December 13, 1999

D.P.U./D.T.E. 96-73/74, 96-75, 96-80/81, 96-83, 96-94-Phase 4-N

Consolidated Petitions of New England Telephone and Telegraph Company d/b/a Bell Atlantic-Massachusetts, Teleport Communications Group, Inc., Brooks Fiber Communications of Massachusetts, Inc., AT&T Communications of New England, Inc., MCI Telecommunications Company, and Sprint Communications Company, L.P., pursuant to Section 252(b) of the Telecommunications Act of 1996, for arbitration of interconnection agreements between Bell Atlantic-Massachusetts and the aforementioned companies.

APPEARANCES: Bruce P. Beausejour, Esq.

185 Franklin Street, Room 1403

Boston, MA 02107

-and-

Robert N. Werlin, Esq.

Keegan, Werlin & Pabian, LLP

21 Custom House Street

Boston, MA 02110

FOR: NEW ENGLAND TELEPHONE & TELEGRAPH COMPANY D/B/A BELL ATLANTIC-MASSACHUSETTS

Petitioner

Keith J. Roland, Esq.

Roland, Fogel, Koblenz & Carr, LLP

1 Columbia Place

Albany, NY 12207

-and-

Paul Kouroupas, Esq.

David Hirsch, Esq.

Regulatory Affairs

1133 21st Street, N.W., Suite 400

2 Lafayette Centre

Washington, DC 20036

FOR: TELEPORT COMMUNICATIONS GROUP, INC.

Petitioner

Todd J. Stein, Esq.

2855 Oak Industrial Drive

Grand Rapids, MI 49506-1277

FOR: BROOKS FIBER COMMUNICATIONS OF MASSACHUSETTS, INC.

Petitioner

Jeffrey F. Jones, Esq.

Jay E. Gruber, Esq.

Laurie S. Gill, Esq.

Kenneth Salinger, Esq.

Palmer & Dodge

One Beacon Street

Boston, MA 02108

-and-

Melinda T. Milberg, Esq.

32 Avenue of the Americas

Room 2700

New York, NY 10013

FOR: AT&T COMMUNICATIONS OF NEW ENGLAND, INC.

Petitioner

Alan Mandl, Esq.

Ottenberg, Dunkless, Mandl & Mandl

260 Franklin Street

Boston, MA 02110

-and-

Hope Barbulescu, Esq.

One International Drive

Rye Brook, NY 10573

FOR: MCI WORLDCOM, INC.

Petitioner

Cathy Thurston, Esq.

1850 M Street, N.W., Suite 1110

Washington, D.C. 20036

FOR: SPRINT COMMUNICATIONS COMPANY, L.P.

Petitioner

Thomas Reilly, Attorney General

By: Daniel Mitchell

Assistant Attorney General

Public Protection Bureau

Regulated Industries Division

200 Portland Street, 4th Floor

Boston, MA 02114

Intervenor

TABLE OF CONTENTS

I. INTRODUCTION

This arbitration proceeding is held pursuant to the Telecommunications Act of 1996. 47 U.S.C. § 252 ("Act"). The proceeding is a consolidated arbitration between New England Telephone and Telegraph Company d/b/a/ Bell Atlantic-Massachusetts ("Bell Atlantic," formerly "NYNEX"), the incumbent local exchange carrier ("ILEC"), and its competitors, AT&T Communications of New England ("AT&T"); Brooks WorldCom, Inc., formerly Brooks Fiber Communications of Massachusetts, Inc.; MCI WorldCom, Inc. ("MCI WorldCom"), formerly MCI Telecommunications Corporation; Sprint Communications Company L.P.; and Teleport Communications Group, Inc. Consolidated Arbitrations, D.P.U./D.T.E. 96-73/74, 96-75, 96-80/81, 96-83, 96-94.[(1)]

On December 4, 1996, the Department of Telecommunications and Energy, formerly the Department of Public Utilities, issued an Order in this proceeding ("Phase 4 Order") which set forth our rulings with regard to the method to be used by Bell Atlantic in carrying out total element long-run incremental cost ("TELRIC") studies to determine the prices to be charged by Bell Atlantic to competing local exchange carriers ("CLECs") for the use of unbundled network elements ("UNEs").[(2)] The method employed by the Department was the one set forth by the Federal Communications Commission ("FCC") in its First Report and Order dated August 8, 1996 ("Local Competition Order").[(3)] On February 5, 1997, in response to motions for clarification, recalculation, and reconsideration, the Department issued a second Order ("Phase 4-A Order") with regard to the TELRIC studies and directed Bell Atlantic to submit cost studies in compliance with that Order. Most aspects of that compliance filing were approved by the Department on May 2, 1997 ("Phase 4-B Order").

Bell Atlantic's initial TELRIC studies and compliance filing did not include a TELRIC study for the provision of dark fiber to CLECs. Dark fiber consists of fiber optic facilities that are in place in the Bell Atlantic network, but are not connected to electronic equipment -- essentially, a dormant circuit. The provision of this network element was required by the Department in an Order issued on December 4, 1996 ("Phase 3 Order"). Bell Atlantic filed an initial dark fiber TELRIC study on September 15, 1997, and Bell Atlantic then replaced that filing with a revised version on February 20, 1998 (Exh. BA-DF-1). The February 20, 1998 filing was later revised on August 26, 1998 (Exh. BA-DF-2).[(4)]

Evidentiary hearings were held on this matter at the Department on August 20, 1998, and February 17 and 19, 1999. Donald Albert, network services director of CLEC implementation, and Frederick Miller, staff director in Bell Atlantic's finance department, testified on behalf of Bell Atlantic. Maria Marzullo, senior manager of local service delivery methods, testified on behalf of MCI WorldCom. John Donovan, president of Telecom Visions, Inc., a consulting firm, testified on behalf of AT&T. Initial briefs were filed on May 4, 1999, and reply briefs were filed on May 24, 1999. The issues in the case relate to the dark fiber cost study submitted by Bell Atlantic, as well as the terms and conditions of the provisioning of dark fiber to CLECs.

II. AT&T MOTION TO STRIKE

On May 6, 1999, AT&T filed a Motion to Strike Bell Atlantic's supplemental response to record request DF-3 ("Motion to Strike"). On February 19, 1999, following a colloquy on the billing unit topic (see Section VI.G., below) during a hearing, the Arbitrator gave Bell Atlantic the opportunity to file a supplemental response to an earlier record request (RR-DF-3). Bell Atlantic filed that supplemental response on May 3, 1999, the day before the initial briefs on the issue of dark fiber were due to be filed. AT&T objects to the lateness of Bell Atlantic's response. AT&T argues that Bell Atlantic's extraordinary delay following multiple opportunities to present its case, and its late filing of the supplemental response on the eve of the due date for filing briefs, are prejudicial to AT&T (Motion to Strike at 4). AT&T notes that it has had no time to review the supplemental response and no opportunity to consider whether further cross examination would be appropriate (id.). Accordingly, AT&T asks the Department to strike the supplemental response (Motion to Strike at 5). Bell Atlantic has not responded to AT&T's Motion to Strike.

AT&T properly raises legitimate concerns about Bell Atlantic's delay in submitting this supplemental response to a record request. The issue here is not so complicated that a delay of over two months was warranted, and Bell Atlantic has made no defense of its delay. Nonetheless, in the desire to include as much information as possible on this issue, the Department will permit the supplemental response to be included in the record. We do so in this case for the simple reason that the supplemental response highlights the deficiencies in Bell Atlantic's position on the billing issue, and therefore its inclusion in the record of this matter does not prejudice AT&T's position. See MFS-McCourt, D.P.U. 88-229/252, at 9 (1989) (allowing inclusion in record of late-filed exhibits even though opposing party had not had opportunity to cross-examine the new evidence, because no prejudice to the moving party would result from admission). Accordingly, AT&T's Motion to Strike is denied.

III. SUMMARY OF THE BELL ATLANTIC FILING

A. Cost Study

Bell Atlantic has submitted a cost study that it states is consistent with the Department-approved TELRIC method (Exh. BA-DF-2). The study produces specific non-recurring costs ("NRCs") that cover the charges for a CLEC to submit a service order for an initial fiber pair and for each additional fiber pair; an optional cable documentation charge, which would be applied if the CLEC asked for documentation from Bell Atlantic to demonstrate that dark fiber is not available; and a service date change charge, which

would apply if a CLEC requests a change of the service date. NRCs for other services would be calculated on a time-and-materials basis. These include a record review charge, to cover the work required to determine the availability of dark fiber; an optional field survey charge, to cover the instances in which a CLEC requests a field survey to verify and test the dark fiber; an optional testing charge, to cover instances in which a CLEC requests that dark fiber be retested subsequent to a field survey; and a splicing charge (Exh. BA-DF-2, at 2-3).

The Bell Atlantic study also produces recurring costs as follows: a fixed cost per serving wire center, representing the cost of the fiber distribution frame termination per fiber pair and fiber jumper cable per pair; a fiber cost per mile; an intermediate central office ("CO") cross connection charge, representing the investment for two fiber pair terminations and associated fiber jumpers in the event Bell Atlantic is required to provide any intermediate CO connections between the serving wire center for the dark fiber; and a cost of unusable fiber per mile, the investment associated with the portion of a fiber cable pair rendered unusable when a CLEC leases less than the total length of that cable pair (Exh. BA-DF-2, at 3).

B. Terms and Conditions

Bell Atlantic proposes to impose a number of terms and conditions for the provision of dark fiber. We summarize certain of those conditions here. First, Bell Atlantic says it will not provide dark fiber to a CLEC if it has allocated fiber pairs for another customer (e.g., they have been installed or allocated to serve a particular customer in the near future), or for growth or survivability in a particular part of its network. Second, Bell Atlantic would require a CLEC to procure a fiber pair from a CO location, using a CLEC's collocation arrangement, or at an existing splice point. Third, Bell Atlantic would charge for service based on mileage calculated using the vertical and horizontal ("V&H") coordinate method, as opposed to the actual length of the fiber. Fourth, Bell Atlantic would round up the length of the fiber, whenever the V&H calculation results in a fraction of a mile, to the next whole mile. In all cases, a minimum of one mile would apply. Fifth, Bell Atlantic proposes to make no warranty or representation concerning the optical characteristics of fiber that it has leased to a CLEC. Finally, Bell Atlantic intends to charge a CLEC for the downstream portion of a fiber that becomes unusable or stranded, using the same V&H coordinate and rounding up method described above (Exh. BA-DF-1, "Service Description," at 1-5).

IV. NON-RECURRING COSTS

AT&T and MCI WorldCom contest two components of Bell Atlantic's NRC study: service order charges for multiple orders of fibers with the same end points; and the inclusion of service disconnection costs in the charges for installation.

A. Service Order Charges

Bell Atlantic has proposed to charge $22.50 per service order for a single fiber pair between two points. Bell Atlantic also intends to charge $20.45 for each additional fiber pair between the same two end points when the request is made at the same time as the request for the initial pair. AT&T and MCI WorldCom argue that the Department should reject the proposal to charge for additional pairs, stating that there is no incremental work to be done beyond that needed for the initial pair (AT&T Brief at 28; MCI WorldCom Brief at 16).

Bell Atlantic states that the CLECs have misunderstood the nature of the proposed charges applicable to service orders for multiple pairs. Bell Atlantic states that it must establish separate and unique circuit-identification numbers for each pair, among other things, to track individual fiber pairs for maintenance and to permit future disconnection when appropriate. Thus, whether pairs have identical end points or not, separate service orders are needed to establish the required individual circuit numbers (Bell Atlantic Brief at 26-27; Bell Atlantic Reply Brief at 9).

MCI WorldCom replies that Bell Atlantic has not refuted its argument that it can assign different cable numbers to fiber pairs without incurring additional research time and costs (MCI WorldCom Reply Brief at 6).

We agree with MCI WorldCom that Bell Atlantic has offered no evidence to refute that cited by MCI WorldCom. Bell Atlantic's cost study does not distinguish between the amount of time needed to conduct the record review (i.e., research) and the time needed to assign an identification number to each pair. We conclude from the record that of the total 18 minutes involved in these two tasks (Exh. BA-DF-2, at workpaper 1.4, line 1), the relative amount of time spent by a person conducting the record review is much greater than the time spent assigning an identification number to a given circuit. The evidence indicates, too, that there is no additional research time required when Bell Atlantic conducts research on multiple pairs with the same end points (Exh. MCI-DF-2, at 18; Tr. 43, at 51-53). While some additional time must be spent on assigning an identification number to the additional pairs, it appears on this record to be de minimis. Accordingly, we accept the CLECs' proposal that no service order charge should apply beyond the charge for the initial pair when multiple circuits with the same end points are ordered simultaneously.

B. Disconnect Charges

AT&T and MCI WorldCom both argue that the costs of disconnecting a fiber circuit should not be included in the service connection charge and that to do so awards Bell Atlantic an interest-free loan for the duration of the service connection. Instead, they say, such costs should be recovered at the time of disconnection (AT&T Brief at 29-30; MCI WorldCom Brief at 4-5, 16). Bell Atlantic disagrees, stating that the inclusion of disconnection costs in service installation charges is an established industry practice, in that it is difficult to recover these costs at the time of service disconnection. Bell Atlantic

states that AT&T and MCI WorldCom offer no evidence that large numbers of CLECs will behave differently in their remittance practice than Bell Atlantic's retail customers (Bell Atlantic Brief at 27-28).

We have addressed this issue in our recently-issued Order on NRCs, where we found that Bell Atlantic's inclusion of disconnect costs in the service connection charge was reasonable and appropriate. Phase 4-L Order at 22-23 (1999) (inclusion of disconnection costs at the time of service ordering provides Bell Atlantic with an appropriate allowance in anticipation of disconnections). We agree here with Bell Atlantic for the same reasons.

V. RECURRING COSTS

AT&T, joined by MCI WorldCom, contests several aspects of Bell Atlantic's recurring cost estimates. These include the costs of structures[(5)] associated with dark fiber; the costs of the fiber distribution frame; the capitalized costs of installing a fiber jumper cable; and the choice of an annual carrying charge factor to apply to capitalized facilities.

A. Structure Costs

AT&T acknowledges that Bell Atlantic's structure costs are taken from its approved compliance filing for TELRIC studies of other UNEs, but AT&T argues that no structure costs should have been included in this case. The thrust of AT&T's argument is that this proceeding concerns leasing Bell Atlantic's existing fiber; and so, by definition, the structure must already exist. The cost of this sheath, notes AT&T, has already been financed from regulated rates paid by ratepayers of all of Bell Atlantic services; and the use of the sheath imposes no additional cost on Bell Atlantic (AT&T Brief at 30-31).

Bell Atlantic correctly notes that the issue of whether the embedded cost of the sheath has already been funded by existing customers is wholly irrelevant to the use of TELRIC forward-looking costs to price UNEs such as dark fiber. TELRIC-based costs and charges are not designed to provide for embedded cost recovery (Bell Atlantic Reply Brief at 4-5). See also, Phase 4-L Order at 46 (the pricing of UNEs, per the TELRIC method, is not an exercise in cost recovery). AT&T's proposed change in the cost study therefore is not accepted.

B. Fiber Distribution Frame

AT&T asserts that the cost of the fiber distribution frame, although consistent with that used in previous Department-approved TELRIC studies, is out of line with actual industry practice. AT&T offers testimony from Mr. Donovan to state that the prices used by Bell Atlantic were too high and that the "per pair" cost also was exaggerated because it was based on smaller distribution frames than those that would be required for the size cable that Bell Atlantic used in its study (AT&T Brief at 32-33).

Bell Atlantic reiterates that its cost was taken from its previously-approved compliance filing. Bell Atlantic also notes that AT&T's cost estimate did not include the frame

required to house the fiber patch panel or the fire-retardant riser fiber cable that connects the fiber distribution frame to the outside plant fiber cable in a vault (Bell Atlantic Reply Brief at 5-6).

Bell Atlantic has raised substantial doubts about the accuracy of AT&T's costs estimates, in that those estimates did not include all relevant components of the fiber distribution frame (Tr. 42, at 45-46). Absent credible countervailing information, we will continue to rely on the method and inputs accepted by the Department in Bell Atlantic's TELRIC compliance filing of February 14, 1997, and approved by the Department in Phase 4-B Order at 3. Accordingly, AT&T's proposed changes to the dark fiber distribution costs are not accepted.

C. Capitalization of Fiber Jumper Cable Costs

AT&T argues that, rather than calculating the NRC of hooking up a fiber pair at the time a CLEC orders it, Bell Atlantic computes a capitalized cost of the work by applying an installation factor of 45 percent to the material cost. AT&T states that this result is an absurdity, because the work involved is minimal (AT&T Brief at 33).

Bell Atlantic responds that, under the Department-approved TELRIC method, the cost study contains an installation factor based on total installed investment, and this factor is then applied to the relevant investment for each UNE (Bell Atlantic Reply Brief at 7).

AT&T has attempted to introduce a stand-alone time estimate for this particular dark fiber-related investment, and that is inconsistent with the Department's approved approach to TELRIC studies. See Phase 4 Order, generally. Accordingly, AT&T's proposal is rejected.

D. Annual Carrying Charge Factors

AT&T asserts that Bell Atlantic has used the wrong annual carry charge factor ("ACCF") for fiber cable. AT&T argues that Bell Atlantic's use of the Digital Circuit ACCF of 0.3308 is wrong because digital circuit equipment maintenance costs are significantly higher than fiber cable costs (AT&T Brief at 34-35).

Bell Atlantic responds that AT&T is incorrect because the fiber jumper used in a central office environment is purchased as Digital Circuit central office equipment, consistent with the equipment with which it is connected (Bell Atlantic Brief at 13).

The evidence supports Bell Atlantic's conclusion. The identical treatment of this equipment was contained in the Department-approved TELRIC compliance filing (Exh. BA-DF-4, at 10). Accordingly, we do not accept AT&T's proposed change.

VI. TERMS AND CONDITIONS

A. Relationship to Interconnection Agreements

AT&T argues that Bell Atlantic has inappropriately included terms and conditions ("Service Description") for the provision of dark fiber in its filing, stating that its interconnection agreement with Bell Atlantic contains a full exposition of the relevant terms and conditions for this UNE. AT&T notes that its interconnection agreement provides that, pursuant to the Phase 3 Order, Bell Atlantic must provide dark fiber to AT&T and sets forth the negotiated terms and conditions regarding the provision of this UNE. AT&T asserts that Bell Atlantic was required to file only a cost study in this portion of the case; yet, it has filed terms and conditions that are different from and inconsistent with those to which it has already agreed. AT&T characterizes Bell Atlantic's inclusion of this Service Description as an attempt to reopen settled and agreed to provisions of its interconnection agreement with AT&T. AT&T asserts that the Department should reject in its entirety Bell Atlantic's Service Description and focus exclusively on the issue of the price at which the dark fiber will be made available to AT&T (AT&T Brief at 7-9). AT&T asks, that if the Department does not reject the Bell Atlantic terms and conditions in their entirety, it should be careful not to approve items that are inconsistent with those contained in the interconnection agreement (AT&T Brief at 10). MCI WorldCom agrees with the first argument propounded by AT&T, and it also asserts that the Service Description contains unreasonable terms and conditions that should be modified (MCI WorldCom Brief at 2-5; MCI WorldCom Reply Brief at 2-3).

Bell Atlantic replies that the Service Description is a necessary component to its Dark Fiber cost study because such a description establishes the underlying service assumptions upon which the TELRIC-based costs are computed and rates developed. Bell Atlantic also states that the Phase 3 Order provided only broad parameters for the appropriate terms and conditions for this UNE. Bell Atlantic states that it is not seeking to reopen settled and agreed-to provisions of its interconnection agreement with AT&T. Bell Atlantic agrees with AT&T that to the extent the interconnection agreement with a carrier establishes specific terms concerning dark fiber, such terms should govern both parties during the terms of the interconnection agreement; but Bell Atlantic asserts that, where the interconnection agreement is silent, the Service Description properly establishes the terms of sale for dark fiber consistent with TELRIC-based prices (Bell Atlantic Reply Brief at 2-3).

We agree with Bell Atlantic that a description of terms and conditions under which the dark fiber UNE will be provided is a prerequisite for the construction of a reliable cost study, and as such, was properly included in the filing. We take note that negotiated and signed interconnection agreements exist, and it is important to remember, as noted by Bell Atlantic, that the interconnection agreements govern both signatories.[(6)] Also, the Department's Phase 3 Order sets forth expectations regarding this service offering. It appears to us that the more pertinent dispute in this instance is whether the specific terms and conditions included by Bell Atlantic in the Service Description are consistent with the interconnection agreements and with the terms of the Phase 3 Order. It is to those specific terms and conditions, therefore, that we now turn.

B. Request Process

Under the request process, a CLEC request must identify two end points, and Bell Atlantic will respond within 15 days as to the availability of those facilities. If dark fiber is not available between those two specific points, Bell Atlantic will so indicate, without providing information regarding where available fiber may be located within the general area of the request. If dark fiber is available, the CLEC must respond within one business day as to whether it wants to take the dark fiber (Exh. BA-DF-1, at Service Description §§ 1.4, 1.7, 1.8).

AT&T argues that Bell Atlantic's proposed process for a CLEC service request is cumbersome and unworkable, as the Service Description contains a "cumbersome and artificially constrained process for ordering dark fiber." In contrast with Bell Atlantic's Service Description, notes AT&T, the interconnection agreement provides that a CLEC request begins with a request for Bell Atlantic's dark fiber records relating to a particular central office serving wire center. Those records will be made available within five days. There is no time limit within which the CLEC must decide to take the available fiber (AT&T Brief at 10-11).

Bell Atlantic asserts that it has offered, in response to the CLECs' concerns, a reasonable proposal concerning the existence of dark fiber in a particular community or group of communities to facilitate planning (Tr. 41, at 17-28). Bell Atlantic notes that it does not currently document the existence of such fiber on an easily accessible CAD/CAM system; rather, such information is included in a variety of physical documents that must be identified, collected, collated, and interpreted manually to provide a meaningful response to a request for fiber locations. Bell Atlantic therefore proposes to create and provide a comprehensive fiber layout map for each wire center requested by a CLEC, at a time-and-materials-based cost for producing the requested information. This process, notes Bell Atlantic, is intended to parallel Bell Atlantic's existing process for carriers that want to obtain access to its conduits (Bell Atlantic Brief at 17-18; Bell Atlantic Reply Brief at 24-25).

AT&T and MCI WorldCom do not respond to Bell Atlantic's amended proposal in their briefs. We conclude that Bell Atlantic's amended proposal is consistent with the interconnection agreements. Given the state of Bell Atlantic's knowledge of its own fiber network, the proposal provides a reasonable process for meeting the needs of the CLECs when they are thinking of using dark fiber in a given geographic area. The Service Description should be modified accordingly in Bell Atlantic's compliance filing.

C. Bell Atlantic Reservation Rights

Bell Atlantic's Service Description provides that Bell Atlantic can reserve fiber that has been installed or allocated to serve a particular customer in the near future, and fiber that has been allocated "for growth or survivability in a particular part of the network," where such growth has been identified in a three-year planning forecast (Exh. BA-DF-1, at Service Description § 1.6).

AT&T argues that Bell Atlantic has adopted too restrictive a set of conditions under which Bell Atlantic would give itself the right to reserve dark fiber strands for its own use. AT&T states that the latter provision is inconsistent with its interconnection agreement, which contains no language permitting Bell Atlantic to reserve "for growth or survivability" (AT&T Brief at 11-12). MCI WorldCom likewise argues that this phrase gives Bell Atlantic unreasonable discretion to limit the availability of dark fiber to CLECs (MCI WorldCom Brief at 3). Both AT&T and MCI WorldCom also argue that the Bell Atlantic proposal violates the terms of the Phase 3 Order, which prohibits Bell Atlantic from refusing to provide dark fiber to CLECs based on a general statement that a fiber is needed for unspecified or general future growth (AT&T Brief at 19; MCI WorldCom Brief at 7-8). See Phase 3 Order at 50.

Bell Atlantic responds that the CLECs are misreading the Phase 3 Order, and it argues that the Order was designed to limit Bell Atlantic's ability to reserve dark fiber in anticipation of unknown and unspecified future growth. Here, Bell Atlantic asserts, the limitation would only apply where the growth is specific, based on a detailed forecasting process that would include detailed customer-specific input. Bell Atlantic also asserts that the CLECs' objections ignore Bell Atlantic's obligation to serve customers. Bell Atlantic states that its three-year planning forecast provides a critical near-term view of its obligations to serve, and therefore such forecasts should form the basis for the right to limit the provision of dark fiber to the CLECs (Bell Atlantic Reply Brief at 12-13).

This issue was explored quite thoroughly in the earlier phase of this proceeding, and we return to our language in the Phase 3 Order for reference:

Accordingly, we conclude that it is physically practical to offer dark fiber as an unbundled network element. Before turning to the pricing issue, however, we address one final concern, whether NYNEX does not have to make available for resale a particular fiber circuit that may have been installed by NYNEX to serve growth in a particular part of its network. We accept AT&T's suggestion that, if NYNEX has a bona fide reason to reserve some dark fiber strands (e.g., they have been installed or allocated to serve a particular customer in the near future), it need not make those available for resale (Tr. 5, at 34-35). Such a reason, however, must be clearly documented, lest it be used as an artificial barrier to competition. Thus, a general statement by NYNEX that fiber is needed for unspecified or general future growth, *or even for a particular customer's potential long-term growth*, will not suffice to relieve it of its obligation to offer the dark fiber for resale. We believe that this and the other requirements we impose with regard to the offering of dark fiber as an unbundled network element are consistent with the Act and the Local Competition Order.

Phase 3 Order at 49-50 (*emphasis added*).

The issue is whether Bell Atlantic's three-year planning forecast is, as it states, a "near-term view" or whether it is, as argued by the CLECs, a projection of a "customer's potential long-term growth." The record on this issue indicates that Bell Atlantic's forecast of a specific customer's needs is not based on a definite or even likely commitment for service by that customer from Bell Atlantic (Tr. 43, at 70-73; Tr. 39, at 51-53). Indeed, it is unstated on this record what method is used to estimate the accuracy of a given customer's demand for fiber-related services in general or Bell Atlantic's (versus a competitor's) fiber-related services in particular. As a general matter, given the rapid dynamics and uncertainty in the expansion and shrinkage of an individual business customer's demand for telecommunications service, we cannot accept a three-year projection of a customer's need for fiber-related service as "a near-term view."

We do not hereby diminish Bell Atlantic's responsibility to meet its public service obligation. Bell Atlantic must understand, though, that its public service obligation has been altered by the Act, in that it must make available certain of its facilities to CLECs in support of a national and state goal of enhanced competition in the local exchange telecommunications market. We recognize that the Act complicates the planning and operational aspects of Bell Atlantic's business. Here, though, we have established a reasonable process for dark fiber service requests by CLECs. Indeed, this CLEC dark fiber service request process may very well be more predictable than the service requests from individual retail customers. If Bell Atlantic has ably handled the latter over the past decades, it can surely adjust its business and planning process to handle the former, while meeting its service obligations to both its retail and wholesale customers.

In summary, the concern we raised in the Phase 3 Order about an artificial barrier to competition remains valid. We find that Bell Atlantic's proposed language would codify the excuse of an unspecific service obligation to limit the availability of dark fiber to its competitors. Accordingly, unless Bell Atlantic has received a specific order for fiber-related service from a given customer, it may not reserve the use of a fiber strand for that customer and thereby limit its availability to CLECs. The compliance filing shall reflect this provision.

Before turning from this topic, we address a related issue raised by AT&T. AT&T argues that there is a problem with Bell Atlantic's proposal in that it sets no limit on the number of strands that Bell Atlantic can reserve as maintenance spares. AT&T states that it has offered a proposal that attempts to provide a balance between Bell Atlantic's legitimate need for maintenance spares and a curb on the potential for Bell Atlantic to abuse this right (AT&T Reply Brief at 5). Bell Atlantic does not address this issue on brief.

As noted above, Bell Atlantic proposes to reserve fibers that are needed for maintenance spares (Exh. BA-DF-3, at 7), and this is certainly consistent with the Department's intent in the Phase 3 Order at 49-50. Bell Atlantic's proposal, however, raises the potential, as

noted by AT&T, of abusing this right to thwart effective competition. Accordingly, some quantification of this issue is appropriate.

Mr. Donovan offered such a quantitative approach. He suggested that, in general, five percent of fibers in a sheath should be presumed to be reserved for maintenance. He noted, however, that in smaller cables, those with 12 or 24 fibers, a minimum of two fibers should be reserved for maintenance. He also stated that in an extremely large fiber cable, no more than 12 fibers should be reserved for maintenance. If Bell Atlantic wished to reserve more fibers in any of these circumstances, it would have to offer a formal explanation to the requesting CLEC (Tr. 43, at 6).

Bell Atlantic witnesses did not respond to Mr. Donovan's proposal, and we find that AT&T offers a reasonable set of guidelines on this issue. If, in the course of denying dark fiber service to a CLEC, Bell Atlantic is relying on reserving fibers for maintenance in excess of that proposed by AT&T, it shall inform the CLEC that it is doing so and the reasons therefore. The dispute resolution procedures set forth in the interconnection agreement will then govern any ensuing disagreement between the CLEC and Bell Atlantic. If experience with the Donovan formula proves unsatisfactory over the next two or three years, Bell Atlantic is free to suggest (but must also document the need for) revision of the formula. Bell Atlantic's compliance filing shall include these provisions.

D. "Unusable" Fiber

AT&T asserts that Bell Atlantic's proposed Service Description improperly gives Bell Atlantic the right to impose charges on fiber rendered "unusable" by a CLEC's use of another portion of that fiber strand. AT&T states that this provision is in conflict with the interconnection agreement, which does not contain any language providing Bell Atlantic the right to charge AT&T for fiber that AT&T is not using (AT&T Brief at 12). AT&T also states that the provision violates the Phase 3 Order (AT&T Brief at 22, citing Phase 3 Order at 48). That Order, says AT&T, permits Bell Atlantic to obtain relief from providing dark fiber where a CLEC request would render an unreasonable amount of dark fiber unusable, but it says nothing about charging for unused dark fiber. AT&T further argues that the Bell Atlantic provision is unworkable in light of the difficulties in determining when fiber is "unusable" and tracking when fiber that Bell Atlantic had thought was unusable later becomes used (AT&T Brief at 21-22).

MCI WorldCom expands on this argument to note that, according to Bell Atlantic, fiber is rendered unusable when a CLEC "leases less than the total length of that cable pair between a specific 'A' and 'Z' end." This provision, says MCI WorldCom, ignores the fact that fiber networks are designed with splice points that are used as junctions, allowing interconnection from various routes. MCI WorldCom also concurs with AT&T that Bell Atlantic has not indicated how it intends to audit what fiber is "unusable" or "stranded." MCI WorldCom notes that Bell Atlantic has stated that it cannot rely fully on its record tracking system for dark fiber and finds this inconsistent with Bell Atlantic's plan to track and bill CLECs for what it claims is unusable. This creates a situation, says MCI

WorldCom, that precludes a thorough financial audit of Bell Atlantic's determination of what fiber is "unusable" (MCI WorldCom Brief at 14-15).

Bell Atlantic states that its proposal to charge for unusable fiber is reasonable and that the Department recognized the potential for such stranding in the Phase 3 Order (Bell Atlantic Reply Brief at 21). Bell Atlantic asserts that the lease by a CLEC of dark fiber from the central office to a particular splice point may leave the remaining segment of fiber from the splice point to the end point of no practical or business use to Bell Atlantic or other CLECs. Also, in many instances, there will be no way, according to Bell Atlantic, for it to splice onto the remaining section of fiber other than to run an entirely new fiber from the central office to the splice point. Bell Atlantic argues that these physical and economic limitations on the ability to use the remaining segment of fiber from the splice point to the end point provide a legitimate and reasonable basis for the proposed unusable fiber charge (Bell Atlantic Brief at 15-16). Bell Atlantic also responds to AT&T and MCI WorldCom by noting that its TELRIC study could have been designed to develop a fiber-cost-per-mile in a way that would have reflected usable fiber as well as some percentage of fiber rendered unusable by certain CLEC dark fiber requests. This approach, argues Bell Atlantic, would have been analogous to the use of "fill factors" or "utilization factors" in other applications of the TELRIC model. This approach is less desirable, though, says Bell Atlantic, in that it would include a projected average amount of unusable fiber into all CLECs' fiber-related costs, even those CLECs that might not have caused fiber to be left unused. Bell Atlantic says that its proposed approach more closely follows the Department's principle that cost responsibility should follow cost incurrence (Bell Atlantic Reply Brief at 19-21).

In the Phase 3 Order, the issue of unusable fiber was raised by Bell Atlantic in objection to the CLECs' proposal to have dark fiber declared to be a UNE. There, we noted that Bell Atlantic's own use of a fiber cable could leave a portion of that cable unusable, and we said "[w]e therefore see little distinction between a splice performed on behalf of NYNEX and that performed for another carrier." We further found that, "in a particular case where NYNEX believes that a request by another carrier for lease of its dark fiber would "strand" an unreasonable amount of fiber, then NYNEX will be allowed to petition the Department for relief from its obligation." Phase 3 Order at 48-49.

Here, Bell Atlantic seeks to reintroduce into the proceeding its concern for the creation of unusable fiber by charging a CLEC for fiber that becomes stranded. We will not, however, permit Bell Atlantic's condition to be put in place. As noted by the CLECs, the procedures to be used by Bell Atlantic to specify -- and to permit CLEC review of its determination thereof -- the portion of the fiber to be declared unusable are vague and undocumented. This may be understandable given the nature of Bell Atlantic's plant records concerning dark fiber (see "Request Process," above); but even if those records were available on a CAD/CAM system, the determination of what is stranded is extremely subjective. As noted by MCI WorldCom's witness, Ms. Marzullo, what is a complete "A" to "D" circuit length in Bell Atlantic's eyes is actually a series of "A" to "B", "B" to "C", and "C" to "D" links between splice points, each of which has different utilization characteristics (Exh. MCI-DF-2, at 15-16). Also, what is deemed "stranded"

today may not turn out to be tomorrow, when a different configuration of customers and usage evolves. Bell Atlantic has offered no approach to an ongoing review and analysis of circuits, an approach that could permit the characterization of a fiber as "unusable" to be reevaluated as conditions change (Tr. 39, at 123).

We have considered Bell Atlantic's thoughtful arguments with regard to cost causation. Bell Atlantic is correct in noting that an approach to TELRIC pricing that would include an average allowance for unusable fiber would improperly assign such costs to CLECs where there is no unusable fiber. Also, this approach would require an unsupportable guess as to the amount of fiber that might, in fact, be left stranded in the average case.[(7)] Here, though, there is a further problem, one that applies to Bell Atlantic's unusable fiber charge as well to the alternative pricing method that was properly dismissed by Bell Atlantic. It is simply the fact that, as discussed in the previous paragraph, there is no demonstration that there is a cost that is caused by the CLEC that can be adequately documented by Bell Atlantic.

Accordingly, no charge shall be permitted for fiber deemed "unusable" by Bell Atlantic.

E. CLEC Reservation Rights

The Service Description requires a CLEC to pay the applicable charges upon completion of the service order, although there is an allowance for a thirty day extension. If the CLEC is unable to use the fiber at that time, it would revert back to Bell Atlantic, and the CLEC would pay a cancellation fee. Likewise, if a CLEC stops using a fiber, it must return the fiber to Bell Atlantic within 60 days (Exh. BA-DF-1, Service Description §§ 1.16, 1.18, 1.19).

AT&T complains that the Service Description contains unreasonable conditions concerning a CLEC's rights and responsibilities with regard to reserving in advance any amount of dark fiber. AT&T notes that its interconnection agreement imposes no requirement that AT&T use the dark fiber it has leased, as long as it is paying for it (AT&T Brief at 12). AT&T further notes that the limited window during which the CLEC must decide whether it has a customer lined up to use a fiber or otherwise needs the fiber is unreasonable, and it draws the comparison with Bell Atlantic's proposal to use a three-year planning horizon for similar decisions (AT&T Brief at 18).

AT&T offers a proposal under which a CLEC would pay 25 percent of the normal dark fiber recurring charge during an "Under Construction Period" of no more than one year. If during that time, the CLEC commences use of the dark fiber, it would pay the full charges. If, during that period, another CLEC or Bell Atlantic sought to use that fiber, the CLEC holding the fiber would have to pay the full charges or release the dark fiber (AT&T Brief at 19-21).

MCI WorldCom joins in AT&T's argument that the 60-day return period proposed by Bell Atlantic in unjustified. MCI WorldCom states that, if such a period is required by the Department, it should be for no less than 120-160 days (MCI WorldCom Brief at 4).

Bell Atlantic notes that it has tried to accommodate some of the concerns raised by the CLECs, in that it is has offered to modify its proposed original Service Conditions. In particular, Bell Atlantic has proposed that CLECs be allowed up to four dark fibers at a single location to be returned to Bell Atlantic within 180 days of not being used, but that the unused fibers beyond the first four would have to be returned to Bell Atlantic within 60 days. Bell Atlantic argues that this requirement is necessary to prevent the warehousing of dark fiber, which, it states, has the potential to cause major problems for Bell Atlantic's management of its own network (Bell Atlantic Brief at 16-17, citing Exh. BA-DF-3).

Bell Atlantic also modified its original proposal that a CLEC be required to accept (i.e., place an order for) available fiber within 24 hours of completion of Bell Atlantic's field testing, establishing a period of 30 days instead. Bell Atlantic reminds us that it does not have a reservation system for dark fiber, so CLECs would have to be aware that, the longer they wait to place an order, the higher the probability that the specific facilities may no longer be available (Bell Atlantic Brief at 17).

MCI WorldCom argues that Bell Atlantic has not gone far enough to provide CLECs with the requisite degree of flexibility required by new market entrants. MCI WorldCom says that the four-fiber limit is arbitrary and should be removed (MCI WorldCom Reply Brief at 4). MCI WorldCom also asserts that Bell Atlantic's proposal to extend from 24 hours to 30 days the time within which a CLEC may accept Bell Atlantic survey results, without a guaranteed "reservation" of that fiber, is inadequate. MCI WorldCom asserts that this provision is inconsistent with Bell Atlantic's desire to reserve fiber for its own use. MCI WorldCom suggests that the Department Order Bell Atlantic to report on the development of a system that would enable CLECs to reserve fiber capacity and that would permit additional time for the CLEC to review the Bell Atlantic field survey results (MCI WorldCom Reply Brief at 4-5).

Bell Atlantic argues that AT&T's 25 percent reservation charge contradicts the TELRIC method, which is intended to be forward-looking and to allow an ILEC to recover all the direct and indirect costs attributable to the provision of a UNE (Bell Atlantic Brief at 5-6). Bell Atlantic also argues that the proposal would create improper incentives for the "warehousing" of unused facilities and fails to account for the additional complexities and costs associated with its implementation. In particular, Bell Atlantic argues that, under AT&T's proposal, it may be forced to perform unnecessary network rearrangements to change out Bell Atlantic fiber-optic electronics to "route around" the fiber-optic facility shortage, using more expensive serving arrangements. The proposal would also, says Bell Atlantic, require it to develop new administrative processes and procedures (Bell Atlantic Brief at 6-7; Bell Atlantic Reply Brief at 14-15).

AT&T replies that Bell Atlantic's TELRIC-related argument with regard to its proposed 25 percent reservation charge is without merit because the charge is not meant to cover the costs of a fiber in service. Rather, the reservation charge provides Bell Atlantic with revenue in the absence of an actual lease of the facilities, and would only stay in place until the CLEC actually leased the facility, returned it to Bell Atlantic, or made it

available to another CLEC (AT&T Reply Brief at 2-3). AT&T also asserts that there is no need for an extensive administrative system to support this reservation charge. AT&T says that a simple uniform service order code ("USOC") could be attached to each fiber to serve this purpose (AT&T Reply Brief at 3).

None of the parties has set forth a comprehensive position on this issue that is satisfactory to the Department. Therefore, we adopt a combination of various aspects of the parties' arguments. First, if the charges for dark fiber are determined properly through a TELRIC cost study, and if a CLEC is willing to pay that charge for a fiber that meets our criteria for being available for lease, the issue of whether a CLEC chooses to "light" that fiber is irrelevant. The fiber is, by definition, surplus to Bell Atlantic's needs, Bell Atlantic is being fully compensated, and the CLEC is making the financial decision to pay for it. In this context, the concern about "warehousing" is a red herring. We have made no requirement for the return of unused UNEs, such as the return of leased but unused transport capacity or local loops, which, it could be argued, have the same type of economic or technical value to Bell Atlantic or competing CLECs, and we shall not do so here. Accordingly, there shall be no provision in the Service Conditions that requires a CLEC to return a dark fiber to Bell Atlantic if it is not lit within a given period.

We accept Bell Atlantic's evidence that it does not have a dark fiber reservation system in place and that the creation of one would be difficult and costly (Exh. BA-DF-3, at 2-3). Mr. Donovan's testimony on behalf of AT&T that dark fiber reservation could be accomplished simply through the use of USOC codes is not persuasive (Tr. 40, at 20-21). The USOCs that he references are generic to a billing rate and type of service and are not what would be needed here for multiple occasions of leasing specific sections of fiber. Thus, a more detailed reservation system would have to be created, at some cost to Bell Atlantic. Also, we accept Bell Atlantic's statement that a reservation of fiber would required it to re-route traffic or alter its network design, in anticipation that the fiber might in fact be leased, imposing that cost on Bell Atlantic during the reservation period.

Regarding AT&T's proposal, whether the 25 percent charge proposed by AT&T would be appropriate in this instance is not quite addressed by Bell Atlantic's TELRIC-related argument. Rather, the question of an appropriate reservation charge, under the Act, would appear to require a TELRIC study of the opportunity cost of each fiber. AT&T has proposed 25 percent of the TELRIC recurring charge. There is no way to know, on this record, whether that is an appropriate charge.

However, we do not believe such a reservation system is necessary or appropriate in any case. In allowing dark fiber to be purchased as a UNE in the Phase 3 Order, we did not imagine that the reservation of this UNE by a CLEC would be significantly different from other UNEs. In other words, upon determination by Bell Atlantic that facilities were available, the CLEC would or would not chose to lease those facilities. If the CLEC chose to do so, it would pay the full TELRIC rate. If the CLEC pondered the decision and another CLEC chose to use the facility, the second CLEC would gain access to the facility and pay the full TELRIC rate. In short, the availability of a given circuit would be subject to market forces, just as the availability of loops, switching capacity, and

transport are so subject (see, for example, Exh. BA-DF-3, at 3). Accordingly, AT&T's proposal for a reservation system and for a 25 percent reservation charge is not accepted.

Bell Atlantic has offered to permit a CLEC 30 days to make the decision to lease or not lease, but it asserts that it cannot promise the facility would still be available during that period, as another CLEC may choose to lease it first. Bell Atlantic's proposal is appropriate in part and too restrictive in part. The 30-day period proposed by Bell Atlantic has no reservation value, if during that period another CLEC can lease the fiber in question. As we have stated above, we have no philosophical problem with permitting this to occur. On the other hand, we see no reason to impose any particular decision-making period under these circumstances. Once a CLEC receives the report on the availability of fiber, it should be permitted to act on that report whenever it pleases. The CLEC should be aware, however, that the fiber may cease to be available if it acts too slowly (Tr. 43, at 64-66). Bell Atlantic's obligation in this case is solely to inform the CLEC that such an event (i.e., another company's use of the fiber) has occurred; but, there needs to be a limit on Bell Atlantic's obligation to do so over time, or else Bell Atlantic will face an unreasonable data handling and reporting obligation. We determine that Bell Atlantic shall inform the requesting CLEC that a specific fiber route has been used by Bell Atlantic or another carrier anytime during a period of 60 days following the initial report indicating that the fiber was available.

In summary, there will be no reservation system for dark fiber; there will be full payment of the TELRIC rate upon leasing of a fiber, whether the fiber is lit or unlit by the CLEC; there will be no obligation to return an unlit fiber to Bell Atlantic as long as the recurring rate is being paid; a CLEC may choose to lease a dark fiber, subject to availability, at any time following notification of the availability of that fiber; and Bell Atlantic must inform a requesting CLEC of the unavailability of a fiber for a period lasting 60 days from the notification to that CLEC that the fiber was available.

F. Collocation Requirement

MCI WorldCom states that there is no technical reason why a CLEC must be collocated in order to lease dark fiber from Bell Atlantic. MCI WorldCom notes that it leases dark fiber today from many carriers and does not collocate at their offices. MCI WorldCom notes that the Department recognized the technical feasibility of connecting at existing splice points in the Phase 3 Order (MCI WorldCom Brief at 5-7).

AT&T joins with MCI WorldCom's argument, saying that equipment exists that can be attached to a fiber strand at any hard termination point to determine where there are problems on the line. AT&T notes that it would permit Bell Atlantic access to its hard termination points to conduct the testing (AT&T Brief at 23-24).

Bell Atlantic states that the collocation requirement is reasonable because it is based on Bell Atlantic's requirement for test access for fiber-fault diagnosis and the associated ability to repair and restore damaged fiber-optic facilities within its network. Bell Atlantic asserts that the requirement is consistent with the way Bell Atlantic plans and

deploys its fiber network for service to its own customers (Bell Atlantic Reply Brief at 25-27).

We find for the CLECs. We specifically addressed this point in the Phase 3 Order, where we determined that CLECs would have access to dark fiber at splice points. Phase 3 Order at 48-49. We imposed no collocation requirement.[(8)] Any reservations we might have about this point are alleviated by Ms. Marzullo's testimony that it is technically feasible and consistent with industry practice to lease dark fiber at splice points (Exh. MCI-DF-2, at 4, 7-8). Accordingly, the Service Conditions shall be modified to eliminate the collocation requirement.

G. Measurement

Bell Atlantic's Service Description provides that the billing mileage for dark fiber will be calculated using Bell Atlantic's system of Vertical and Horizontal ("V&H") coordinates, with a factor applied to estimate actual ground distance. Then, the resulting mileage will be rounded up to the nearest whole mile for charging purposes. AT&T and MCI WorldCom, on the other hand, propose that the actual mileage be measured using an Optical Time Domain Reflectometer ("OTDR") and that, if Bell Atlantic's billing system cannot accommodate fractions, a smaller billing unit should be used to measure distance, such as feet or hundredths of a mile (AT&T Brief at 25-27; MCI WorldCom Brief at 15).

Bell Atlantic responds that use of an OTDR would result in the need for unnecessary additional time and cost. Bell Atlantic notes that difficulties would occur in making actual test measurement where dark fiber is provided at splice points because the test cannot be performed without physically breaking into those points (Bell Atlantic Brief at 14; Bell Atlantic Reply Brief at 22). On the question of billing units, Bell Atlantic describes a variety of "significant technical barriers" to the use of increments less than a whole mile (Bell Atlantic Reply Brief at 22-24).

On the first issue, we find for Bell Atlantic. The use of an OTDR test to measure each dark fiber to provide an appropriate charge for each fiber would require Bell Atlantic to undertake the "optional" field survey for every dark fiber order, adding time and cost to the service order process (Exh. BA-DF-4, at 5). OTDR testing would also require physically breaking into as-yet-undisturbed splice points to offer accurate measurements (Tr. 42, at 62). The Department has authorized the use of the V&H coordinate system for facility pricing for years for a variety of retail and wholesale services (Tr. 42, at 61). There is no reason to abandon that system here, and we approve its use for pricing dark fiber.

On the issue of billing units, we accept that Bell Atlantic's billing system utilizes a three-digit quantity field that does not accept decimal places, and we will not require Bell Atlantic to modify this aspect of existing systems for the single purpose of charging for dark fiber. Therefore, when dark fiber distance is calculated, it must be rounded up to a whole number (Exh. RR-DF-3-S, at paragraph 1).

Recognizing this point, Mr. Albert was asked by the Arbitrator to explain why a measurement unit smaller than a mile could not be used for dark fiber, to permit rounding of that unit to the nearest whole number while also providing a more exact representation of the distance covered than would be possible using rounded miles (Tr. 43, at 49-51). Bell Atlantic notes that the billing system can only handle digits up to "999." For example, if the billing unit were defined as one quarter mile, the maximum billable circuit length would be 249 miles; but Bell Atlantic notes that use of such a billing unit would not be problematic in that regard, as dark fiber orders "tend to be relatively short lengths" (Exh. RR-DF-3-S, at paragraph 2). Using the same arithmetic, we note that billing in tenths of a mile could be accommodated for circuits up to 99.9 miles, which we also conclude would not be problematic in terms of the expected lengths of dark fiber.

Bell Atlantic states that "fooling" the billing system is not simple and requires many system modifications to two computer systems. "The modifications are not limited to changing the unit definition. Mileage calculations and rate tables would have to be modified in order to bill proportionately to the new unit definition" (RR-DF-3-S, at paragraph 3). Bell Atlantic then describes the kinds of changes that would be needed (RR-DF-3-S, at paragraph 3-6). Bell Atlantic further asserts that such changes will cause additional costs, which would have to be "reflected in dark fiber rates" (RR-DF-3-S, at paragraph 5).

We accept and understand the changes that would be needed to accommodate billing for dark fiber in increments under one mile. Bell Atlantic's response indicates that doing so for quarter mile increments would be the "least intrusive" because it would be able to adapt existing programming rationale from other offerings (Exh. RR-DF-3-S, at paragraph 4). We do not find its logic persuasive in this regard. For example, Bell Atlantic cites the need to redefine the "unit of measure in the USOC ordering codes" (Exh. RR-DF-3-S, at paragraph 5). In addition, Bell Atlantic also notes the need to change "the applicable rate tables" in the billing system (Exh. RR-DF-3-S, at paragraph 5). Furthermore, Bell Atlantic notes the need to change the "mileage equation to round to the next quarter mile" (Exh. RR-DF-3-S, at paragraph 6). In each situation, Bell Atlantic has offered no persuasive evidence to support its contention that changing this item from miles to quarter miles would require any more or less work than changing it from miles to tenths of miles.

Accordingly, any change in billing units will require some work on the part of Bell Atlantic to modify its billing system. The only germane questions before us are whether it is reasonable to do so, in light of the characteristics of this service; if so, what the billing unit should be; and how the costs of accompanying such changes should be treated.

On the first question, the CLECs have made a persuasive case that smaller billing units are appropriate. Mr. Donovan noted that rounding up to the next mile is "severely biased in favor of Bell Atlantic" (Exh. AT&T-DF- 1, at 31), a conclusion supported by Bell Atlantic's responses to questions under cross-examination (Tr. 39, at 110-116). Ms. Marzullo, too, noted that Bell Atlantic's approach would increase a CLEC's cost by "making it pay for more fiber than it is using" (Exh. MCI-DF-2, at 5). We recognize that

the problem raised by the CLECs will exist, to a greater or less extent, for any measurement unit, as long as the billing system rounds up to the next unit. However, this problem is especially notable in this service offering, where many of the leased fiber strands are likely to be in sub-mileage lengths or short mileage lengths, reflecting service between a central office and a portion of a local serving area. Thus, we need to select a billing unit that is appropriate to the actual lengths of circuits being ordered. Based on the evidence in this case, it appears to us that a billing unit of a tenth of a mile is reasonable and should be employed.

We turn now to the issue of the treatment of costs of changing the billing system. We do not accept Bell Atlantic's proposal that such costs should be "reflected in the dark fiber rates" (Exh. RR-DF-3-S, at paragraph 5). The TELRIC cost method is based on the forward-looking costs of providing the service, with a reasonable allocation of forward-looking joint and common costs. That latter category of costs, which includes the kinds of billing and support systems needed to carry out the general range of telecommunications services, is thus already accounted for in the TELRIC study. Bell Atlantic's proposal to add an additional billing cost factor here is inappropriate and will not be permitted.[(9)]

H. Warranty

AT&T contends that the Bell Atlantic Service Description contains an improper disclaimer with regard to the transmission characteristic of dark fiber. The Service Description states that transmission characteristic cannot be guaranteed to remain constant over time and that the CLEC assumes all risks associated with the unforeseen introduction of future splices. AT&T asks the Department, at a minimum, to require Bell Atlantic to conform to a commitment it made during the hearings (i.e., to do for the CLECs what it would for itself with regard to maintenance, and correction of degradation due to temperature-induced cable loss, and the effects of a dirty splice) (AT&T Brief at 27-28).

MCI WorldCom agrees with AT&T's point but also states that Bell Atlantic must meet initial technical standards, as well as protecting against future deterioration. MCI WorldCom notes that this is industry practice with regard to fiber it leases from other providers (MCI WorldCom Brief at 12-13).

Bell Atlantic, in reply, restates the commitment made during the hearing to maintain CLEC fibers in the same sheath(s) as Bell Atlantic fibers using the same methods, procedures, and practices. Bell Atlantic notes that this provision is grounded upon the principle of parity between Bell Atlantic's own operating characteristics and the quality of service offered to CLECs (Bell Atlantic Brief at 24). Bell Atlantic indicates AT&T's agreement with this proposal. Bell Atlantic opposes MCI WorldCom's proposal to meet industry standards as being unspecific and requiring a greater requirement than Bell Atlantic applies to itself (Bell Atlantic Reply Brief at 27-28).

We accept and adopt Bell Atlantic's proposed language. As Bell Atlantic indicates, its proposal offers parity between the treatment of its own fibers and those provided to the

CLECs, a policy we have consistently adopted in these Consolidated Arbitrations. See, for example, Phase 3 Order at 20. MCI WorldCom's proposal goes beyond such a requirement, and we decline to require it.

VII. ORDER

Accordingly, after hearing and due consideration, it is

ORDERED: That Bell Atlantic's Dark Fiber proposal dated August 26, 1998 is hereby approved as amended herein; and it is

FURTHER ORDERED: That Bell Atlantic's proposed Terms and Conditions dated February 20, 1998 are hereby approved as amended herein; and it is

FURTHER ORDERED: That Bell Atlantic shall file a compliance filing incorporating the directives herein within 30 days of the date of this Order; and it is

FURTHER ORDERED: That the parties comply with all other directives contained herein.

By Order of the Department,

_____

Janet Gail Besser, Chair

_____

James Connelly, Commissioner

_____

W. Robert Keating, Commissioner

_____

Paul B. Vasington, Commissioner

_____

Eugene J. Sullivan, Jr., Commissioner

1. Since the start of these arbitrations, AT&T acquired Teleport, and MCI WorldCom acquired Brooks. AT&T assumed representation for Teleport and MCI WorldCom assumed representation for Brooks. Thus, the remaining parties are Bell Atlantic, AT&T, MCI WorldCom, and Sprint.

2. UNEs are parts of the telephone network that one carrier leases from another carrier to provide telecommunications services. See 47 U.S.C. §§ 153(29), 251(c)(3).

3. Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, CC Docket No. 96-98, First Report and Order, FCC 96-325, released August 8, 1996.

4. The Service Description portion of the February 20, 1998 filing was not amended in the August 26, 1998 filing.

5. A structure is the sheath holding the fiber.

6. In MediaOne/Bell Atlantic Arbitration, D.T.E. 99-42/43, 99-52, at 8-9 (1999), the Department addressed the relationship between Department decisions and negotiated terms and conditions of interconnection agreements. The Department stated that Department-ordered provisions contained in Department-approved tariffs shall supersede corresponding arbitrated provisions in interconnection agreements, and that there may be circumstances where the Department explicitly requires that a tariff provision supersede negotiated provisions on the same subject matter.

7. We note in passing that we do not accept Bell Atlantic's analogy of this approach to the use of fill factors in other TELRIC studies. Those factors are related to the required and inherent use of spare capacity in network planning decisions.

8. We note that we declined to allow Bell Atlantic to impose a collocation requirement for other UNEs. See Phase 4-K Order at 26.

9. We note, too, that the general issue of operation support systems costs has been treated in a separate phase of this proceeding. See Phase 4-L Order at 37-57 (1999).