case in Order No. PSC-01-0824-FOF-TP on March 30, 2001, on this 15 very same issue. On Page 126 of this Order, the Commission states: 16 17 We believe that the per ampere rate for the provision of DC power 18 to WorldCom's collocation space should apply to fused capacity for 19 two reasons. First, it appears that WorldCom witness Messina 20 agrees that BellSouth's power plant must be capable of 21 22 accommodating 150 percent of the requested amount of power. However, it appears that witness Messina contends that the fuse 23 feeding WorldCom's collocation space should be sized at 24 WorldCom's requested amperage, but the infrastructure behind that 25

1	space should be capable of carrying 150 percent of the requested
2	amperage. We find that if BellSouth must construct its overall
3	power plant to accommodate 150 percent of the aggregate
4	amperage requested by collocators then it should be compensated
5	for this level of capacity. Furthermore, both parties believe that it is
6	a generally accepted power engineering practice to fuse capacity in
7	excess of the amperage needed.
8	
9	Second, we agree with BellSouth witness Milner that metering
10	WorldCom's actual usage would be costly and time-consuming.
11	While specific numbers were not provided, we suspect that the
12	costs of metering could exceed the difference in costs of applying
13	the rate to fused capacity versus amperes used. Therefore, we
14	find that the per ampere rate for the provision of DC power to
15	WorldCom's collocation space shall apply to fused capacity.
16	(Emphasis added)
17 « <sup>#&gt;\\\</sup> \\	
18	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
Alabama, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, and South
Carolina Commissions have taken similar positions.

23 Issue 6B: If power is charged on a per-amp-used basis or on a fused capacity24 basis, how should the charge be calculated and applied?

- 1 Q. WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?
- 2

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 4 on the assumption that the charge would be applied on a per fused amp basis. 5 6 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 / 7 1.5). This adjustment factor reflects the relationship between fused and rated 8 9 capacities (Fused = 1.5 \* Rated). The average investment per amp and the average monthly cost per kilowatt hour are both adjusted downward, for billing 10 purposes, to reflect the application of a per fused amp charge. To develop a per 11 12 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 13 per used amp cost. Further discussion on this charge will also be addressed by 14 BellSouth in its February 4, 2003, filing under issue 9B regarding proper rates. 15 16

To illustrate how an ALEC would be assessed for DC power, let's assume an 17 ALEC's equipment bay requires 40 amps of power and the ALEC requests a pair 18 of redundant (Load A and Load B) 60 amp fuses (i.e. the fused amps, which is 19 1.5 times the anticipated load). The formula for calculating the recurring cost 20 assuming a per fused amp rate of \$7.80 would be: 21 Calculation 1: (\$7.80 \* 60) = \$468.00 22 The equivalent per used amp rate is calculated by multiplying \$7.80 by 1.5, which 23 is \$11.70 (this removes the 0.6667 multiplier used to develop the per fused amp 24

25 rate). By comparing the total per fused charge to the total per used charge,

1	(\$7.80 x 60 = \$468; \$11.70 x 40 = \$468), it is evident that BellSouth is truly
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
4	the per-fused-amp rate of \$7.80 by the number of fused amps (60), as shown
5	above under Calculation 1. While both formulas yield the same result, it is
6	appropriate to calculate such a charge on a per-fused-amp basis since the fused
7	amperage is what BellSouth is obligated to provide for the ALEC's use.
8	BellSouth should not be the party that bears the loss if the ALEC elects not to
9	utilize the full capacity the ALEC demanded and for which BellSouth had to
10	provision.
11	
12 <b>Issue</b>	6C: When should an ILEC be allowed to begin billing an ALEC for power?
13	
13 14 Q.	WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?
13 14 Q. 15	WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?
13 14 Q. 15 16 A.	WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE? Since DC power is assessed by BellSouth as a recurring monthly charge, billing
13 14 Q. 15 16 A. 17	WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE? 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
13 14 Q. 15 16 A. 17 18	WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE? 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 regard to Issue 1B. If an ALEC conducts an acceptance walkthrough of the
13 14 Q. 15 16 A. 17 18	WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE? 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 regard to Issue 1B. If an ALEC conducts an acceptance walkthrough of the collocation space within fifteen (15) calendar days of the Space Ready Date,
13 14 Q. 15 16 A. 17 18	WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE? 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 regard to Issue 1B. If an ALEC conducts an acceptance walkthrough of the 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
13 14 Q. 15 16 A. 17 18 19 20 21	WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE? 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 regard to Issue 1B. If an ALEC conducts an acceptance walkthrough of the 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 the space ("Space Acceptance Date"). If the ALEC fails to conduct the
13 14 Q. 15 16 A. 17 18 19 20 21 22	WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE? 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 regard to Issue 1B. If an ALEC conducts an acceptance walkthrough of the 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 the space ("Space Acceptance Date"). If the ALEC fails to conduct the acceptance walkthrough within this fifteen calendar day period, the monthly
13 14 Q. 15 16 A. 17 18 20 21 22 23	WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE? 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 regard to Issue 1B. If an ALEC conducts an acceptance walkthrough of the 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 the space ("Space Acceptance Date"). If the ALEC fails to conduct the acceptance walkthrough within this fifteen calendar day period, the monthly recurring charges will begin on the Space Ready Date. If the ALEC requests,
13 14 Q. 15 16 A. 17 18 19 20 21 22 23 24	WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE? 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 regard to Issue 1B. If an ALEC conducts an acceptance walkthrough of the 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 the space ("Space Acceptance Date"). If the ALEC fails to conduct the acceptance walkthrough within this fifteen calendar day period, the monthly recurring charges will begin on the Space Ready Date. If the ALEC requests, and is granted by BellSouth, the right to occupy its collocation space prior to the

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the date the ALEC occupies the space. The ILEC should be allowed to begin
 billing an ALEC for power at Space Ready Date. On Space Ready Date,
 BellSouth will turn the requested collocation space over to the requesting ALEC.

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The Space Ready Date for physical collocation is the date that BellSouth finishes 5 construction in accordance with the requesting ALEC's application and turns 6 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 ALECs that requested collocation space and associated power, for which 15 BellSouth prepared the collocation space and associated power by the ALEC 16 requested date, delayed physically occupying the space for several months thus 17 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 power starting at the date the ALEC accepts the space or on the Space Ready 21 22 Date, as specified above.

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

1	Q.	WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?
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3	A.	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	Issue	8: What are the responsibilities of the ILEC, if any, when an ALEC requests
14 15	Issue colloc	8: What are the responsibilities of the ILEC, if any, when an ALEC requests cation space at a remote terminal where space is not available or space is
14 15 16	Issue colloc nearii	8: What are the responsibilities of the ILEC, if any, when an ALEC requests cation space at a remote terminal where space is not available or space is ng exhaustion?
14 15 16 17	Issue colloc nearii	8: What are the responsibilities of the ILEC, if any, when an ALEC requests cation space at a remote terminal where space is not available or space is ng exhaustion?
14 15 16 17 18	Issue colloc nearii	8: What are the responsibilities of the ILEC, if any, when an ALEC requests cation space at a remote terminal where space is not available or space is ng exhaustion? WHAT IS BELLSOUTH'S POLICY REGARDING COLLOCATION IN REMOTE
14 15 16 17 18 19	Issue colloc nearii	8: What are the responsibilities of the ILEC, if any, when an ALEC requests cation space at a remote terminal where space is not available or space is ng exhaustion? WHAT IS BELLSOUTH'S POLICY REGARDING COLLOCATION IN REMOTE TERMINALS?
14 15 16 17 18 19 20	Issue colloc nearii	8: What are the responsibilities of the ILEC, if any, when an ALEC requests cation space at a remote terminal where space is not available or space is ng exhaustion? WHAT IS BELLSOUTH'S POLICY REGARDING COLLOCATION IN REMOTE TERMINALS?
14 15 16 17 18 19 20 21	Issue colloc nearin	8: What are the responsibilities of the ILEC, if any, when an ALEC requests cation space at a remote terminal where space is not available or space is ng exhaustion? WHAT IS BELLSOUTH'S POLICY REGARDING COLLOCATION IN REMOTE TERMINALS? BellSouth permits the collocation of any type of equipment necessary for
14 15 16 17 18 19 20 21 22	Issue colloc nearin Q	8: What are the responsibilities of the ILEC, if any, when an ALEC requests cation space at a remote terminal where space is not available or space is ing exhaustion? WHAT IS BELLSOUTH'S POLICY REGARDING COLLOCATION IN REMOTE TERMINALS? BellSouth permits the collocation of any type of equipment necessary for interconnection to BellSouth's network or for access to unbundled network
14 15 16 17 18 19 20 21 22 23	Issue colloc nearin	8: What are the responsibilities of the ILEC, if any, when an ALEC requests cation space at a remote terminal where space is not available or space is ing exhaustion? WHAT IS BELLSOUTH'S POLICY REGARDING COLLOCATION IN REMOTE TERMINALS? BellSouth permits the collocation of any type of equipment necessary for interconnection to BellSouth's network or for access to unbundled network elements in the provision of telecommunications services. BellSouth's policy
<ol> <li>14</li> <li>15</li> <li>16</li> <li>17</li> <li>18</li> <li>19</li> <li>20</li> <li>21</li> <li>22</li> <li>23</li> <li>24</li> </ol>	Issue colloc nearin	8: What are the responsibilities of the ILEC, if any, when an ALEC requests cation space at a remote terminal where space is not available or space is ing exhaustion? WHAT IS BELLSOUTH'S POLICY REGARDING COLLOCATION IN REMOTE TERMINALS? BellSouth permits the collocation of any type of equipment necessary for interconnection to BellSouth's network or for access to unbundled network elements in the provision of telecommunications services. BellSouth's policy regarding collocation at DLC remote terminals is this: If sufficient space exists

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