D.T.E. 98-57-Phase III

Investigation by the Department on its own motion as to the propriety of the rates and charges set forth in M.D.T.E. No. 17, filed with the Department by Verizon New England, Inc. d/b/a Verizon Massachusetts on May 5 and June 14, 2000, to become effective October 2, 2000.

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I. INTRODUCTION AND PROCEDURAL HISTORY

On May 5, 2000, Verizon New England, Inc. d/b/a Verizon Massachusetts ("Verizon"),[(1)] filed with the Department of Telecommunications and Energy ("Department") proposed revisions to its tariff M.D.T.E. No. 17 in compliance with both Department and Federal Communications Commission ("FCC") orders, with an effective date of June 4, 2000. These proposed revisions include Verizon's proposed digital subscriber line ("xDSL") and line sharing offerings and were made in response to the Department's March 24, 2000 Order in D.T.E. 98-57 (2000) ("Tariff No. 17 Order") and the FCC's Deployment of Wireline Services Offering Advanced Telecommunications Capability and Implementation of the Local Competition Provisions of the Telecommunications Act of 1996, Third Report and Order in CC Docket No. 98-147 and Fourth Report and Order in CC Docket 96-98, FCC 99-355 (rel. Dec. 9, 1999) ("Line Sharing Order"). Verizon modified its May 5 compliance filing on June 14, 2000. The Department docketed this proposed tariff filing as D.T.E. 98-57-Phase III.

As noted by the FCC in its Line Sharing Order, both incumbent local exchange carriers ("ILECs") and competitive local exchange carriers ("CLECs") are beginning to provide xDSL-based services to customers in major markets nationwide. Line Sharing Order at ¶ 3. These xDSL-based services provide high-speed connections between subscribers and packet switched networks, over ordinary copper telephone loops. Id. According to the FCC, the economic realities of providing advanced services have also caused most xDSL providers to market primarily to large business customers. Id. The FCC's Line Sharing Order is intended to promote the availability of competitive broadband xDSL-based services, especially to residential and small business customers, by creating a new unbundled network element ("UNE") -- the high frequency portion of the local loop. Id. at ¶ 4. Voice services over copper use a lower frequency portion of the loop. Id. at ¶ 13 n.18.

The FCC states that making available this portion of the local loop for advanced services will enable CLECs to offer xDSL services through the same loop over which ILECs provide voiceband service. Id. The provision of xDSL-based service by a CLEC and voiceband service by an ILEC on the same loop is referred to as "line sharing." Id. Such access, the FCC notes, is "vital to the development of competition in the advanced services market, especially for residential and small business consumers," and that the policies set forth in Line Sharing Order "will ensure that American consumers will not face undue delay in receiving the benefits of technological innovation." Id. at ¶¶ 5-6.

Pursuant to notice duly issued, the Department indicated that all parties to D.T.E. 98-57, the Department's investigation into the propriety of the rates and charges set forth in M.D.T.E. Nos. 14 and 17, would be parties to Phase III of this proceeding, and requested comments about whether the Department should suspend, disallow, or permit Verizon's proposed tariff revisions to go into effect while pending the outcome of the Department's investigation. The Department received initial comments on May 17, 2000, from the Attorney General; AT&T Communications of New England, Inc. ("AT&T"); Choice One Communications of Massachusetts Inc. ("Choice One"); Covad Communications Company ("Covad"); the Massachusetts CLEC Alliance ("MA CLEC Alliance");[(2)] Rhythms Links, Inc. ("Rhythms"); and WorldCom, Inc. Rhythms and Verizon filed reply comments on May 24, 2000. Upon review and consideration of these comments, on May 25, 2000, the Department suspended Verizon's proposed tariff until September 18, 2000. At the request of the parties, the Department issued a second suspension Order on August 9, 2000, extending the tariff suspension to October 2, 2000.

On May 19, 2000, the following D.T.E. 98-57 limited participants were granted full intervenor status in the Phase III proceeding: Digital Broadband Communications, Inc. ("DBC"); Intermedia Communications, Inc.; Vitts; and Z-Tel Communications, Inc. Also on this date, Mpower's and Nextlink Massachusetts, Inc.'s petitions for intervention were granted. The Department granted limited participant status to Network Access Solutions Corporation on June 5, 2000, and to Adelphia on July 11, 2000.

On July 28, 2000, Department staff and Phase III parties conducted a site visit to Verizon's central office in Newton, Massachusetts, a remote terminal ("RT"), and a

controlled environment vault. The Department held evidentiary hearings from August 1 to 3, 2000, with witnesses sponsored by Verizon, AT&T, Covad, DBC, and Rhythms. Verizon presented the testimony of David Kelly, Bruce Meacham, Augie Trinchese, Amy Stern, James Virga, and John White. AT&T presented the testimony of William Salvatore, and Covad presented the testimony of Michael Clancy and Mike Zulevic. DBC presented the testimony of Terry Landers, and Rhythms presented the testimony of Robert Williams. In addition, Covad and Rhythms jointly presented the testimony of Patricia Kravtin and Joseph Riolo. The Attorney General, Verizon, AT&T, Covad, DBC, the MA CLEC Alliance, Rhythms, Sprint Communications Company L.P. ("Sprint"), Vitts, and WorldCom filed initial briefs on or before August 18, 2000. On September 1, 2000, the Association of Communications Enterprises ("ASCENT"), AT&T, Covad, DBC, the MA CLEC Alliance, Rhythms, Verizon, Vitts, and WorldCom filed reply briefs.

Line sharing issues similar to those at issue in Verizon's tariff filing were raised in a petition for arbitration filed by Covad on April 26, 2000, pursuant to § 252(b) of the Telecommunications Act of 1996 ("Act") (47 U.S.C. § 252(b)) and docketed as D.T.E. 00-46. Upon review of Verizon's tariff filing, it became apparent that the Department would be required to arbitrate and adjudicate separate proceedings covering similar, if not identical, subject matter at approximately the same time. This largely redundant exercise would not have been an efficient use of either the Department's or the affected parties' resources. Therefore, with the consent of Covad and Verizon, the Department agreed to address in Phase III whatever residual line sharing issues remained from Covad's petition.

II. STANDARD OF REVIEW

Section 251(c)(2) of the Act imposes a duty upon Verizon, as an ILEC:

[T]o provide, for the facilities and equipment of any requesting telecommunications carrier, interconnection with the local exchange carrier's network -- (A) for the transmission and routing of telephone exchange service and exchange access; (B) at any technically feasible point within the carrier's network; (C) that is at least equal in quality to that provided by the local exchange carrier to itself or to any subsidiary, affiliate, or any other party to which the carrier provides interconnection; and (D) on rates, terms, and conditions that are just reasonable, and nondiscriminatory, in accordance with the terms and conditions of the agreement and the requirements of this section and section 252.

In addition, § 251(c)(3) of the Act imposes a duty on Verizon to provide UNEs on a nondiscriminatory basis. Specifically, this provision states that ILECs are required:

[T]o provide, to any requesting telecommunications carrier for the provision of a telecommunications service, nondiscriminatory access to network elements on an unbundled basis at any technically feasible point on rates, terms, and conditions that are

just, reasonable, and nondiscriminatory in accordance with the terms and conditions of the agreement and the requirements of this section and section 252. An incumbent local exchange carrier shall provide such unbundled network elements in a manner that allows requesting carriers to combine such elements in order to provide such telecommunications service.

As noted in its Line Sharing Order, the FCC concluded in an earlier Order that the provision of access to operations support systems ("OSS") falls squarely within an ILEC's duty under § 251(c)(3) to provide UNEs under terms and conditions that are nondiscriminatory and just and reasonable. Line Sharing Order at ¶ 172, citing Local Competition First Report and Order.[(3)] In addition, the FCC states that as a general matter, the nondiscrimination obligation requires ILECs to provide to requesting carriers access to the high frequency portion of the loop that is equal to the access the ILEC provides to itself for retail xDSL service to its customers or its affiliates, in terms of quality, accuracy and timeliness. Id. at ¶ 173. The Line Sharing Order is subject to further FCC modification.[(4)] At the appropriate time, the Department will direct Verizon to modify its tariff to conform to these FCC changes, if any.

The Act also requires ILECs, such as Verizon, to provide physical collocation on a nondiscriminatory basis. Section 251(c)(6) requires Verizon:

[T]o provide, on rates, terms, and conditions that are just, reasonable, and nondiscriminatory, for physical collocation of equipment necessary for interconnection or access to unbundled network elements at the premises of the local exchange carrier, except that the carrier may provide for virtual collocation if the local exchange carrier demonstrates to the State commission that physical collocation is not practical for technical reasons or because of space limitations.

In addition, in § 251(d)(3), the Act does not "preclude the enforcement of any regulation, order, or policy of a State commission that--(A) establishes access and interconnection obligations of local exchange carriers; (B) is consistent with the requirements of this section; and (C) does not substantially prevent implementation of the requirements of this section and the purposes of this part."

The obligations imposed on an ILEC by the Act are typically referenced in relation to the terms and conditions contained in interconnection agreements, but these obligations apply equally to an ILEC seeking to fulfill its obligations, in part, under the Act by filing a tariff. Pursuant to G.L. c. 159, §§ 19 and 20, the Department must determine whether Verizon's proposed rates, terms, and conditions in its interconnection tariff are "just and reasonable." The right of a common carrier to make rules and regulations, subject to the

approval of the Department and the requirement of reasonableness, has been long recognized. Wilkinson v. New England Telephone and Telegraph Company, 327 Mass. 132, 135 (1951).

III. PHASE III OPERATIONAL ISSUES

A. General Tariff Issues

1. xDSL Definitions

a. Introduction

Part B, Section 5.4.1.A of Verizon's proposed tariff defines an xDSL link as a loop providing transmission technology capable of supporting either asymmetrical DSL ("ADSL") or high-bit DSL ("HDSL"). According to Verizon's proposed definition, ADSL is a transmission technology that uses twisted pair, copper loop plant to transmit an asymmetrical digital signal of up to 6 megabits per second ("Mbps") to the telecommunications carrier from the central office and up to 640 kilobits per second ("kbps") from the telecommunications carrier to the central office, as specified in American National Standards Institute ("ANSI") standards and TR 72575, a Verizon-created, technical specifications document. Verizon defines HDSL as a transmission technology that transmits up to 784 kbps over one twisted copper cable pair or up to 1.5 Mbps over two twisted copper cable pairs, as specified in TR 72575.

Verizon proposes two ADSL offerings (two-wire, non-loaded,[(5)] twisted copper pair loop of less than 12,000 and 18,000 feet) and two HDSL offerings (two- and four-wire non-loaded, twisted copper pair loop of less than 12,000 feet). Verizon makes available longer, conditioned loops as part of its "digital design links" ("DDL") tariff offering for integrated services digital network ("ISDN"),[(6)] ADSL, or HDSL. Lastly, the tariff provides for other link designs, to be handled on a bona fide request basis (set forth in Part A, Section 2). See Part A, Section 5.4.1.A.5. Several CLECs argue that Verizon's proposed definitions are overly restrictive and discriminatory (MA CLEC Alliance Brief at 3-5; Rhythms Brief at 7-10).

b. Positions of Parties

i. Verizon

Verizon argues that its definitions for ADSL and HDSL are consistent with industry standards and the FCC's Line Sharing Order (Verizon Reply Brief at 2-3). According to Verizon, its inclusion of both transmission speeds and loop lengths in its proposed tariff is not arbitrary but, rather, is based on accepted industry standards and technical limitations (id. at 3). During an evidentiary hearing, a Verizon witness stated that while it guarantees the transmission speeds stated in the proposed tariff, a CLEC could always "try higher speeds as long as they stay within the power-spectrum density mass" (Tr. at 36). Lastly, Verizon notes that since all data service providers, including Verizon's data

affiliate,[(7)] would be subject to the same loop engineering standards, there can be no discrimination; therefore, there is no reasonable basis for eliminating these technical specifications from the tariff (Verizon Reply Brief at 3).

ii. CLECs

The MA CLEC Alliance argues that while Verizon's retail xDSL service, Infospeed, permits speeds up to 7.1 Mbps downstream (i.e., to the customer) and 680 kbps upstream (i.e., from the customer), the proposed tariff provides slower transmission speeds for competitors that use the same loop (MA CLEC Alliance Brief at 3, citing Exh. RLI/CVD-1, at 21). In addition, according to the MA CLEC Alliance, Verizon's proposed tariff restricts xDSL offerings to either ADSL or HDSL for certain loop lengths, in violation of FCC rules that prohibit an ILEC from imposing "limitations, restrictions, or requirements on requests for, or the use of, unbundled network elements that would impair the ability of a requesting telecommunications carrier to offer a telecommunications service in the manner the requesting telecommunications carrier intends" (id. at 3-4 n.4, citing 47 C.F.R. § 51.309(a)). Finally, the MA CLEC Alliance opposes Verizon's proposed limitations on the ability of CLECs to use enhanced extended links ("EELs") to provide xDSL services (id. at 3, citing Part B, Section 13.1.1.B).

Rhythms argues that there is no basis for Verizon's arbitrary limitation on the type of xDSL that can be provisioned by CLECs (Rhythms Brief at 7). According to Rhythms, the FCC has stated repeatedly that "Section 251(c)(3) does not limit the types of telecommunications services that competitors may provide over unbundled elements to those offered by the [ILEC]" (id., citing Advanced Services Order at ¶ 53).[(8)] Simply because Verizon chooses to limit its retail xDSL service either to ADSL or HDSL, Rhythms argues, Verizon should not be permitted to limit competitors to those services only (id. at 8).

Rhythms also opposes Verizon's limitations on transmission speeds and loop lengths, arguing that Verizon's technical definitions become a means to "significantly hamper the marketability of its competitors' services" (id., citing Exh. RLI/CVD-1, at 21). Specifically, Rhythms argues that any definition tied to current technology will "impede the introduction of innovative competitive services to Massachusetts' consumers" (id. at 8-9, citing Exh. RLI/CVD-1, at 21). Moreover, Rhythms argues that if a CLEC is able to provide service using its own equipment in conjunction with Verizon's loops over distances greater than those specified by Verizon, it should be permitted to do so (id. at 9).

Rhythms urges the Department to adopt language similar to that approved by the Texas Public Utility Commission ("Texas PUC") for two-wire xDSL loops:

A 2-wire xDSL loop . . . is a loop that supports the transmission of [xDSL] technologies. The loop is a dedicated transmission facility between a distribution frame, or its equivalent, in [an ILEC's] central office and the network interface device at the customer premise. A copper loop used for such purposes will meet basic electrical standards . . .

and will not include load coils or excessive bridged taps [citation omitted]. The loop may contain repeaters at [the CLEC's] option. The loop cannot be "categorized" based on loop length and limitations cannot be placed on the length of xDSL loops. A portion of a xDSL loop may be provisioned using fiber optic facilities and necessary electronics to provide service in certain situations.

(Rhythms Brief at 10, citations omitted).

Rhythms asserts that the Texas PUC's xDSL definition promotes innovation and customer choice because it allows CLECs to deploy any xDSL technology permitted by the FCC and the Department (id.). Adoption of this definition, according to Rhythms, will afford Massachusetts consumers with access to the wide variety of xDSL services currently available in other parts of the country (id.).

c. Analysis and Findings

In its Line Sharing Order, the FCC states that ILECs are required to provide "unbundled access to the high frequency portion of the loop to any carrier that seeks to deploy any version of xDSL that is presumed to be acceptable for shared-line deployment in accordance with our rules." Line Sharing Order at ¶ 71 (emphasis added). According to the FCC, an advanced services loop technology is presumed acceptable for deployment if the technology: (1) complies with existing industry standards; (2) is approved by an industry standards body, the FCC, or any state commission; or (3) has been successfully deployed by any carrier without significantly degrading the performance of other services. 47 C.F.R.

§ 51.230(a).

The FCC has determined that several versions of xDSL currently meet the requirements of Rule § 51.230(a). "xDSL technologies that meet this presumption include ADSL, as well as Rate-Adaptive DSL ["RADSL"] and Multiple Virtual Lines (MVL) transmission systems . . ." Line Sharing Order at ¶ 71. Also in this Order, the FCC noted that ADSL subscribers will "generally experience downstream data rates from 1.54 to 6.14 Mbps, and upstream data rates from 176 to 640 kbps." Id. at ¶ 64 n.135. In requiring ILECs to condition loops[(9)] of any length for which CLECs have requested line sharing (unless such conditioning would result in the significant degradation of voice service), the FCC noted that until recently, lines over 18,000 feet were not considered amenable to xDSL transmission. However, commenters in the FCC's Line Sharing Order docket state that these very long length loops are now compatible with certain xDSL transmission technologies and "represent an opportunity for further xDSL product development." Line Sharing Order at ¶ 84.

It is clear to the Department that xDSL technology is evolving at a fast pace. Because line sharing relies on rapidly changing technology, the FCC declined to "limit the availability of line sharing to any particular technology . . . " Line Sharing Order at ¶ 70. We agree with the FCC that expressly permitting any xDSL technology that is "presumed acceptable," in conformance with 47 C.F.R. § 51.230(a), will facilitate the development and deployment of new technologies that use the high frequency spectrum of the local loop to provide consumer services. Id. at ¶ 27. Part A, Section 5.4.1.A of Verizon's proposed tariff is inconsistent with the FCC's rules by narrowly defining "xDSL links" as providing "transmission technology capable of supporting either [ADSL] or [HDSL]." In conformance with the FCC's Line Sharing Order and its rules, Verizon is directed to modify this section to indicate that a requesting telecommunications carrier may deploy any xDSL-based service that conforms to the FCC's criteria set forth in Rule § 51.230. 47 C.F.R. § 51.230(a); Line Sharing Order at

¶ 70. Verizon should only reference industry-approved and publicly-available definitions for these technologies, such as ANSI T1.413 (which provides the electrical and other characteristics of the ADSL signals appearing at the network interface),[(10)] and should not require CLECs to rely on Verizon's own internal, proprietary guidelines (see, e.g., Exh. RLI/CVD-60, containing, among other things, Verizon's TR 72575, Issue 2, for which Verizon sought and received protective treatment).[(11)] This decision will not pose any difficulty to Verizon because Verizon states that its standards "do not vary from industry standards" (Exh. DTE-BA-MA 2-3).

Verizon also has indicated that it guarantees the transmission speeds provided in Part B, Section 5.4.1.A of its tariff (Tr. at 35-36). For the reasons stated below, the Department does not think such guarantees are required or necessary; therefore, Verizon shall remove transmission speeds from its compliance filing. Verizon is required to provide unbundled access to the high frequency portion of loops so that CLECs may offer any version of xDSL presumed acceptable for line sharing deployment. Line Sharing Order at ¶ 71. If requested, Verizon is also required to condition a requested loop, regardless of the length, unless such conditioning would result in significant degradation to Verizon's voice service for that customer. Id. at ¶ 84. The FCC does not require Verizon to "guarantee" a particular transmission speed for a particular version of xDSL. As noted by the FCC, "Actual downstream transmission speed decreases . . . in relation to the distance and the number of line impairments between the user and the serving central office." Line Sharing Order at ¶ 64 n.135. CLECs are capable of advising their potential xDSL customers about what transmission speed a particular loop is capable of supporting based upon that loop's characteristics (e.g., length) and the type of equipment selected by the CLEC (see Exh. DTE-BA-MA 2-3).

In addition, the Department directs Verizon to remove loop lengths from this section of the tariff. While today's technology may not permit a CLEC to offer xDSL over a shared line in excess of 18,000 feet, that limitation may soon disappear. Therefore, it is unnecessary to include loop lengths, which may arguably be viewed as limiting Verizon's offering, in this tariff. Finally, it is not necessary for the Department to address the MA CLEC Alliance's concern with Verizon's proposed Part B, Section 13.1.1.B (concerning

EELs) in this Order (MA CLEC Alliance Brief at 3-4). This section of Verizon's tariff is outside the scope of Phase III and has already been adequately addressed in D.T.E. 98-57-Phase I at 32-33 (September 7, 2000) ("Phase I Order").

2. Significant Degradation

a. Introduction

In Part B, Section 5.4.3.B, Verizon proposes to reserve the right to "terminate the [CLEC's] link if it creates interference or impairment with other [Verizon] facilities or services." In addition, Verzion's proposed tariff provides that it will "not provide [DDL] if such conditioning is likely to degrade the voice grade service being provided to [Verizon's] end user customer over that same loop." Part B, Section 19.1.2.B.1. Lastly, Part B, Section 19.1.5.D sets forth a process whereby Verizon may remove the CLEC-provided splitter[(12)] and other advanced services equipment from the end user's loop if the customer encounters "unacceptable transmission" or cannot originate or receive voice-grade calls. Several CLECs argue Verizon's proposed tariff does not comply with FCC rules.

b. Positions of the Parties

i. Verizon

Verizon argues that its proposals affirm its ability to restore promptly a customer's voice-grade service in order to protect the integrity of Verizon's network (Verizon Reply Brief at 3). Verizon indicates that it will work cooperatively with CLECs in trouble-shooting problems, but that ultimately, the Department must decide whether to allow the CLEC or the end-user to direct Verizon to terminate the data service (id. at 4). According to Verizon, it could not meet its service obligations if it were "forced to take direction" from the CLEC, even on the voice portion of the line (id.).

ii. CLECs

DBC, the MA CLEC Alliance, and Rhythms all express concern about Verizon's proposed "unilateral" authority to terminate a CLEC's data service absent a Department ruling (DBC Brief at 7-14; MA CLEC Alliance Brief at 4-5; Rhythms Brief at 11-13). Specifically, the MA CLEC Alliance argues that federal Rule 51.230(b) provides that an ILEC may not deny a request to deploy line sharing technology unless the ILEC demonstrates to the Department that such deployment will "significantly degrade the performance" of the ILEC's voice service or other advanced services (MA CLEC Alliance Brief at 4, citing 47 C.F.R.

§ 51.230(b)). According to the MA CLEC Alliance, Verizon's proposed Part B, Section 5.4.3.B is inconsistent with this FCC rule and, thus, must be deleted (id.).

Rhythms cites another FCC rule in support of its position that Verizon's proposed Part B, Section 5.4.3.B is contrary to federal requirements. According to Rhythms, 47 C.F.R.

§ 51.233 provides that before Verizon may disconnect a CLEC's link, it must notify the CLEC and allow the CLEC a reasonable opportunity to correct the problem (Rhythms Brief at 11, citing 47 C.F.R. § 51.233). In addition, Rhythms contends that this rule directs Verizon to establish before the relevant state commission that a particular technology deployed by the CLEC is causing significant degradation to Verizon's voice service (id.). Rhythms recommends that the Department direct Verizon to demonstrate to the Department that a particular technology is causing interference before Verizon may take any action that would affect a CLEC's provisioning of service over a particular loop (id. at 13).

DBC argues that in several proposed tariff sections, Verizon attempts to usurp Department authority to resolve interference disputes between Verizon and CLECs (DBC Brief at 7). According to DBC, two sections are at odds with the FCC's rules regarding possible interference: Part B, Sections 19.1.2.B.1 and 19.1.5.D. As mentioned above, Section 19.1.2.B.1 of Verizon's proposal states that Verizon will not condition loops if such conditioning is likely to degrade the voice-grade service being provided to Verizon's end-user. DBC asserts that this provision reserves for Verizon the right to deny line sharing but is silent about the process for determining whether loop conditioning is "likely to degrade" the voice-grade service (id.). Similarly, DBC argues that Verizon's steps for addressing customer-reported trouble on Verizon's voice-grade service (Section 19.1.5.D) permit Verizon to disconnect a CLEC's splitter and terminate the CLEC's data service based on nothing more than an "undocumented, unverified report by a customer of 'trouble' in its voice service" (id. at 8).

According to DBC, the FCC's Line Sharing Order and rules make clear that Verizon has no unilateral right to determine that conditioning a loop will result in interference to its voiceband service (id.). Specifically, where loop conditioning will significantly degrade Verizon's voiceband services, Verizon must migrate its voiceband service to another loop capable of being shared or prove to the Department that (1) the original loop cannot be conditioned without significantly degrading the voiceband service on that loop and (2) no alternative loop is available (id. at 9, citing 47 C.F.R. § 51.319(h)(5)(ii)).

DBC contends that Verizon's proposal to resolve unilaterally alleged voiceband service troubles is also contrary to FCC rules (id. at 10). According to DBC, the applicable FCC rule establishes the following process: if Verizon asserts that its voiceband service on a line-shared loop is experiencing significant degradation, it must give the CLEC notice; allow the CLEC to conduct testing; provide information necessary to correct the problem; and allow the CLEC an opportunity to correct the problem. If the CLEC's efforts are unsuccessful, Verizon must then prove to the Department that the technology used by the CLEC is causing this degradation. Only after the Department agrees with Verizon about

the cause of this interference is the CLEC required to discontinue deployment of interfering technology and migrate to an alternative technology (id. at 10-11, citing 47 C.F.R. § 51.233(d) and Line Sharing Order at

¶ 208). DBC urges the Department to require Verizon to amend its tariff to incorporate the FCC's mandatory processes (id. at 13).

c. Analysis and Findings

The FCC's rules detailing the process ILECs must follow to restore service if and when their voiceband customers experience "significant degradation" of their voice-grade services are clear. Rule § 51.233 requires Verizon to notify the carrier deploying the advanced service (i.e., the CLEC) of the problem and allow the CLEC a "reasonable opportunity" to correct the problem. 47 C.F.R. § 51.233(a). If the problem remains after this opportunity, Verizon "must establish before the [Department] that a particular technology deployment is causing the significant degradation." 47 C.F.R. § 51.233(b). Moreover, Verizon's claims of network harm must be supported with specific and verifiable information. 47 C.F.R. § 51.233(c). Should the Department agree with Verizon's documented assertion of network harm, the CLEC shall discontinue deployment of that technology and migrate its customers to technologies that will not significantly degrade the performance of other such services.

47 C.F.R. § 51.233(d).

Similarly, the FCC's rules require Verizon to condition any requested loop unless such conditioning will significantly degrade, as defined in § 51.233, the voiceband services Verizon is currently providing over that loop, in which case, Verizon must either (1) locate another loop that can be conditioned, migrate the voiceband service to that loop, and provide the CLEC with access to the high frequency portion of that loop; or (2) demonstrate to the Department that the original loop cannot be conditioned without significantly degrading voiceband services on that loop, and that there is no alternative loop available that can be conditioned or to which the customer's voiceband service can be moved. 47 C.F.R.

§ 51.319(h)(5).

Verizon's proposed tariff provisions Part B, Sections 5.4.3.B, 19.1.2.B.1, and 19.1.5.D do not comply with the FCC's rules and, therefore, must be modified. Verizon does not have the unilateral right to terminate a CLEC's xDSL service absent a Department ruling. Even with a Department ruling, it is clear from the FCC's rules that the Department, not Verizon, would direct the CLEC to discontinue the service creating the degradation. Simply put, the FCC's rules do not contemplate an ILEC's unilateral termination of a CLEC's data service. Indeed, the FCC states that it is "concerned that some [ILECs] may plan to take unilateral action against allegedly interfering [CLEC] data services, rather than comply with the processes" set forth in the Advanced Services Order. Line Sharing

Order at ¶ 207. The FCC continues, "We emphasize, therefore, that [ILECs] are required to follow these procedures." Id.

During an evidentiary hearing, counsel for Verizon indicated that in several jurisdictions, Verizon and a few CLECs agreed to language similar to that proposed in its tariff, presumably amending their interconnection agreements, at least with respect to the issue of loop conditioning and significant degradation (Tr. at 13-14). Irrespective of whether certain parties reached an agreement and amended their interconnection agreements accordingly, the Department will not allow tariffed language that contradicts FCC rules to go into effect. Therefore, the Department directs Verizon to file tariff language incorporating the process set forth in the FCC rules mentioned above.

The FCC's rules are categorical and afford little flexibility. The burden they place on a state regulator to settle in a regulatory forum, with its associated delays, commercial disputes that call for dispatch in resolution, may prove quite onerous. In practice, the Department will have to dispose of such disputes with a speed consistent with the demands of the market.

B. Operations Support Systems Issues

1. Introduction

In order to provide access to the high frequency portion of the loop, ILECs, such as Verizon, must make modifications to their OSS. As the FCC summarized in its Line Sharing Order, ILECs maintain a variety of computer databases and "back-office" systems that enable ILEC employees to process customer orders more efficiently, provide the requested services to their customers, maintain and repair network facilities, and render bills. To provide these services efficiently to their customers, CLECs must have access to these databases and systems. Line Sharing Order at ¶ 93 n.213.

On or around August 1, 2000, Verizon and Telcordia Technologies ("Telcordia") contracted to upgrade Verizon's OSS so that line sharing orders may electronically flow through Verizon's systems and not drop out for manual processing (see Tr. at 486). Several CLECs argue that the Department should direct Verizon to make these OSS enhancements available in Massachusetts by a date certain (generally March 1, 2001). Verizon asserts there is no need for Department action with respect to OSS.

2. Positions of the Parties

a. Verizon

According to Verizon, there is no reason for the Department to mandate any specific schedule for the necessary OSS enhancements, which are "targeted for completion, on a staggered basis, beginning March 2001" in Pennsylvania (Verizon Brief at 32). Verizon argues that the FCC acknowledged in its Line Sharing Order that ILECs would not be able to modify fully the OSS in time for the scheduled roll-out of line sharing (id.,

citing Line Sharing Order at ¶¶ 126-130). Verizon states that the final acceptance of Telcordia's software is scheduled to occur on February 15, 2001, after which Verizon will begin deployment throughout its footprint (id. at 33).

A Verizon witness indicated that its OSS upgrades must be implemented on a region-by-region basis across its five regions (id., citing Tr. at 479). Because Verizon is mandated to modify its OSS in Pennsylvania by March 1, 2001, that region will receive the OSS enhancements first (id.). New York, located in a different Verizon region, has also requested this March 1 date (id.). Verizon argues that these upgrades require substantial work activities and that each region must be converted separately; thus, the only viable solution is to implement the updates on a staggered, monthly basis (id. at 33-34). Verizon indicates its willingness to work collaboratively with CLECs to develop a priority schedule for rolling out these OSS enhancements (id. at 33). Specifically, Verizon is willing to work with CLECs to rank the regions based on order of preference for this OSS roll-out (id. at 34).

b. Attorney General and CLECs

The Attorney General, ASCENT, DBC, and Rhythms oppose Verizon's suggestion not to mandate a date certain for implementation of the OSS upgrades in Massachusetts. The Attorney General requests that the Department order Verizon to implement the line sharing OSS enhancements no later than April 1, 2001, to "ensure that Massachusetts will be next in line after Pennsylvania" to receive these upgrades (Attorney General Brief at 11). The Attorney General argues that if the Department does not mandate this due date, if not an earlier one, "Massachusetts consumers will experience increased delays because their orders will be processed manually, rather than mechanically" (id.). ASCENT also supports this April 1, 2001, deadline and notes the importance of establishing a due date as a target (ASCENT Reply Brief at 11). According to ASCENT, if Verizon is unable to meet this deadline for a good reason, then it can so explain to the Department (id.). However, ASCENT argues, if the Department fails to set a deadline and Verizon unduly delays its OSS upgrades, restrictions on the roll-out of advanced services in Massachusetts may result (id.).

Rhythms argues that Verizon has provided, at most, only unsupported claims that it could not implement the OSS enhancements at the same time Verizon provides them in Pennsylvania (Rhythms Brief at 35). Rhythms suggests that Verizon is telling the Department that the Department is unable to direct Verizon as to when the OSS upgrades will be made in Massachusetts, resulting in Massachusetts being treated as "second-class" behind other states (Rhythms Reply Brief at 24). DBC urges the Department to direct Verizon to make its Loop Facility Assignment and Control System ("LFACS") database[(13)] available immediately to CLECs and notes that the FCC found no technical reason why ILECs could not resolve operational issues, including OSS modifications, to provide unbundled access to the high frequency portion of the loop by June 6, 2000 (DBC Brief at 40, citing Line Sharing Order

at ¶ 130).

3. Analysis and Findings

The Department directs Verizon to implement the necessary OSS enhancements in Massachusetts no later than April 1, 2001, or if Pennsylvania's implementation date slips from March 1, 2001, no later than one month after implementation in Pennsylvania. Verizon's OSS expert testified that this date is feasible for Massachusetts (Tr. at 484-485). While Verizon argues that it is unable to roll-out the OSS upgrades throughout its footprint in the compressed period of time advocated by several CLECs, and that pressuring Verizon to do so will only result in system errors, it appears this inability is largely or entirely due to Verizon's current personnel constraints (Tr. at 479-481). According to Verizon's witness, it uses the same work group to perform the software installation region-by-region (Tr. at 481). Verizon has not explained why it could not use other Verizon software personnel to perform this installation in Massachusetts.

Verizon was put on notice last December, when the FCC's Line Sharing Order was released, that certain OSS modifications would have to be made to permit unbundled access to the high frequency portion of the loop. In that Order, the FCC stated that ILEC arguments that OSS issues will take at least twelve months to resolve to provide unbundled access to the high frequency portion of the loop are "significantly overstated" and that its record shows that ILECs should be able to implement necessary system changes within 180 days from release of the Order. Line Sharing Order at ¶¶ 96, 130.

The Department does not fault Verizon for not having these upgrades in place today. We recognize that the underlying technical issues are difficult ones,[(14)] requiring necessary input from CLECs, which has occurred through the regional OSS collaborative overseen by the New York Public Service Commission ("NYPSC"), and Verizon's vendor.[(15)] This consultation has been time-consuming but appears to have been productive. If Verizon adheres to the milestones it set to implement Telcordia's software releases (see Exh. DTE-BA-MA 1-15) an April 1, 2001 roll-out in Massachusetts should be feasible according to Verizon's witness, particularly since it will have made these upgrades already in Pennsylvania (and, possibly, New York). If, however, Pennsylvania's implementation date slips from March 1, 2001, we will likewise give Verizon a corresponding addition of one month to implement the OSS upgrades in Massachusetts.

We decline the suggestion of some CLECs to direct Verizon to make these enhancements available in Massachusetts by March 1, 2001. We are persuaded by Verizon's witness that the March 1 deadline provides Verizon with approximately one month less than it normally requires to test the software in its production environment (Tr. at 479-480). The Department has concerns about requiring Verizon to "cut" this software live, as opposed to testing it for one month (Tr. at 480). The Department finds that CLECs operating in Massachusetts will be well-served by allowing Verizon to test the OSS enhancements, either in a production environment or through actual experience in other Verizon regions, for one and a half months (i.e., from February 15 to April 1, 2000) in order to catch and remedy any software glitches.

In the regional OSS collaborative, Verizon and CLECs continue to discuss access to loop information, one option of which is direct access to LFACS (Exh. DTE-BA-MA 2-18; Tr. 495-496). Because the decision on which option to obtain more information about loop and terminal makeup and system type is squarely before CLECs, we find it would be counter-productive to make that decision for the CLECs, which is what DBC urges us to do (DBC Brief at 40). Therefore, we decline DBC's request to direct Verizon to make LFACS available immediately to CLECs.

C. Splitter Ownership and Placement

1. Introduction

The FCC notes that a splitter's primary function is to separate the high frequency (xDSL signals) from the low frequency (voiceband) analog signals traversing the copper loop. Line Sharing Order at ¶ 9 n.11. Splitters are installed at each end of the customer's loop to accomplish this operation. Id. at ¶ 66. One splitter is installed at the customer's premises and the other splitter is placed at the central office or RT. Id. Specifically, the splitter "bifurcates the digital and voiceband signals concurrently traversing the local loop, directing the voiceband signals through a pair of copper wires to the Class 5 switch, and directing the digital traffic through another pair of copper wires to a DSLAM [Digital Subscriber Line Access Multiplexer] attached to the packet-switched network." Id.

The FCC's Order permits ILECs to "maintain control over the loop and splitter equipment and functions," or permits CLECs to own and collocate their own splitters in the ILEC's central office. Id. at ¶¶ 76, 79. Verizon's proposed tariff provides for two splitter placement options, both of which require the CLEC to purchase and collocate its splitter in Verizon's central office. In the so-called Option A splitter arrangement, the CLEC purchases and installs the splitter in its collocation cage (Exh. VZ-MA-2, at 56). Under the Option C arrangement, the CLEC purchases the splitter and transfers ownership of it to Verizon for a nominal amount (id. at 54). Under Option C, the splitter is installed by Verizon in the common space of its central office (id.). In addition, the splitter is maintained by Verizon in the Option C scenario (id.). Several CLECs ask the Department to direct Verizon to purchase the splitter and make it available to requesting CLECs. In addition, CLECs ask that the Department require Verizon to permit CLECs to mount their splitters directly onto Verizon's main distribution frame ("MDF"). Verizon opposes these requests.

2. Positions of the Parties

a. Verizon

Verizon argues that under applicable federal court precedent and FCC rules, Verizon cannot be required to own splitters for CLEC use (Verizon Reply Brief at 33). Specifically, Verizon asserts that there is nothing in the Act, the FCC's regulations, or its UNE Remand Order or Line Sharing Order that supports the CLECs' argument that the ILECs' obligation to provide unbundled access to the high frequency portion of the loop includes the obligation to own and provide splitters for CLECs (Verizon Brief at 21). If this logic were followed, Verizon argues, and ILECs were required to provide "all equipment that might be useful in utilizing a network element, [ILECs] would have an obligation to provide all of the equipment that CLECs currently own and locate in their collocation cages and Points of Presence" (id.).

Verizon points to several federal court decisions, which, it argues, make clear that

§ 251(c)(3) of the Act requires unbundled access only to an ILEC's existing network, and not to a yet unbuilt, superior one (id. at 20, citing Iowa Utilities Board v. FCC).[(16)] More recently, according to Verizon, a federal district court reaffirmed the Eighth Circuit's conclusion that "'delay and higher costs for new entrants . . . [that may] impede entry by [CLECs] and delay competition' cannot be used by the FCC to overcome statutory terms in the [Act]" (id., citing GTE Service Corp. v. FCC).[(17)]

Neither the Line Sharing Order nor the SBC Texas Order,[(18)] Verizon argues, requires it to purchase splitters (id. at 22). Verizon states that in the former Order, the FCC states that ILECs "may maintain control over the loop and splitter equipment, if desired" (id., citing Line Sharing Order at ¶ 76). Verizon argues that in the latter Order, the FCC "squarely rejected the same arguments" CLECs raise here before the Department regarding Verizon's obligation to own splitters (id. at 22). Verizon cites the following language from the FCC's SBC Texas Order to support its position: "The [FCC] has never exercised its legislative rulemaking authority under section 251(d)(2) to require [ILECs] to provide access to the splitter, and [ILECs] therefore have no current obligation to make the splitter available," and "[t]he UNE Remand Order cannot be fairly read to impose on [ILECs] an obligation to provide access to their splitters" (id. at 22-23, citing SBC Texas Order at ¶¶ 327-328).

According to Verizon, if the Department were to consider ordering Verizon to purchase splitters for CLECs, FCC Orders require the Department to perform the analysis set forth in federal Rule 317(b)(2), which requires a thorough review of such issues as cost, timeliness, quality, ubiquity, and impact on network operations (id. at 24). Verizon argues that CLECs have not demonstrated that they will be "impaired" if Verizon does not own splitters and supply access to CLECs on a line-at-a-time or shelf-at-a-time basis[(19)] (id. at 26). Verizon also contends that CLEC arguments in support of ILEC splitter ownership do not meet the public policy concerns outlined in Rule 317(c), which include whether unbundling the network element promotes the rapid introduction of competition and promotes innovation and investment (id. at 27).

Finally, Verizon argues that there are no MDF mountable splitters that are compliant with Network Equipment and Building Specifications ("NEBS") on the market (Verizon Reply Brief at 14, citing Tr. at 784). Moreover, Verizon argues that it needs to conserve space on its MDFs for providing basic local exchange service, an argument that Verizon notes was supported by a federal appellate court (Verizon Brief at 60, citing GTE Services Corporation v. FCC, Nos. 99-1176, 99-1201, 200 U.S. App. Lexis 4111 (D.C. Circuit, March 17, 2000)). For these reasons and because, according to Verizon, the FCC does not require ILECs to permit MDF-mounted splitters, the Department should deny the CLEC request to mount their splitters directly onto Verizon's MDF (Verizon Reply Brief at 14).

b. CLECs

ASCENT, AT&T, Covad, Rhythms, Sprint, and WorldCom all request that the Department direct Verizon to purchase splitters for their usage. ASCENT contends that CLEC access to Verizon-owned splitters is technically feasible, noting it is apparently done in other states (ASCENT Reply Comments at 9). Moreover, requiring CLECs to purchase their own splitters is inefficient, according to ASCENT, especially since CLECs would be required to purchase equipment beyond their needs (id.). ASCENT argues that such a Department directive would be consistent with the Act and with FCC Orders and that failure to require Verizon splitter ownership would improperly shift the burden of providing access to the high frequency portion of the loop to CLECs, giving a competitive advantage to Verizon (id. at 9-10).

AT&T argues that the Department should direct Verizon to make splitters available to CLECs on a per-line basis (AT&T Brief at 6). According to AT&T, this arrangement is both technically feasible and is more efficient (id.). AT&T contends that Verizon's rationale for not providing splitters (i.e., it would have to develop appropriate business rules), is a "red herring" (id.). According to AT&T, the development of new business rules is something that Verizon must do for each and every UNE and UNE combination; the fact that new rules may be required is not a reason for Verizon to refuse to enable line splitting to be provided in the most efficient manner (id.).[(20)]

Covad argues that Verizon has a legal obligation under federal law to provide splitters to requesting CLECs (Covad Brief at 12). Covad states that § 51.319(h)(4) gives ILECs the option to control splitters, but requires ILECs to "provide splitter functionality" to CLECs (id., citing 47 C.F.R. § 51.319(h)(4)). In addition, Covad argues that the Bell Atlantic/GTE merger conditions prevent Verizon from owning splitters for its own use, all of which must be transferred to its data affiliate; thus, Verizon's argument about confusion and unnecessary operational complexities in distinguishing between Verizon-owned and CLEC-owned splitters is overstated (id.). Covad also disagrees with Verizon's concerns about maintaining an inventory of splitters, arguing that the Department could

require CLECs to agree upon one model or type of splitter that Verizon would be required to provide (id. at 12-13). In addressing Verizon's stranded investment argument, Covad states that the Department could direct CLECs to commit to using the agreed-upon splitter for a certain period of time whenever CLECs purchase splitter capacity from Verizon (id. at 13).

Like other CLECs, Rhythms argues that Verizon ownership and management of the splitter is technically feasible (Rhythms Brief at 32). Rhythms argues further that if Verizon were to offer splitters on a per line and per shelf basis, splitter utilization and management would be improved (id. at 33). According to Rhythms, this option, which would allow CLECs to buy splitters in varying quantities, would give CLECs the necessary flexibility to minimize costs, provide service efficiently, and implement their individual business plans (id.). In response to Verizon's statements that federal case law and FCC rules prevent the Department from directing it to purchase splitters for CLECs, Rhythms argues that the only relevant provision of law on this subject is the "Department's statutory right to unbundle additional network elements as it sees fit to establish and maintain competition" (id. at 21-22, citing 47 U.S.C. § 251(d)(3)).

WorldCom supports directing Verizon to purchase and make available to CLECs its splitters on a per shelf and per line basis (WorldCom Brief at 9). According to WorldCom, the FCC noted that arguments made "in favor of ILEC-owned splitters 'merit prompt and thorough consideration by the [FCC],' which the FCC will undertake in its review of petitions for reconsideration of the UNE Remand Order" (id. at 10, citing SBC Texas Order at ¶ 328). Moreover, WorldCom argues that the Line Sharing Order specifically contemplates additional state-imposed unbundling requirements and permits states to do so in a manner consistent with other FCC Orders (id. at 11, citing Line Sharing Order at ¶ 223).

Finally, Rhythms argues that the Department should direct Verizon to permit MDF-mounted splitters because such splitters are NEBS-compliant and do not impede Verizon's ability to conserve space on its MDF (Rhythms Brief at 93, citing Exh. RLI/CVD-1).

3. Analysis and Findings

The Department will not direct Verizon to purchase splitters for use by CLECs. The FCC's rules and Orders are clear: ILECs, such as Verizon, may provide splitters for CLEC use but are not required to do so. Covad argues that 47 C.F.R. § 51.319(h)(4)[(21)] legally obligates Verizon to purchase splitters. We disagree. First, Verizon is correct that Covad's interpretation of this rule is "contrary to the well-settled principle of statutory construction that one phrase of a provision cannot negate the direct intent of another phrase of the provision" (Verizon Reply Brief at 33 n.34). Second, the FCC's Order states clearly that "both the [ILECs] and the [CLECs] agree that subject to certain obligations, the [ILEC] may maintain control over the loop and splitter functionality if desired." Line Sharing Order at ¶ 76 (emphasis added). Covad's argument that the FCC's rules make

ILEC splitter ownership discretionary but access to splitter functionality mandatory, cannot be supported by the plain language of the Line Sharing Order.

Based upon the record before it, it appears that the FCC assumed ILECs would want to maintain control over splitters. Various ILECs raised concerns about voiceband service degradation and an inability to properly "police" data services if CLECs owned and controlled splitters for line sharing arrangements. See Line Sharing Order at ¶ 76 n.169. Indeed, the majority of the FCC's splitter ownership discussion in the Line Sharing Order is about the obligations of ILECs should they seek to control the splitter (e.g., no delays in procuring necessary equipment, informing CLEC when equipment will be installed). Line Sharing Order at ¶ 77. In its Order approving Southwestern Bell's § 271 application for Texas, the FCC states, "The [FCC] has never exercised its legislative rulemaking authority under section 251(d)(2) to require [ILECs] to provide access to the splitter, and [ILECs] therefore have no current obligation to make the splitter available." The FCC further noted: "The UNE Remand Order cannot be fairly read to impose on [ILECs] an obligation to provide access to their splitters;" and "we stated in the Line Sharing Order that [ILECs] have discretion to maintain control over the splitter." SBC Texas Order at ¶¶ 327-329.

There is no ambiguity about whether the FCC has made access to an ILEC splitter an unbundled network element. It clearly has not. Therefore, in order for the Department to direct Verizon to purchase splitters for use by CLECs -- that is, to require the unbundling of an additional network element -- the Department would have to perform the analysis set forth in 47 C.F.R. § 51.317. As mentioned in Verizon's brief, this analysis includes a review of such factors as: whether a requesting carrier's ability to provide the service it seeks to offer is "materially diminished" by not having access to this element; the costs a requesting carrier may incur absent this requested element; when the carrier may enter the market without access to the requested element; the quality and availability of the alternatives to this requested element; and the impact on network operations of using an alternative. 47 C.F.R. § 51.317(b). Section 51.317(c) sets forth additional factors the FCC, or a state commission, may use in making this determination, including, will the unbundling of this element promote the rapid growth of competition; and investment, innovation and facilities-based competition. 47 C.F.R. § 51.317(c).

The CLECs have not provided the Department with the information needed to perform this analysis. Conclusory statements about certain splitter capacity management efficiencies that Verizon may have or the buying power that Verizon may have do not create a sufficient factual record (see, e.g., Exh. RLI/CVD-1, at 57-58). Should the FCC, upon reconsideration of its UNE Remand Order, declare splitters either part of an existing or a new UNE, the Department can direct Verizon to amend its tariff accordingly. Until such time, however, the Department finds it unnecessary to address CLEC requests for per line or per shelf access to Verizon's splitters. Witnesses for both Covad and Rhythms stated that it is technically feasible for CLECs to make available to other CLECs their splitters on a line-by-line or shelf-by-shelf basis (Tr. at 461-463).

Finally, the Department rejects the CLECs' request to direct Verizon to permit CLECs to mount their splitters directly on Verizon's MDF. Contrary to Rhythms' assertion that it has "thoroughly and completely refuted" Verizon's NEBS-compliant argument, it has provided no evidence that such splitters are NEBS-compliant (see Rhythms Brief at 93, citing Exh. RLI/CVD-1). According to Verizon, the only MDF-mounted splitter compatible with Verizon's frame is not NEBS-compliant because such splitters have failed NEBS safety requirements (Exh. VZ-MA-4, at 27; Exh. DTE-BA-MA 2-12). There is nothing in our record that rebuts Verizon's statements. Unrebutted, these statements have credibility and substance as evidence. When it is shown that MDF-mounted splitters that are compatible with Verizon's frame meet the appropriate safety standards, the Department would be willing to revisit its decision.

D. Line Splitting

1. Introduction

As stated most recently in its SBC Texas Order, the FCC notes that "the obligation of an [ILEC] to make the high frequency portion of the loop separately available is limited to those instances in which the [ILEC] is providing, and continues to provide, voice service on the particular loop to which the [CLEC] seeks access." SBC Texas Order at ¶ 324. Thus, the term "line sharing" is used to describe a situation where the ILEC and a CLEC use the same loop to provide separate services. The term "line splitting" is used by the FCC to characterize the provisioning of both voice and data services over a single loop by a CLEC, through the UNE-Platform ("UNE-P"). Id. According to the Line Sharing Order, ILECs are "not required to provide line sharing to [CLECs] that are purchasing a combination of network elements known as the platform. In that circumstance, the [ILEC] no longer is the voice provider." Line Sharing Order at ¶ 72. Verizon argues that it is not required to offer or permit "line splitting." Several CLECs disagree.

There is not consistent usage among the parties about terminology and definitions; therefore, specification of how the Department uses certain terms is in order. As mentioned above, the FCC stated that "line sharing" is limited to an arrangement where an ILEC is providing and continues to provide voice service over a loop and shares the same loop with a single data CLEC. Line Sharing Order at ¶¶ 72-75; SBC Texas Order at ¶ 324. "Line splitting" is an arrangement where a CLEC, and not the ILEC, provides both the voice and data service over a single loop. SBC Texas Order at ¶ 324. Verizon uses the term "line sharing on UNE-P" to describe an arrangement where a voice CLEC and a data CLEC share a single loop. For this same arrangement, Rhythms uses the term, "line splitting on UNE-P." In order to avoid confusion between line sharing and line splitting, we will refer to this scenario as "line sharing between two CLECs."

2. Positions of the Parties

a. Verizon

Verizon asserts that the SBC Texas Order makes clear that ILECs do not have a legal obligation to provide line splitting or line sharing between two CLECs (Verizon Reply Brief

at 34). Contrary to arguments made by AT&T and WorldCom, Verizon contends that it has no obligation to preserve a CLEC's UNE-P arrangement should that CLEC decide it would like to offer data, as well as voice, over that loop (id. at 35). Rather, Verizon argues, the SBC Texas Order states that a CLEC can order "an unbundled xDSL-capable loop terminated to a collocated splitter and DSLAM equipment and unbundled switching combined with shared transport to replace its UNE-P with a configuration that allows provisioning of both data and voice service" (id. at 36, citing SBC Texas Order at ¶ 325). This language, Verizon argues, indicates that the FCC did not envision that a UNE-P arrangement would remain in place after the provisioning of line splitting (id.). Therefore, Verizon urges the Department to reject AT&T's and WorldCom's argument that Verizon has to preserve the UNE-P arrangement in conjunction with line splitting (id.).

According to Verizon, its obligation to provide "line sharing" is limited just to those instances where it is providing, and continues to provide, voice service on the particular loop to which the requesting carrier seeks access (Verizon Brief at 34-36, citing Line Sharing Order at ¶ 72; SBC Texas Order at ¶¶ 320-329). However, Verizon notes that discussions to facilitate line splitting and line sharing between two CLECs are underway in the New York and Verizon will continue to work with the CLECs to resolve this matter (Verizon Brief at 38, citing Tr. at 206-210).

b. CLECs

AT&T argues that ILECs have an additional obligation to permit CLECs to engage in line sharing between two CLECs (AT&T Reply Brief at 3, citing SBC Texas Order at ¶ 325). According to AT&T, this obligation to facilitate line sharing between two CLECs flows directly from Verizon's obligation under the Act to provide CLECs with non-discriminatory access to all "features, functions, and capabilities" of network elements, including the loop (id.). AT&T argues that when a CLEC leases a loop as part of a UNE-P arrangement, it is entitled to use all capabilities of that loop, including the high frequency spectrum (id.).

AT&T and WorldCom argue that when a customer who currently receives xDSL service from a data CLEC under a line sharing arrangement with Verizon wants to migrate his or her voice service to a CLEC using UNE-P, but continue to receive xDSL services from the same data CLEC, the voice service can be electronically migrated without any disruption or dismemberment of facilities. AT&T and WorldCom insist that Verizon's offer to permit the UNE-P provider to migrate its UNE-P configuration to an unbundled xDSL-capable loop and unbundled switch port at a collocation node provided by that CLEC or another CLEC does not preserve the UNE-P arrangement, and, thus, prevents voice CLECs from engaging in line-splitting (AT&T Reply Brief at 4-5, citing Tr. at 224-225, 237; WorldCom Reply Brief at 2). According to AT&T, a Verizon requirement for

unnecessary re-wiring and disconnection is discriminatory (AT&T Reply Brief at 4-5). Lastly, AT&T and WorldCom claim that Verizon must offer line splitting functionality to CLECs on a line-at-a-time basis (AT&T Reply Brief at 7; WorldCom Reply Brief at 2).

Rhythms argues that a customer obtaining voice service from a CLEC through UNE-P is entitled to obtain xDSL service from a data CLEC, and, thus, the Department should require Verizon to implement line sharing between two CLECs (Rhythms Reply Brief at 32-34). Sprint and ASCENT also urge the Department to order Verizon to provide xDSL service where a CLEC is providing voice service through UNE-P or on resold lines (Sprint Brief at

5-6; ASCENT Reply Brief at 4).

3. Analysis and Findings

In the SBC Texas Order at ¶ 325, the FCC states that ILECs have an obligation to permit competing carriers to engage in line splitting where the competing carrier purchases the entire loop and provides its own splitter. The FCC states that in order for a competing UNE-P carrier to provision both data and voice service over the same loop, it can order the loop portion of the existing UNE-P as an unbundled, xDSL-capable loop terminated to a collocated splitter and DSLAM equipment along with unbundled switching combined with shared transport to "replace its UNE-P." SBC Texas Order at ¶ 325. Verizon states, and we agree, that it permits CLECs to engage in line splitting exactly as described in the SBC Texas Order (Exh. DTE-BA-MA 1-19). Therefore, we find that Verizon has met its obligation to provide "line splitting." AT&T and WorldCom argue that the voice service can be electronically migrated without any disruption or dismemberment of facilities, and, therefore, UNE-P must remain intact in line splitting. However, the argument AT&T and WorldCom use to support their claim that UNE-P migration is possible without disruption is based on line sharing between two CLECs, and not line splitting as defined by the FCC.[(22)] In addition, AT&T and WorldCom do not rebut Verizon's argument that a UNE-P arrangement no longer exists under a line splitting arrangement. We agree with Verizon that the SBC Texas Order at ¶ 325 states that a line splitting configuration replaces a UNE-P arrangement, and not that a UNE-P arrangement remains in place after the provisioning of line splitting. Therefore, the Department rejects the CLECs' request to permit a CLEC's UNE-P arrangement to remain intact after line splitting.

AT&T and WorldCom also claim that Verizon must offer line splitting functionality to CLECs on a line-at-a-time basis. This argument is premised on the assumption that Verizon is required to provide CLECs with access to Verizon's splitter, which, as we decided above in section III.C, is incorrect. The FCC states that its UNE Remand Order cannot "fairly be read to impose on [ILECs] an obligation to provide access to their splitters." SBC Texas Order

at ¶ 328. Similarly, the FCC states that it has not imposed any obligation on ILECs to provide access to their splitters in a line splitting arrangement. Therefore, we deny AT&T's and WorldCom's requests. See SBC Texas Order at ¶ 329.

With respect to Rhythms' argument that Verizon must provide line sharing between two CLECs, the FCC states that when the customer, for whatever reason, voluntarily terminates its ILEC-provided voice service on the shared loop, or if the ILEC disconnects the customer's voice service in compliance with applicable federal, state and local law (e.g., the customer does not pay its local voice telephone bill), the data CLEC must purchase the entire unbundled loop. Line Sharing Order at ¶¶ 72-73. Although the FCC states that, in such cases, the data CLEC may enter into a voluntary line sharing agreement with a voice CLEC, the FCC does not make this arrangement the ILEC's obligation. We agree with Verizon that it is not obligated to provide line sharing between two CLECs. Line Sharing Order at ¶73. The FCC has emphasized numerous times that an ILEC is required to provide line sharing only when it is the voice service provider. In addition, Verizon indicated that it is working with CLECs to resolve technical and operational issues on this matter in the New York collaborative. We expect Verizon to import whatever technical and operational resolutions are reached in New York to Massachusetts (see Exh. VZ-MA-3, at 4, 14, in which Verizon commits to implement in Massachusetts any resolutions reached in the New York collaborative). Therefore, we reject Rhythms' request.

E. Intervals

1. Provisioning and Loop Conditioning Intervals

a. Introduction

Part A, Section 3.2.10.A of Verizon's proposed tariff states that Verizon will provision one to nine line-shared loops within six business days, and for orders of ten or more line-shared loops, the provisioning interval is negotiated. Verizon states that this interval applies to both its unbundled xDSL stand-alone loop offering and its retail ADSL service (Verizon Brief at 6). For loop conditioning, Part A, Section 3.2.3.7 of Verizon's tariff proposes a 15 business-day interval. In contrast, several CLECs support a staggered provisioning interval, beginning with three business days upon issuance of the Order in this proceeding and decreasing to one business day after a certain period of time (Rhythms Brief at 16; Covad Brief at 2; DBC Brief at 22). In addition, Covad proposes a loop conditioning interval of five business days (Covad Brief at 2).

b. Positions of the Parties

i. Verizon

Verizon argues that the FCC makes clear in its Line Sharing Order that the most appropriate line sharing interval to apply "at the outset" of line sharing is the provisioning interval applicable to Verizon's stand-alone xDSL loop offering, and that the FCC encourages states to require ILECs to fulfill requests for line sharing within the same interval that the ILEC provisions xDSL to its own retail or wholesale customers (Verizon Brief at 7-8, citing Line Sharing Order at ¶¶ 171-174). Verizon contends that the CLECs' highly accelerated proposed interval is flawed for several reasons (Verizon Brief at 8). First, several CLECs claim that the work involved in provisioning a line-shared loop requires a mere ten minutes of wiring work in the central office (id. at 9). Verizon argues that this assertion ignores the fact that provisioning work is far more involved than a few simple cross-connects made in the central office (id.). Specifically, Verizon states it must perform significant "front end ordering" work, which goes through a number of OSS and service centers (id.). Among other things, these service centers: identify and verify the assigned cable and pair to be shared and the tie cables to be used; update inventories for maintenance and network management; update retail records to reflect the shared use of the line; and update billing systems (id.).

According to Verizon, the CLECs also fail to account for the "force to load"[(23)] allocation that must be performed (id.). Verizon argues that its Work Force Administrator ("WFA") must assign a technician to perform the wiring work in the central office for every line sharing order, a fact that becomes more complicated if this work is to be performed in an unmanned central office (id. at 9-10). Verizon states that one consideration in its "force to load" balancing is an attempt to make the dispatches to unmanned offices more efficient by having the technicians perform as many jobs as possible (id. at 10). Verizon mentions that pair swaps[(24)] may also build additional time into the provisioning process (id.). While CLECs may argue that no outside dispatch is necessary to provision line sharing orders, Verizon contends that "until further experience is gained," it does not know the percentage of line sharing orders that will require an outside dispatch (id. at 9). In fact, Verizon notes that dispatches were required for approximately one-quarter of its retail Infospeed orders (Verizon Reply Brief at 27, citations omitted).

According to Verizon, CLEC errors, such as incorrect information on service orders, or CLEC practices, such as frequently changing the facilities assignment, create delays in processing orders and divert the attention of Verizon's employees from processing "clean" CLEC orders (Verizon Brief at 10). Verizon notes that other examples of situations creating delays include: the telephone number cannot be found in Verizon's systems; the cable and pair cannot be found; the slot on the splitter requested by the CLEC is already taken; and the loop turns out to be unqualified, even though the local service request indicates that it is qualified (id.). Moreover, Verizon argues that CLECs also ignore the necessary "back end" testing that must be completed to ensure that the work was provisioned properly and to avoid mis-wiring the circuit (id. at 9, 11).

Verizon contends that the fact that certain work activities may be completed within a discrete period of time is not indicative of the full length of time it takes to provision an average line sharing order (Verizon Reply Brief at 28). Verizon argues that while the FCC permits state commissions to adopt "more accurate provisioning standards" for line sharing, the "3-2-1" interval (see discussion below) proposed by the CLECs is not "more accurate." Until further experience is gained in provisioning these orders, Verizon asserts that the evidence in this proceeding supports its proposed six business-day interval (id. at 26).

As it gains experience and after the OSS upgrades are implemented, Verizon indicates it hopes to decrease the provisioning interval (Verizon Brief at 13). However, Verizon argues, attempting to meet an "unrealistically short interval" during the next few months, as proposed by several CLECs, would only jeopardize Verizon's efforts to provide a "quality turn-up" of the provisioning of shared loops (id.). Verizon urges the Department to approve Verizon's proposed interval, which will ensure parity of performance with the provisioning of stand-alone loops, and which will be applied on a non-discriminatory basis both to the CLECs and Verizon's data affiliate (id.).

Verizon asserts that 15 business days to condition loops is the appropriate interval that should be adopted by the Department. Verizon claims that, in many cases, this conditioning work is equivalent to a full construction job, and plant must be reconstructed at numerous locations and over several miles (Exh. VZ-MA-4, at 19).

ii. Attorney General and CLECs

The Attorney General notes that a Verizon witness acknowledged during the evidentiary hearing that a five business-day provisioning interval can be achieved by January 1, 2001, when Verizon's data affiliate is expected to begin operating in Massachusetts (Attorney General Brief at 9, citing Tr. at 156). Furthermore, the Attorney General contends that Verizon agreed to consider further reductions to this interval as it gains line sharing experience (id., citing Exh. VZ-MA-4, at 14). The Attorney General urges the Department to reduce the provisioning interval accordingly (id. at 9-10).

Covad, Rhythms, Vitts, DBC, WorldCom, and Sprint argue that the tasks involved in provisioning line sharing are much simpler than provisioning stand-alone xDSL loops and, therefore, a staggered 3-2-1 calendar-day interval is more reasonable. In other words, the initial provisioning interval should be three (3) calendar days; after a certain period of time, the interval should be reduced to two (2) calendar days; and after an additional amount of time, the interval should be reduced to one (1) calendar day. Covad argues that unlike stand-alone xDSL loops, the physical work needed to provision line sharing takes place entirely in the central office and can be completed in a matter of minutes (Covad Brief at 3). Covad states that even if Verizon alleges that a dispatch is required for unmanned central offices, only a minority of Verizon's lines (16 percent) are

served by such central offices (Covad Reply Brief at 6-7, citing Exh. RLI/CVD-108). Covad urges the Department not to adopt Verizon's longer proposed interval simply to accommodate a few orders that may require a dispatch but, instead, to establish separate intervals for dispatched and non-dispatched orders (Covad Reply Brief at 6-7). In fact, Covad contends that Verizon's data show that the percentage of its Infospeed orders requiring a dispatch has been decreasing sharply[(25)] (Covad Reply Brief at 6).

Covad proposes a five business-day interval for line sharing arrangements that require loop conditioning (Covad Brief at 7). Covad claims that while Verizon has to dispatch a technician into the field to perform conditioning, there is nothing on the record that explains why performing such a dispatch would take any longer than the six business-day interval that Verizon offers for provisioning stand-alone loops, which requires a dispatch 100 percent of the time (id.).

Rhythms maintains that Verizon's proposed six-day interval was established to manage the exception rather than the rule (Rhythms Reply Brief at 9). Rhythms asserts that there is no need to dispatch a technician to do outside plant work in line sharing because the line is already working with dial-tone (Rhythms Brief at 16). According to Rhythms, the time required for a dispatch is the principal driver of the six-day interval. And despite Verizon's statements to the contrary, Rhythms argues that Verizon is unable to justify its claim that dispatches are routine (id.). For example, according to Rhythms, Verizon states that dispatches are required to remove maintenance test units ("MTUs")[(26)] from the customer's premises. However, Rhythms argues, Verizon has been unable to quantify the magnitude of this problem (id. at 17, citing RR-CVD-4). Furthermore, Rhythms argues that MTU removal is not germane to the provisioning process but, rather, is a repair issue (Rhythms Reply Brief at 10, citing Tr. at 56). Rhythms also contends that the number of lines served out of unmanned central offices is too small to justify a provisioning interval of six business-days (id. at 18, citing Exh. RLI/CVD-10). Lastly, according to Rhythms, Verizon is unable to support its claim that line and station transfers ("LSTs"), which require dispatches, would have to be performed with some frequency and would affect Verizon's ability to provision line sharing in a shorter interval (Rhythms Reply Brief at 10).

Contrary to Verizon's statements, Rhythms contends its own suggested staggered interval does recognize both front-end and back-end work that Verizon must perform to provision a line sharing order (id. at 8). However, Rhythms argues that Verizon inflates its estimates of front-end and back-end activities, and other portions of the interval, by purporting to account for a series of mistakes, interventions, and catastrophes, which are either under Verizon's control or unlikely to occur, and assigns exaggerated time periods to simple and repetitive tasks (Rhythms Reply Brief at 7-8). Rhythms states that Verizon's provisioning interval only starts once all the front-end ordering problems -- to which Verizon cites as a reason to justify a longer interval -- are resolved (id. at 8). Moreover, according to Rhythms, once Verizon has a complete order, Verizon will stop the clock when problems arise during the provisioning process until the problem is resolved (id. at 9). Rhythms also argues that Verizon further inflates this interval by allotting an excessive two full days for testing (id.).

Rhythms contends that Verizon's claim of inexperience in line sharing is belied by the fact that Verizon has been provisioning Infospeed, its retail line sharing service, for more than a year and has provisioned many thousands of shared lines (Rhythms Brief at 22, citations omitted). Rhythms asserts that the FCC contemplated that state commissions would mandate more accurate line sharing provisioning intervals as more information became available and stated that states are free and are encouraged to adopt more accurate provisioning standards for the high frequency portion of the loop (Rhythms Reply Brief at 14, citing Line Sharing Order at ¶ 175).

Rhythms contends that its Internet service provider partners are demanding shorter provisioning intervals, claiming that customers can receive cable modem service, which is a competitive alternative to xDSL, in a five-day interval. Rhythms claims that in order to remain competitive with cable modem services, Rhythms and other xDSL providers must provide their services in shorter intervals (Rhythms Brief at 22, citing Tr. at 41).

DBC supports the 3-2-1 interval proposed by Covad and Rhythms for orders of fewer than ten loops and asks the Department to establish "reasonable" intervals for larger orders (DBC Brief at 21). According to DBC, Verizon can easily meet these shorter intervals by subtracting the time Verizon has allocated to activities that do not pertain to line sharing provisioning (id. at 23). Indeed, DBC's witness testified that Verizon can "get an order and get it wired, tested, and back to the customer within one day" (id. at 24, citing Tr. at 319-320). DBC argues Verizon's testimony is "replete with possibilities and contingencies, which [Verizon] admitted that it has not tracked" (id., citing Tr. at 300). Moreover, DBC argues that Verizon's proposed "extra negotiation phase" for every order over nine lines is anti-competitive and should either be eliminated or increased to a substantially higher limit to safeguard against the potential for delay and discrimination (id. at 24-25).

WorldCom argues that the six-day interval for stand-alone loops, upon which the line-sharing interval is based, has two days built in for a cooperative testing process and time for dispatches out to the customer's premises (WorldCom Brief at 11). According to WorldCom, with line sharing, there is no need for cooperative testing or dispatches -- indeed, there is no need for any work to be done outside the central office because a functioning loop with dial tone is already in place (id. at 11-12). While WorldCom has not proposed a specific provisioning interval for line sharing, it notes that Verizon's product interval guide provides a two-day interval for UNE-P voice migrations that do not involve dispatches (id. at 12). In addition, a WorldCom subsidiary's interconnection agreement with Verizon provides for a 24-hour interval for residential plain-old-telephone-service ("POTS") orders without a dispatch, and a 48-hour interval for business POTS orders without a dispatch (id. at 12-13, citations omitted). Therefore, according to WorldCom, the provisioning interval for POTS voice migrations is a "far more appropriate benchmark" to use for line sharing than the interval for stand-alone xDSL loops, which actually require dispatches (id. at 13).

The MA CLEC Alliance argues that Verizon has not justified imposing longer intervals when a CLEC requests access to more than nine loops (MA CLEC Alliance Brief at 18).

In addition, the MA CLEC Alliance contends that Verizon should be required to apply the SMARTS clock,[(27)] as it does in provisioning other UNEs (id.). Vitts agrees with other CLECs that in requesting the six business-day interval for provisioning, Verizon has assumed the worst-case scenario for provisioning line-shared loops, and that many of the cited problems are within Verizon's control (Vitts Brief at 3). Such problems, according to Vitts, include errors by the Telecom Industry Services Ordering Center ("TISOC") representative, inaccuracies in inventory control and maintenance, and faulty stenciling of the collocation node -- none of which should "accrue to the detriment of CLECs" (id.). Vitts also argues that mistakes on the part of CLECs have no bearing on the running of this six-day interval because in the event of an error, the clock returns to day zero (id., citing Tr. at 67). Finally, Vitts argues that Verizon's claim that "force to load" considerations justify this six-day interval begs the question (Vitts Reply Brief at 2). According to Vitts, "force to load" is merely a multiplier or "time mark-up" that would be equal for line sharing and stand-alone xDSL loop provisioning (id. at 2). Therefore, if a line-shared loop involves fewer steps and less total time, which Vitts argues it does, the "force to load" multiplier yields a proportionately shorter interval (id.). Finally, Sprint and ASCENT both support shorter provisioning intervals, arguing that Verizon has not developed its proposed interval based on the work required for a line sharing arrangement (Sprint Brief at 3; ASCENT Reply Brief at 10).

c. Analysis and Findings

Verizon provided us with a detailed description of the work activities it must perform and the problems that might occur in the course of provisioning process (Tr. at 106-150). We expect some of these problems will become less frequent and, eventually, be eliminated as both CLECs and Verizon gain experience in line sharing and as Verizon's OSS is upgraded. Indeed, Verizon indicated that, through its experience with stand-alone ADSL loops in New York and in the New York collaborative, it built "more checks into the system, more steps where testing and coordination could be done, and we cleared up those problems significantly" (Tr. at 88). Although Verizon already has some experience in line sharing through provisioning its retail DSL service, the Department finds that the most reasonable option for intervals is to start with the FCC's suggested interval, i.e., an interval that is at parity with Verizon's own retail xDSL service. This is the most reasonable option because it is based on actual experience and it maintains parity between Verizon and its competitors.

Verizon's average provisioning interval for Infospeed, the most accurate analogue to the line sharing provisioning interval, has been decreasing consistently in approximately one-day increments each month, from 8.76 days (no dispatch) and 12.14 (dispatch) in April 2000 to 4.70 days (no dispatch) and 5.93(dispatch) in July 2000, while volumes have increased (Exh. DTE-BA-MA 2-9, Supp.; Exh. VZ-MA-4 at 16). Thus, the six business-day interval Verizon has proposed is no longer at parity with the provisioning interval for Infospeed, which it must be to consider Verizon's offering as non-discriminatory. Therefore, we direct Verizon to provision line-shared loops at the shorter of a) five business days; or b) the shortest average interval (using a weighted average for no dispatch/dispatch) that Verizon has achieved by the effective date of this Order.

Verizon has demonstrated significant improvement in its ability to offer Infospeed in shorter intervals, while the number of orders has increased steadily from 2,423 provisioned orders in April 2000 to 3,742 orders in July 2000 (Exh. DTE-BA-MA 2-9, Supp.). Verizon should be able to achieve a further shortening of this interval as it gains more experience and after its OSS are upgraded (see Tr. at 84). Therefore, the Department further directs Verizon to file 30 days after implementation of the OSS upgrades in Massachusetts a revised tariff setting forth an interval that is one business day shorter than the interval arrived at pursuant to the above directives. In addition, we expect that Verizon will work cooperatively with CLECs to continue to reduce this interval and that if Verizon-New York agrees, as part of the New York collaborative, to provision line sharing in a period of time that is shorter than the provisioning interval set in Massachusetts, the Department directs Verizon to file a revision to its tariff to reflect this shorter period of time (see Exh. VZ-MA-3, at 4, 14 (stating that Verizon will apply the results of the New York collaborative in Massachusetts)). This filing should be made with the Department no later than ten days after such an agreement and should be effective on the same date it is effective in New York.

The Department does not direct Verizon to create two separate intervals for dispatched and non-dispatched orders. Verizon states that it does not know whether a dispatch will be required when an order is placed (Exh. DTE-BA-MA 2-10). While there is a superficial appeal to keeping the intervals for these orders separate, based upon the record before us and absent additional information, it appears that assigning different intervals for dispatched and non-dispatched orders simply is not workable at this time. We also decline to adopt DBC's request to modify the number of loops that are subject to our standard provisioning interval (see DBC Brief at 21). According to Verizon, while it requires a negotiated interval for orders containing more than nine lines per order, a CLEC may file 100 orders for eight lines each on a single day and Verizon would still be required to provision the request within our standard provisioning interval (see Tr. at 163). The Department does not believe Verizon's negotiated interval for orders containing more than nine lines per order poses any hindrance to the deployment of line sharing.

Regarding the conditioning interval, Covad argues that since performing a dispatch takes six days for stand-alone loops, there is no reason why the dispatch to condition loops should take any longer. We find that Covad's argument is flawed. Although both provisioning stand-alone loops and conditioning loops require dispatches, the work activities the dispatched technician performs are different. If we follow Covad's reasoning, the provisioning intervals for stand-alone loops would be the same with or without conditioning. They are not. Should a stand-alone loop require conditioning so that it can support xDSL service, Verizon has proposed a 15 business-day interval. It is the same interval that Verizon has proposed for loop conditioning on a shared loop. We find nothing in the record to support Covad's argument that the provisioning interval for stand-alone loops is analogous to the time it takes to condition a loop. Therefore, we deny Covad's request.

2. Splitter and Cable Capacity Augmentation Interval

a. Introduction

Verizon's proposed tariff applies a 76 business-day interval, currently applicable to physical and virtual collocation arrangements, to splitter installations and cable augmentations. Part E, Section 2.5.1.B. CLECs oppose this interval and urge the Department to adopt a shorter period of time.

b. Positions of the Parties

i. Verizon

Verizon argues that its 76 business-day proposal for line sharing augmentations and splitter installations is appropriate because the work required is "substantially the same" as for other collocation arrangements (Verizon Brief at 14). Indeed, Verizon urges the Department to reaffirm its recently-issued decision that a 76 business-day interval is appropriate for all forms of collocation (except adjacent), augmentations included (Verizon Reply Brief at 29, citing Tariff No. 17 Order at 73). According to Verizon, contrary to the arguments made by several CLECs, the physical act of installing a splitter rack or a cable is not the main determinant of the installation time (Verizon Brief at 15). Rather, Verizon states that "surveying the space, planning the routing of cable, ordering cable and obtaining equipment, coordinating with Verizon's Central Office . . . Equipment Installers to perform the work, and coordinating with other work to be performed in a given central office consume the majority of the required time to complete a collocation job, whether it is new or an augment[ation]" (id. at 14-15). Verizon also notes that the limited number of trained technicians and the space constraints in central offices are contributing factors in this 76-day interval (Verizon Reply Brief at 31).

According to Verizon, its position is consistent with the FCC's recent rejection of Covad's proposed 45 calendar-day interval for new collocation arrangements, in which the FCC found that "While a shorter interval, such as the 45 . . . calendar day interval Covad urges, obviously would provide even quicker deployment of advanced services, we are not persuaded on this record that an interval significantly shorter than 90 days would be reasonable for many collocation arrangements."[(28)] Verizon argues the Department should likewise reject Covad's unreasonable request for a shorter interval for collocation augmentations for line sharing arrangements because the work is substantially similar (id. at 15).

Verizon contends that its experience with line sharing augmentations in New York is instructive here (id. at 15-16). These augmentations took, on average, between 45 and 75 business days to complete, and this abbreviated interval was achieved only through a level of effort that is not sustainable in the normal course of business (id. at 16). In addition, Verizon asserts that CLECs have failed to demonstrate that a shortened collocation interval serves any public or competitive purpose (id. at 18). If a CLEC were to forecast its business needs and request collocation as a normal part of its business, Verizon argues, no customer would be deprived of service for an "unacceptable period" (id.). Verizon states that CLECs requiring collocation for non-line sharing work (e.g., to

provide voiceband service) would suffer because their requests would take a "back seat" to the preference afforded CLECs with a line sharing business plan (id.).

Finally, Verizon argues that not all collocation augmentations take the full 76 business days to provision and that Verizon does not wait until the interval has elapsed before turning a collocation arrangement over to the CLEC (Verizon Reply Brief at 30, citing Tr. at 340). Rather, Verzion states that as soon as it completes a job, it turns that arrangement over to the CLEC (id.).

ii. Attorney General and CLECs

The Attorney General urges the Department to adopt the shorter of the collocation augmentation intervals adopted by the NYPSC or the Pennsylvania Public Utility Commission ("PAPUC") because "Massachusetts consumers deserve to receive DSL line sharing services at least as quickly as New York and Pennsylvania consumers" (Attorney General Brief at

9-10). DBC argues that Verzion's proposed 76-day interval is "unreasonably long, has no technical justification, and will, if approved, delay the delivery of competitive broadband services to consumers in Massachusetts" (DBC Brief at 14). Moreover, DBC states that this proposed interval is inconsistent with a recent FCC Order, in which the FCC recognized that shorter collocation intervals may be appropriate for certain types of collocation arrangements (id. at 14, 16, citing Advanced Services Reconsideration Order at ¶ 37). DBC asks the Department to adopt a 15 calendar-day interval for Option A equipment where existing equipment and facilities are used, or a 30 calendar-day interval for arrangements where the installation of new equipment and facilities is required (id. at 14, 21).

According to DBC, it intends to use Verizon's Option A, meaning it will provide and install its own splitters in its collocation cages; therefore, it argues, access to line sharing is "simply a matter of connecting Verizon's loops to [DBC's] equipment at the point of termination bay, often using pre-existing facilities" (id. at 17). The physical work required by Verizon should a CLEC select Option A is minimal, according to DBC. Furthermore, DBC asserts that Verizon has conceded that the reuse of existing cable for cross connections is possible and that CLECs using Option A arrangements will not need to change their existing collocation arrangements (id.). DBC states that Verizon's refusal to establish different intervals for different types of orders is arbitrary, costly to CLECs, and anti-competitive (id.

at 18). Specifically, DBC argues that augmentation does not require the same ten-day sub-interval to determine space availability as do initial collocation applications (id.). Additionally, DBC contends that Verizon appears to allocate the bulk of this interval to accommodate its internal processes, and not to the actual performance of the work order (id. at 19). DBC argues that the FCC has criticized such redundancies and inefficiencies (id., citing Advanced Services Reconsideration Order at ¶ 28).

Covad urges the Department to adopt a 30 calendar-day splitter and cable augmentation interval (Covad Reply Brief at 10). In Exhibit A to its reply brief, Covad responds to the Verizon collocation sub-intervals provided in RR-CVD-6. Specifically, Covad describes, in its view, which work activities are not relevant for a line sharing collocation augmentation request (e.g., establishing billing account number ("BAN"), obtaining certain identifying codes, reviewing licensing and right-of-way requirements, issuing a request for quotes to vendors) (id. at Exh. A). Also, Covad contests the amount of time required to install a line sharing augmentation and argues that Verizon fails to account for approximately 37 days of its proposed 76-day interval (id.). According to Covad, Verizon allows 23 business days to complete the installation work, although Covad's witnesses testified that a line sharing augmentation requires only a few days, and Covad notes that Verizon's witnesses did not contest this assertion (id. at Exh. A at 4).

Rhythms argues that the actual wiring for cable augmentations, which is one of the two most common augmentations for line sharing arrangements, can be accomplished by two technicians in one to two days (Rhythms Brief at 25). According to Rhythms, adding splitter capacity, the other most common line sharing augmentation, simply involves the installation of VCR-sized equipment into a pre-existing vertical rack by "placing four bolts through pre-drilled holes and attaching a pre-wired cable connector to the back of the splitter" (id.). Rhythms contends that Verizon's refusal to implement shorter intervals for splitter capacity and cabling augmentations appears to be based on Verizon's desire to delay competition (id.). Rhythms describes the work involved with completing a new collocation arrangement and argues that, in contrast, much less work is required for cable and splitter augmentations (id.

at 26).

Rhythms also argues that Verizon's interval fails to account for efficiencies that result from performing routine processes (id. at 27). Among other things, Verizon's interval includes time to verify that the splitter is NEBS-compliant, something which Verizon does not need to recheck for every application, according to Rhythms, and includes steps unnecessary for Option A line sharing arrangements (id.). Rhythms argues that Verizon has acknowledged that the work associated with cabling and splitter augmentations is not significant but, rather, other tasks, such as space surveys and cable routing planning, consume the "lion's share" of this interval (Rhythms Reply Brief at 18).

Rhythms contends that Verizon's interval has more to do with the resources, or lack thereof, Verizon has chosen to assign to completing augmentations than with the actual work needed to perform an augmentation (Rhythms Brief at 28). According to Rhythms, Verizon cannot justify the extended interval on Verizon's need to hire additional personnel and coordinate the central office work (Rhythms Reply Brief at 19). That decision, Rhythms argues, rests solely within Verizon's control and should be made easier by CLEC forecasts provided to Verizon, which prioritize central offices in which CLECs desire the installation of cable and splitter capacity (id., citing Rhythms Brief at 28-29). Additionally, Rhythms also disagrees with Verizon's assertion that providing a shorter interval for collocation augmentations discriminates against CLECs not involved

in line sharing (Rhythms Brief at 29). Rhythms states that all cabling augmentations entail the same work and should be completed within 30 days, regardless of whether the cabling is for xDSL line sharing or traditional POTS service (id. at 29-30).

Requiring CLECs to wait three and a half months to obtain cabling and splitter augmentations is a "severe handicap in the marketplace," according to Rhythms (id. at 30). Rhythms states that such a delay is not in the public interest and Massachusetts consumers will suffer (Rhythms Reply Brief at 20). Rhythms argues that Verizon's proposal would require it to forecast line capacity requirements at least four months in advance, which could lead either to under-forecasting demand, so that the CLEC would be unable to provide service, or over-forecasting demand (Rhythms Brief at 31). Over-forecasting demand results in the unnecessary overbuilding of capacity and facilities, which, according to Rhythms, leads to the CLEC incurring expenses without receiving revenues on this under-utilized plant (id.).

WorldCom supports a shorter interval for collocation augmentations, for the reasons set forth by Rhythms and Covad (WorldCom Brief at 13-14). In addition, WorldCom argues this shorter interval should apply to collocation augmentations for all services, not just line sharing (id. at 14-15). Finally, WorldCom urges the Department to apply its decision on the appropriate interval for collocation augmentations to line splitting (id. at 15).

c. Analysis and Findings

For the reasons discussed below, the Department directs Verizon to perform cabling capacity and splitter augmentations within 40 business days of receiving a collocation augmentation application. The record in this proceeding does not support Verizon's position that a comparable amount of work is required for the type of augmentation necessary for line sharing as for a new physical collocation arrangement. However, neither does the record support the overly-optimistic cable augmentation and splitter installation envisioned by several CLECs. It appears that CLECs describe the best-case scenario for cable augmentations and splitter installations, in which Verizon could or should, perform this work in a matter of minutes or hours (Tr. at 325-327). Verizon, on the other hand, describes the worst-case scenario for a cabling augmentation or splitter installation request (e.g., no space, no available relay or cabling racks, insufficient holes for cable runs, no point-of-termination ("POT") Bay availability, no room at the MDF, vendor shortages of necessary equipment, existing equipment must be removed, existing cables must be pulled out) (Tr. at 338-343, 380-381, 384-385). While Verizon is critical of statements made by CLEC witnesses, that only a few days are required to install additional cabling and splitters, the Department need not rely on such statements to find independently that a 76 business-day interval is inappropriate. Rather, we need only look to Verizon's responses to two record requests to support this determination (see RR-CVD-6, Supp.; RR-DTE-11).

In its supplemental response to Covad's record request to provide the "sub-intervals" contained in Verizon's 76 business-day collocation interval, Verizon lists numerous "supporting elements" (Tr. at 338). The Department finds that many of these are

inapplicable to a line sharing augmentation arrangement or can be accomplished in a shorter period of time, despite Verizon's assertions to the contrary. For example, Verizon indicates it requires up to five business days to complete the following activities: (1) receive a CLEC's collocation application; (2) review for provisioning accuracy and completeness, including verifying that cabling matches CLEC equipment quantity; (3) date stamp the application; (4) log the application into the database; (5) verify NEBS compliance; and (6) distribute the application internally to the project manager and a regional engineering group. Two days, not five, is a more appropriate sub-interval for this first phase, in which the only significant activity is the review for provisioning accuracy and completeness. The other listed tasks, with the exception of verifying NEBS compliance, are ministerial. And in terms of verifying NEBS compliance, Verizon's witness stated that there is no need to re-verify whether the same model of equipment is NEBS-compliant (see Tr. 359-360). According to Covad, even if Verizon has to check whether a different splitter model is NEBS-compliant, that verification should only take a few minutes (Covad Reply Brief, Exh. A at 1). In addition, the Department agrees with Covad that reviewing an application for accuracy and completeness should take, at most, a few hours (id.).

From days one through five, Verizon states it accomplishes the following functions before issuing a letter of acknowledgment to the CLEC: (1) verify both the tariff in effect and the application fee; (2) establish both Band rates and the BAN; and (3) verify "all other required information" (RR-CVD-6). According to Covad, there is no need for Verizon to establish Band rates or the BAN for a line sharing collocation augmentation because that work was done for the initial collocation (Covad Reply Brief, Exh. A at 1). Moreover, Covad argues persuasively that Verizon need not verify what tariff is in effect for every line sharing augmentation application (id.). However, even if Verizon did want to make this verification for every application, it could perform this work in one day, as it could for verifying the application fee. To permit Verizon additional time to perform this verification would be to ignore future efficiencies that will result from Verizon's experience in processing cabling and splitter augmentation applications. Lastly, the Department agrees with Covad that Verizon should have already "verif[ied] all other required information" when it reviewed the application for "provisioning accuracy and completeness," which is an activity mentioned above (id.).

By day nine, Verizon states it performs 18 "support elements" before issuing its Collocation Request Response Form ("CCRF") to Wholesale Network Services ("WNS"). It is obvious that several of these 18 items are inapplicable to line sharing augmentation applications. For example, as was mentioned by Covad, there is no need for Verizon to: "identify meet manhole(s)," "determine if conduit [is] required," or "review licensing and right-of-way requirements" (id. at 2, citing RR-CVD-6, Supp.). Additionally, since this is an augmentation application and not an application for a new collocation cage, several other items are of dubious relevance (e.g., the last bullet of RR-CVD-6, Supp. mentions dimensions of cage, and size variance from application). Also, Verizon includes "review for NEBS conformance/check with maintenance and engineering" and "review application requirements" in this sub-interval. It is unclear why Verizon would need to review for a second time whether the equipment conforms or

complies with NEBS standards and "application requirements," which arguably should have occurred by the time Verizon issued the letter of acknowledgment, if not earlier. Lastly, Covad again notes that several elements are unnecessary for augmentations but, instead, are performed for the initial collocation application, and we agree that the record supports this contention (e.g., obtaining codes for Common Language Location Identifier, Geographic Location, and Access Customer Terminal Location) (Covad Reply Brief, Exh. A at 1).

Verizon indicates it will issue the capacity creation request ("CCR") by day 14 after performing the following tasks: (1) confirm service due date; (2) perform preliminary engineering; (3) input requirements, including the amount of space, number of DS1s, DS3s, fiber, power, etc.; (4) review requirements for additional Verizon-provided equipment;

(5) incorporate results of site survey; and (6) notify several internal Verizon divisions to issue orders (RR-CVD-6, Supp.). This sub-interval, which it appears Verizon has allotted four business days to complete, falls subject to the same criticism as others mentioned above. That is, several of the steps could be performed in minutes or hours, not days (e.g., confirm service due date, input certain requirements into the CCR, incorporate the site survey results into this request, and notify Verizon employees to issue orders); and, absent additional information, the "review requirements for additional Verizon-provided equipment" appears to have been performed (or should have been performed) in the earlier "issue CRRF to WNS" sub-interval.

By day 28, Verizon is scheduled to issue the Telephone Equipment Order ("TEO") (id. at 4). It appears that Verizon has provided itself with 14 business days to complete the following: (1) receive the CCR (issued by day 14); (2) issue request for quote from vendors; (3) receive response(s), review and select vendor; issue automated Trunks Integrated Record Keeping System ("TIRKS"), Switch, and LFACS forms; and (4) send TEO to vendor. Covad argues this work could be completed in one day because, among other reasons, there is no need to issue a request for quotes to vendors since all of the splitter and cable augmentation work is the subject of standard contracts (Covad Reply Brief, Exh. A at 4). With the possible exception of requesting and receiving vendor quotes, the other TEO sub-interval items could be completed within a day. It is unclear from this record whether requests for quotes from vendors are necessary for cable augmentations (since under both Option A and Option C, the CLEC provides the splitter, not Verizon). However improbable (and inefficient) it seems for Verizon to solicit bids every time it needs cable, we do not have the record to agree with Covad on this point.

Verizon allots approximately 23 business days for the "detailed engineering, ordering and receipt of material" (RR-CVD-6-Supp.). Within this sub-interval, the vendor performs the following activities: (1) receives TEO; (2) engineers job; (3) orders equipment; and (4) populates "Infobank/News." Also within this sub-interval, material and equipment are shipped to the vendor, and the vendor receives this material (id.). Verizon includes one step that may be performed by Verizon and not the vendor: "method of procedure provided ["MOP"] to vendor management" (id.). The record does not support the

conclusion that up to 23 business days (i.e., one month) are required for Verizon's vendor to order and receive cable.[(29)] Moreover, according to Covad, the "vendor usually performs this engineering work [i.e., "engineers job"] by attending the site survey on day 5 with the Engineer" (Covad Reply Brief, Exh. A at 4).

According to Verizon, the collocation installation work starts by day 53 and includes the following tasks: (1) real estate/site preparation completed, as necessary; (2) installation vendor performs MOP; and (3) installation vendor collects all materials and specifications

(RR-CVD-6-Supp.).[(30)] By day 76 the installation is completed when Verizon performs up to 17 activities, including: (1) installation vendor installs all aspects of job (including, among other things, running and termination of all cables); (2) input cable information into databases; (3) issue orders out of various databases to several Verizon divisions which, in turn, verify the information; (4) the Facility Management Center builds the cable identification, count, terminal, and loop makeup; (5) the Input Group builds the Script and runs the input request; and (6) the engineering group verifies that the job is complete (id.).

Without further explanation, it is difficult for the Department to determine how much time these activities require. For example, the record does not contain information about what is involved in defining or in building the "Script." While Covad states that it agrees with Verizon that the majority of the 17 elements listed under day 76 can be completed in one day, it appears to the Department that Covad misunderstands Verizon's response. That is, the Department understands Verizon to be saying that it will complete the 17 activities by day 76 and not, necessarily, on day 76 (see Covad Reply Brief, Exh. A at 4).[(31)] However, the Department does agree with Covad that merely forwarding cable information to various Verizon divisions can be accomplished instantaneously as can the population of this information into several Verizon databases. Verification of these data should be a simple process that might take a few days, only because it appears this verification process occurs consecutively, not simultaneously, among the Verizon divisions.

Lastly, in its response to a record request, Verizon lists activities that must be performed prior to the due date (e.g., verify data was included in databases, verify cable installation is complete, vendor performs checklist verification, correct any "non-conformances," verify job is on target) (RR-CVD-6, Supp.). Again, Covad argues that these elements are merely ministerial in nature and can be accomplished in hours or a few days, at most, and can occur much earlier in the collocation augmentation process (Covad Reply Brief, Exh. A at 5-6).

That Verizon can complete cabling augmentations and splitter installations in less than 76 business days is apparent from its response to RR-DTE-11, which lists the "line sharing collocation - Option C - installation activities." In contrast to the over one-hundred elements found in RR-CVD-6, Supp., a list the Department finds more appropriate to new collocation arrangements activities rather than to augmentations, Verizon stated in

response to another record request that 21 tasks are necessary to complete a line sharing collocation augmentation request (RR-DTE-11; Exh. RLI/CVD-84).[(32)] This streamlined approach to augmentation is more representative of what the record demonstrates to be necessary for line sharing, and the listed 21 tasks can be performed in 40 business days. In fact, Verizon acknowledges that one-third of the 21 activities can be performed simultaneously with other listed steps (RR-DTE-11). Briefly, these 21 steps can be summarized as follows: (1) receive, review, and distribute collocation augmentation application; (2) input application into database;[(33)] (3) process application fee;[(34)] (4) verify NEBS compliance;[(35)] (5) schedule space availability check;

(6) conduct space availability check; (7) notify WNS and customer of results;[(36)] (8) issue CCR;[(37)] (9) conduct site survey; (10) develop engineering notepad to obtain equipment and installation pricing and availability; (11) CLEC orders splitters;[(38)] (12) TEO issued to initiate engineering, order relay and cable racking, cables and splitter installation;[(39)] (13) coordinate delivery of equipment to installation vendor; (14) conduct MOP for installation activities;

(15) oversee equipment installation; (16) job acceptance review for equipment installation;[(40)] (17) POT Bay and MDF stenciled; (18) CLEC delivers spare cards for splitter outages;[(41)]

(19) inventory updated in Verizon systems; (20) distribute CFA to CLEC; and (21) billing initiated (id.).[(42)]

It appears Verizon has scheduled two site visits within a short period of time. It is not clear to the Department why Verizon technicians would be unable to finalize engineering requirements, such as frame and bay assignments, cable rack routing, and cable holes, during its first site visit in which it "determine[s] [relay rack] placement and frame capacity" (id.). Verizon's witnesses stated that the space availability check is a site survey where "central office engineers and real estate people . . . determine where the cable routing can go, where there's space to lay cable in, to look for space as close to the collocation as possible . . . . These people would have to take into account other activity and plans that are going on in the central office . . . . They have to research what else is planned or what else the space might be reserved for in that central office" (Tr. at 378-380). A Verizon witness also indicated that this site survey is typically scheduled (and, presumably, performed) by day 7 so that Verizon can meet the Department requirement that it notify requesting CLECs whether space exists to accommodate the CLEC's physical collocation request (Tr. at 360).[(43)] In the Department's Phase I Order, the Department directed Verizon to amend its tariff to indicate this notification shall occur within ten calendar, not business, days. Phase I Order, at 66. Therefore, we would expect Verizon to perform this line sharing site survey before business day 7 (otherwise, Verizon would have only one day prior to calendar day 10 to notify the requesting CLEC whether space exists in a central office).

Based upon the Department's analysis of information in our record, specifically, Verizon's responses to several record requests and testimony provided during the

evidentiary hearings (cited above on pages 58-68), the Department finds that 40 business days is an adequate amount of time for Verizon to perform the activities necessary to complete a cable augmentation and splitter installation collocation application, including requesting and receiving equipment from vendors. Verizon has urged the Department not to establish differing collocation intervals based upon the services that will be offered, arguing, among other things, such a policy discriminates against CLECs that just provide voice service. Verizon's concerns are unfounded. In fact, it is noteworthy that only Verizon made this argument. CLECs, including those who offer primarily voice services, did not echo this concern. In addition, a finding that 40 business days is adequate is entirely consistent with the FCC's Advanced Services Reconsideration Order at ¶ 37, in which it held states are "free to set shorter provisioning intervals for . . . augment[ations] to existing collocation arrangements . . . ." [(44)] The Department is not opposed to having Verizon perform all cabling augmentation requests within 40 business days, regardless what type of service the CLEC intends to offer. However, the record in this proceeding does not provide us with enough information to make that decision apply to all cabling augmentation requests.[(45)] Furthermore, the legal notice issued in this proceeding was for Verizon's xDSL and line sharing tariff proposals. Extending our ruling on the augmentation interval to CLECs that provide just voice service is beyond the scope of the Phase III proceeding.

Verizon's witness stated that should the Department order a shorter interval for all cable augmentations, Verizon would "probably . . . have to add staff . . . ." (Tr. at 373). This uncertain concern is not persuasive. We have found above that Verizon ascribed too many days to the work required to perform splitter capacity and cable augmentations. Shortening Verizon's interval for these discrete augmentations does not add any work for Verizon rather, it is intended to better match this interval with the actual work that the record supports as being required.

Consistent with the Department's Order in D.T.E. 98-58, in which we found that Verizon's ability to process collocation applications within the 10-day interval may be affected by circumstances beyond its control,[(46)] Verizon may request an extension of this interval from the Department. In deciding whether we would grant Verizon's extension request, which would be done on a case-by-case basis, the Department will consider, among other things, the number of collocation applications (for both augmentations and new arrangements) received by Verizon prior to its request. See D.T.E. 98-58, at 16.

The Department declines to adopt the even-shorter interval advocated by several CLECs, ranging from 15 to 30 calendar days. Verizon's witnesses effectively argued that the mere act of installing cable or a splitter is not the main determinant of the augmentation interval. For example, Verizon states it does not stockpile material but, rather, all equipment is ordered for a specific job (Tr. at 339). As mentioned above, Verizon allows approximately 23 business days for its "detailed engineering, ordering and receipt of material" sub-interval (RR-CVD-6-Supp.). While the Department would not expect a vendor to require one calendar month to order and receive equipment necessary to complete a cable augmentation and splitter installation, it is possible it could require a few weeks. Our record does not demonstrate that Verizon could receive this equipment

from its vendors in a shorter period of time, which would be necessary if Verizon were to meet the augmentation intervals supported by some CLECs (e.g., the record does not contain copies of Verizon's contracts with vendors for the supply of cable or relay racks).

In support of its proposed 15 calendar-day interval for Option A (in which the CLEC owns and maintains the splitter in its collocation cage) cable augmentation requests, DBC argues it should be permitted to reuse its cable, thus saving time and money. Verizon's witnesses explained the difficulties experienced in New York with the attempted reuse of another CLEC's cabling for line sharing arrangements (Tr. at 342, 395-397). According to Verizon, in many situations, it was unable to obtain a contiguous count of clean pairs on the MDF (e.g., assignment of 100 of a CLEC's cable and pairs would be located at 1 to 50 and 301 to 350 on the MDF, rather than assigned together from 1 to 100). It also found "workers" (an in-service, working pair) within these counts that should have been disconnected or should have been in another cable, and experienced OSS difficulties (Tr. at 395-396). However, Verizon indicates it is willing to revisit the issue of cable reuse and it appears possible that the forthcoming OSS enhancements will solve some of the current OSS challenges (Tr. at 397). The Department declines DBC's request for a shorter interval for Option A arrangements, but we may revisit the issue if it can be demonstrated that cable reuse and OSS efficiencies enable Verizon to perform augmentations for Option A arrangements in a shorter period of time.

As mentioned earlier, CLECs seem to assume the least amount of work required to implement a line sharing augmentation, and Verizon assumes the most. The truth is there will be instances where Verizon's technicians will conduct a site survey and discover that holes will have to be drilled and racks added to accommodate a CLEC's augmentation request. There will also be instances where a cabling augmentation or splitter installation will be as straightforward as the CLECs' witnesses would have us believe. The 40 business-day interval we establish in this Order recognizes that the work required to implement most line sharing augmentations lies somewhere between the competing scenarios provided by the parties in this proceeding. Several CLECs expressed concern about having either to over- or under-estimate demand to account for Verizon's 76 business-day augmentation interval. According to Rhythms, this 76-day interval (or three and a half calendar months) requires it to forecast line capacity requirements, place orders, and make up-front payments four to five months in advance (Rhythms Brief at 31). The Department agrees with Rhythms that planning so far ahead is a challenge and can cause such undesirable results as under-utilized equipment or an inability to provide service to requesting customers. Our shorter interval should make planning easier. Verizon is directed to modify its tariff accordingly.

F. Wideband Testing System

1. Introduction

Verizon's proposed tariff applies a monthly wideband testing charge fee (see Section IV.B, below, for a discussion of the reasonableness of this proposed rate). Verizon seeks to apply wideband testing and charge this fee to all line sharing arrangements. CLECs

argue that wideband testing should be performed only at the CLEC's option. According to Verizon, its so-called Wideband Testing System ("WTS") is used for maintenance to test and verify certain characteristics of the upper portion of the usable spectrum and should not be optional to the CLECs (Exh. DTE-BA-MA 2-13).

2. Positions of the Parties

a. Verizon

Verizon proposes to include a WTS in all line sharing arrangements (Verizon Brief 60). According to Verizon, the WTS "minimizes the costs associated with detecting and isolating troubles and its use represents the most efficient and cost effective means available for providing access to the line sharing UNE" (id. at 20).[(47)] Furthermore, Verizon argues that WTS is necessary because the "simple MLT test[(48)] no longer permits either a qualitative evaluation of the loop for provisioning purposes or the ability to accurately sectionalize and assign problem responsibility from a service assurance perspective" (Verizon Brief at 62). Verizon claims that absent WTS, Verizon would incur even greater costs, which it would pass along to CLECs through dispatch charges (id. at 63).[(49)]

Verizon also contends that although CLECS imply that they can perform their own testing, they still rely on Verizon's test systems (Verizon Reply Brief at 22). Since Verizon will be held accountable for the performance, maintenance, and repair of its wholesale services, Verizon argues that it must have the tools to accomplish this and must be allowed to recover the costs associated with those tools (Verizon Brief at 63). Lastly, Verizon argues that if the Department allows CLECs to opt out of Verizon's WTS, the Department must permit Verizon to charge CLECs for dispatches and apply a less stringent standard for service metrics to such CLECs (id. at 66).

b. CLECs

Covad, Rhythms, DBC, and Vitts argue that Verizon's WTS is unnecessary and redundant for CLECs that have their own testing capability, and, therefore, WTS should be made optional (Covad Brief at 21; DBC Brief at 36; Rhythms Brief at 34; Vitts Brief at 12).[(50)] According to Covad, since testing is required for only a small percentage of loops, it is more efficient to test loops at the MDF with a handheld device than to install and operate a metallic test access unit ("MTAU")[(51)] or "test head" on every shared line (Covad Brief at 22). Covad notes that FCC rules require Verizon to permit purchasers of line sharing to provide their own testing equipment (id. at 21-22, citing 47 C.F.R. § 51.319(h)(7)). Moreover, Covad disputes Verizon's claims that Hekimian[(52)] testing is necessary, regardless of whether CLECs conduct their own testing and states that Verizon refuses to provide shared access to the Hekimian testing system (id. at 22).

Covad also disagrees with Verizon's assertion that the additional costs of implementing WTS will be more than offset by reduced maintenance dispatch charges (id. at 25). According to Covad, Verizon did not support its dispatch claims with a cost study but,

rather, merely offered conclusory statements (id.). Additionally, Covad argues that there is no evidence in the record that would indicate that the dispatch requirements of Infospeed are equivalent to the dispatch requirements of CLECs' xDSL services; therefore, according to Covad, even if WTS is deployed on every line, CLECs may not experience the same reduction in dispatches as Infospeed lines do with WTS (id. at 26). Covad urges the Department to accord little, if any, weight to Verizon's unsubstantiated claims about "secondary costs" (Covad Reply Brief at

20-21, citing Verizon Brief at 66-67). In fact, according to Covad, if the Department makes WTS mandatory, Covad would experience the following "secondary" costs: designing its own OSS to interconnect with the WTS; training its personnel to read the WTS results; and mitigating the additional electrical resistance (id. at 21).

Covad, Rhythms, and Vitts claim that Verizon's cost-benefit analysis for implementing WTS is based on its Infospeed retail service (Covad Brief at 23-25; Rhythms Brief at 71-73; Vitts Brief at 12-14). Like Covad, Rhythms argues that CLECs that opt in to Verizon's WTS should be provided with access to the Hekimian system itself and access to the results generated by Verizon's use of this system (Rhythms Reply Brief at 23). Rhythms also agrees with Covad that CLECs, not Verizon, should decide whether the economics of Verizon's WTS versus the possibility of increased dispatches make economic sense for them (id. at 51-52). According to Rhythms, where Verizon meets reasonable performance standards in provisioning xDSL-capable loops, testing will not be necessary for each loop, but, rather, such testing may be relatively rare (Rhythms Brief at 70). Indeed, Rhythms argues, Verizon estimates it has subjected less than one percent of its Infospeed loops to wideband testing (id., citing Exh. RLI/CVD-69).

DBC argues that Verizon's WTS proposal is anti-competitive and, possibly, discriminatory (DBC Brief at 37). Specifically, DBC contends that Verizon seeks to impose redundant costs on CLECs that have invested in "line-quality monitoring equipment," as DBC has (id.). DBC argues that there appears to be no benefits or functions offered by Verizon's WTS that are not already available to DBC from its own testing equipment, which it normally deploys in its collocation installations (id.). In addition, DBC argues that its equipment possesses one function beyond what Verizon offers -- immediate access to test results (id. at 37-38). According to DBC, Verizon does not even attempt to rebut evidence that such alternative testing by CLECs is sufficient to address service quality issues (DBC Reply Brief

at 15).

3. Analysis and Findings

In its Line Sharing Order, the FCC states that "The quality of the service that a [CLEC] provides to its customer is not the incumbent's responsibility, so long as the incumbent is providing sufficient quality of service to the [CLEC]." Line Sharing Order

at ¶ 123 (emphasis added). Moreover, FCC rules provide that an ILEC must provide physical loop test access to CLECs at the splitter, through a cross-connection to the CLEC's collocation space, or through a standardized interface for purposes of loop testing, maintenance, and repair activities. 47 C.F.R. § 51.319(h)(7)(i). Verizon is thus required to provide line-sharing CLECs with "sufficient quality of service." It is not a federal requirement that Verizon shoulder the burden of minimizing the costs associated with detecting and isolating line sharing troubles for CLECs. CLECs are capable of performing their own cost-benefit analysis to determine whether they should ask Verizon to install an MTAU on their shared loops or whether they should forego Verizon's WTS at the possible risk of increased dispatches in the event of trouble on the line. Covad argues persuasively that Verizon's alleged secondary costs for not deploying WTS on every shared loop are unsupported by the record. And, in fact, Verizon has failed to consider "secondary costs" to CLECs from mandatory WTS (see Covad Reply Brief at 21). Therefore, we agree with Covad, DBC, Rhythms, and Vitts that Verizon's WTS should be made optional.[(53)]

If a CLEC opts in to Verizon's WTS, it should have access to both the test results and the testing element itself. Verizon indicates CLECs will have access to WTS results through RETAS,[(54)] similar to the access CLECs have to MLT results (Tr. at 653). The Department agrees that this immediate, electronic access is necessary to those CLECs that opt in to WTS. In its reply brief, Verizon states that direct, third-party access to the WTS is not technically feasible at this time (Verizon Reply Brief at 22 n.18). The Department expects Verizon to pursue development of such direct access, which would enable a CLEC to perform a WTS test and to receive the results without any involvement by Verizon,[(55)] either under the auspices of the on-going regional OSS collaborative based in New York or on its own.

Finally, the Department makes clear that Verizon should be permitted to recover its costs for dispatches should a CLEC forego Verizon's WTS. In addition, as was decided by the NYPSC in its Order mentioned above, Verizon may separate from the relevant service metrics its performance with respect to CLECs who choose not to use WTS (see Verizon Reply Brief at 23).

G. Line Sharing over Fiber-Fed Loops

1. Introduction

The digital loop carrier ("DLC") issue to be decided in this phase of D.T.E. 98-57 is whether and to what extent Verizon is required to provide the means for CLECs to offer xDSL services in a DLC environment (Tr. at 648-649). As mentioned by the FCC, DLC systems:

digitally encode an individual voice channel into a . . . digital signal, and aggregate, or 'multiplex,' the traffic from up to 24 subscriber lines into DS1 or higher signals to improve transmission efficiency and range. . . . In a DLC system, analog signals are carried from the customer's premises to a remote terminal, at which they are converted to digital information, multiplexed with other signals, and transported, generally through fiber facilities, to the [ILEC's] central office.

Line Sharing Order at ¶ 69 n.152. Verizon states it does not have a current legal obligation to provide end-to-end "line sharing" for CLECs on fiber-fed loops (Verizon Brief at 39). However, Verizon indicates that through a tariff and interconnection process, CLECs could provide "line sharing" over the copper subloop and have access to Verizon's fiber feeder back to the central office (id. at 40). Several CLECs argue that the Department should require Verizon to permit CLECs to use variants of the so-called "plug and play" option, i.e., to place or have Verizon place "line cards in the DLC electronics at the remote terminal that would perform an integrated DSLAM and splitter function for the entire shared loop purchased by the [CLEC]" (Covad Brief at 15). According to the FCC, a plug-in ADSL digital line unit card enables a carrier to transform a single phone line into two lines, one of which is capable of supporting ADSL service, from a so-called "next generation DLC" system. Second SBC/Ameritech Merger Order at ¶ 4 n.11.[(56)]

2. Positions of the Parties

a. Verizon

Verizon insists that the "plug and play" proposal advocated by several CLECs goes beyond the FCC's rules and Verizon's obligations under those rules, for several reasons. According to Verizon, the FCC's Line Sharing Order applies only to the copper portion of the loop, not to the fiber transport systems or to DSLAMs located at RTs (Verizon Reply Brief at 7, citing Line Sharing Order at ¶ 26). In addition, Verizon argues it has met its Line Sharing Order obligation to make line sharing available when loops are served by DLC facilities because it permits CLECs to "collocat[e] at, or interconnect[] to adjacent or nearby remote terminals or at the Feeder/Distribution Interface ("FDI") for placement of DSLAMs and other needed equipment" (Verizon Brief at 39-40, citing Line Sharing Order at ¶ 91).

Verizon argues that the DLC facilities it currently deploys cannot support the provisioning of xDSL services (id. at 39). Specifically, Verizon states that it has not deployed anywhere in its network the "DLC equipment equipped with the line card DSLAM technology, [nor] does [Verizon] have any such line card DSLAMs in use today in the network" (id. at 41). Verizon asserts that the same legal arguments supporting its contention that it should not be required to purchase splitters for CLEC use apply here (id.). Moreover, Verizon argues that it is currently prohibited from providing "line cards that provide DSLAM/splitter functionality, control cards, software, and ATM [asynchronous transfer mode] edge switches" under the Bell Atlantic/GTE Merger Order (id. at 42 n.39). According to Verizon, directing it to permit the plug and play option

amounts to requiring Verizon to provide unbundled access to packet switching, something Verizon argues it is not required to do under the FCC's UNE Remand Order (id. at 42, citing UNE Remand Order at ¶¶ 306, 308). Finally, Verizon argues that two of the four conditions, needed to qualify for a limited exception to the FCC's ruling with respect to packet switching, have not been satisfied. Namely, according to Verizon, it has a tariff provision allowing collocation at RTs, and it does not have any packet switching capability for its own use (id. at 42-43, citing 47 C.F.R. § 51.319(c)(3)(B)(i)-(iv)).

b. Attorney General and CLECs

According to the Attorney General, Verizon's witness testified that at least 5 percent of Verizon's access lines in Massachusetts contain DLC and Covad's witness testified that this figure is greater than 8.6 percent (Attorney General Brief at 4). The Attorney General argues that those numbers, over 200,000 and 400,000 respectively, represent mostly residential customers and are "substantial enough to merit every effort by the [Department] to bring competitive data service through line sharing to these customers" (id. at 5). To that end, the Attorney General asks that the Department grant the CLECs' request for access to DLC loops and modify the tariff accordingly (id.).

Covad argues that Verizon must make three forms of plug and play available to CLECs: (1) Verizon or its affiliate would own and place the line cards in the DLC electronics (Verizon would also maintain the cards, but the CLEC would monitor and configure the cards and the ATM connection); (2) the CLEC would own the line cards, but Verizon would install them as part of virtual collocation provisioning; and (3) the CLEC would own, place, and maintain the line cards (Covad Brief at 15). Covad argues that Verizon will have the obligation to provide the first plug and play option in two circumstances: if Verizon satisfies the conditions set forth in 47 C.F.R. § 51.319(c)(3)(B)(i)-(iv), or if Verizon provides unbundled packet switching devices to an affiliate (id. at 17-18). Furthermore, Covad argues that once Verizon deploys DSLAMs in its RTs that are actually line cards placed in DLC electronics, it must permit CLECs to either collocate their own line cards "on the same terms and conditions" or to lease Verizon's own cards (id., citing UNE Remand Order at ¶ 313). Similarly, Covad argues that if Verizon installs and maintains its own line cards in DLC equipment in an RT, CLECs shall have the right to perform these tasks "on the same terms and conditions" for its collocated line cards (id.).

Covad urges the Department to clarify that Verizon is obligated to offer all three forms of plug and play described above (id. at 19). In addition, Covad and Rhythms ask the Department to establish "ground rules" so that Verizon or its data affiliate will not receive a competitive advantage once Verizon or its affiliate deploys such equipment (id. at 19-20, Rhythms Brief at 36). Covad also asks that the Department not issue any ruling about whether Verizon meets any or all of the conditions set forth in 47 C.F.R. § 51.319(c)(3)(B), but, rather, asks the Department to direct Verizon to present its case against unbundling packet switching before it deploys DSL services over fiber-fed loops (Covad Reply Brief at 13-14). Covad disputes Verizon's argument that in requesting access to plug and play, Covad is seeking to have new network elements defined, such as

an ATM edge switch (id. at 16). According to Covad, the mere fact that different equipment would be necessary to "extract the DSL signal from fiber-fed loops does not mean by extension that this equipment represents a new set of network elements" (id.). Finally, Covad argues that space at RTs is limited and rights-of-way may not be available to CLECs to collocate their equipment; therefore, collocation at the RT is neither an effective nor efficient method of offering xDSL over fiber-fed loops (id. at 15).

Rhythms requests that the Department direct Verizon to provide a tariffed offering allowing CLECs to lease or place line cards in RTs with DSLAM/splitter functionality (Rhythms Brief at 43). Rhythms agrees with Covad that while the ability to collocate at an RT is important, due to space constraints and economic considerations, the opportunity to collocate is more theoretical than real (id. at 43-44). Thus, Rhythms argues that the efficient and only workable solution is to accomplish collocation by permitting CLECs to furnish or lease DSLAM-capable line cards that can be plugged directly into the DLC system at the RT (id. at 44). This solution is feasible, according to Rhythms, as is demonstrated by Verizon's own documents (id.). Indeed, Rhythms argues that Verizon is currently conducting a trial in Boston on the provision of xDSL services through line sharing over DLC (Rhythms Reply Brief at

27-28).

Rhythms argues that Verizon's proposal to negotiate an interconnection agreement on the subject of transport from the feeder to the central office before filing a tariff proposal further delays a CLEC's ability to offer competitive advanced services to customers served by DLC (Rhythms Brief at 46-47). Thus, Rhythms asks the Department to require Verizon to file a tariffed offering for unbundled fiber subloop (id. at 47). In addition, Rhythms asserts that in requesting the plug and play option, it is not seeking access to new UNEs (Rhythms Reply Brief at 28). Rather, according to Rhythms, it merely seeks to exercise its rights to UNEs that have already been mandated by the FCC and the Department (id. at 28-29).

WorldCom argues that adoption of Verizon's interpretation of the UNE Remand Order (i.e., that the loop stops at the RT, and that the subloop extending from the customer's premises to the RT constitutes the entire local loop for data service) would have a chilling effect on competition for advanced services (WorldCom Brief at 16). According to WorldCom, whether Verizon or its data affiliate has deployed DSLAMs at RTs is irrelevant to whether Verizon has an obligation to allow CLECs access to the fiber subloop as a UNE (id. at 17). If a CLEC chooses to be an innovator and offer advanced services over fiber-fed loops, WorldCom argues that Verizon's retail decisions should not be a limiting factor and that to decide otherwise would allow Verizon to be first to market (id.). In addition, WorldCom contends that it is unlikely Verizon will shut itself out of the advanced services market by not evolving its network to support such services over its increasing numbers of RT configurations and fiber-fed loops (id. at 18).

Vitts supports the arguments set forth in the Rhythms/Covad panel testimony (Vitts Brief at 4-6). Specifically, Vitts agrees that Verizon's collocation at the RT option is not

economically viable for the following reasons: (1) the CLECs could be required to pay higher interoffice transport charges back to the central office, and not forward-looking UNE rates;

(2) the cost of collocation would deprive CLECs of parity to Verizon's retail arm, which could offer xDSL service using plug and play technology; (3) space and zoning considerations would limit a CLEC's ability to collocate at the RT; and (4) Verizon's proposed tariff does not provide power under unbundled subloop arrangements (id. at 5). Vitts urges the Department to require Verizon to plan and develop cost-based prices for the same or similar plug and play options that Verizon provides to itself (id.). Finally, Vitts notes that a number of ILECs have announced plans for the deployment of fiber feeder configurations with RTs "located deep into residential areas;" thus, Vitts argues, such service is operationally feasible (id. at 4).

3. Analysis and Findings

CLECs ask that the Department direct Verizon to do the following with respect to line sharing over fiber-fed loops: (1) file a tariff that would enable CLECs to place, or have Verizon place, line cards in Verizon's DLC electronics at the RT that would perform an integrated DSLAM and splitter function for the entire line-shared loop purchased by the CLEC (see Covad Brief at 15); and (2) propose a tariff offering for transport from the feeder to the central office (see Rhythms Brief at 47). Several CLECs also ask the Department to establish ground rules to ensure that CLECs have nondiscriminatory access to plug and play at the same time that Verizon or its affiliate deploys such equipment (Covad Brief at 19). These ground rules include procedures that would allow CLECs to participate in Verizon's planning process to deploy plug and play equipment, trials of this equipment, and development of applicable business rules (id. at 20).

The Department is concerned that many Massachusetts customers may be shut out of the DSL market unless provisions are made to allow for line sharing over fiber-fed loops.[(57)] However, based upon information in this record, the Department finds that further investigation is necessary to determine whether some or all of the plug and play options advocated by CLECs are reasonable or whether the Department should restrict Verizon's tariff offering to one type of deployment such as plug and play (see Verizon Reply Brief at 39). In order to facilitate further investigation, the Department directs Verizon to file a tariff that would enable CLECs to place or have Verizon place CLEC-purchased line cards in Verizon's DLC electronics at the RT (options 2 and 3 proposed by Covad) (see Covad Brief at 15) and to file a tariff for feeder subloops (see RR-RLI-8). Verizon shall make this proposed tariff filing in D.T.E. 98-57-Phase I. The Department decided to continue the Phase I proceeding pursuant to its Order issued on September 7, 2000. Among other things, the Phase I docket already includes an investigation into Verizon's proposed collocation at the RT tariff, which is directly related to the issue of line sharing over fiber-fed loops. Phase I Order at 66-67. The Department will also consider in the Phase I docket Covad's request to establish ground rules (see Covad Brief at 19).

To be clear, the Department is aware that the FCC's Line Sharing Order directs Verizon to provide unbundled access to the high frequency portion of its copper loops. See Line Sharing Order at ¶¶ 17 n.27, 26; see also 47 C.F.R. § 51.319(h)(1). The Department's decision to direct Verizon to file a proposed tariff that would provide CLECs access to unbundled packet switching equipment is based upon the rules promulgated in the FCC's UNE Remand Order, specifically 47 C.F.R. § 51.319(c)(3)(B). Verizon argues that the Department must first determine that all four conditions set forth in 47 C.F.R. § 51.319(c)(3)(B) are satisfied before Verizon can be ordered to provide unbundled packet switching (id. at 40). We agree. Unless and until we make such a finding or the FCC modifies its rules, we will not require Verizon to permit plug and play. An evaluation of the four conditions set forth in 47 C.F.R. § 51.319(c)(3)(B) will be an integral part of the Department's further investigation of this issue.

Verizon's witnesses testified that Verizon does not deploy line cards in DLC at RTs in Massachusetts. This testimony is authoritative and unchallenged on the point. However close Verizon may be to deploying such technology, it does not exist in Verizon's network today. The Department will not direct Verizon to make available equipment not currently found in its network for CLEC use or to purchase equipment solely for the use of CLECs. Verizon is correct that to rule otherwise is analogous to the CLECs' request that Verizon provide them with splitters, a request we denied above in Section III.C. However, since by their very nature, tariff proceedings are time consuming[(58)], we find that it would be fundamentally unfair to CLECs, and to consumers, to allow Verizon's data affiliate,[(59)] which Verizon has indicated will be operational by January 2001 (Tr. at 12), to deploy the technology that would allow plug and play, or to deploy the "infrastructure to support wholesale packet transport services from [Verizon's] RTs"[(60)] and only then file with the Department a proposed tariff offering for CLECs to do the same. Covad argues persuasively that it is not enough to permit CLECs to have access to plug and play only after Verizon or its affiliate deploys actual retail services because it would take CLECs several months to be in a position to offer their own services using this technology (Covad Brief at 19 n.31). Upon further investigation, it is possible the Department would agree with Verizon that the legal, technical, and operational issues associated with plug and play are insurmountable. However, that is a decision for the Phase I proceeding, not Phase III. In accordance with the Phase I Order, Verizon is directed to file its proposed tariff offering within 30 days of the date of this Order.

H. Miscellaneous Operational Issues

1. Line and Station Transfer and Test Access Tariff Language

In response to a record request, Verizon filed proposed tariff language codifying agreements it reached with several CLECs on the issues of LSTs and test access (RR-DTE-10, Errata). Briefly, Verizon's proposal for LST provides that, where suitable facilities exist, Verizon would, at its discretion, perform a pair-swap of a loop from fiber to copper on the CLEC's behalf, provided that such swaps do not impair the service of any third parties involved. Verizon would not be held responsible for any interruption in, or impairments of, service to any party as a result of this activity (see RR-DTE-10-Errata,

at Part B, Section 19.1.3.A.1). In addition, Verizon proposes to apply a non-recurring charge for each pair-swap (id. at Part A, Section 3.3.2.A.11). The Department accepts Verizon's proposed LST language, with one modification. The Department directs Verizon to delete from Part B, Section 19.1.3.A.1 the following ", at the discretion of the Telephone Company,". Counsel for Verizon stated during a hearing that the agreement it reached on LST with Covad, Rhythms, and DBC would require Verizon to perform LSTs "on demand" (Tr. at 498). Deletion of the discretionary language from this proposed section is consistent with Verizon's agreement in principle reached with those CLECs, as summarized on our record (id.). With this modification, the Department directs Verizon to include the LST proposal in its compliance filing.

Verizon also reached an agreement with Covad and Rhythms on the issue of test access, which was reduced to writing and marked as exhibit CVD-1. Verizon's proposed tariff language on test access provides for a joint technician meeting in the event of a dispute about the cause or the source of a trouble on a shared line (RR-DTE-10, Errata, at Part B, Section 19.1.5.F). Specifically, this joint meeting will occur within 24 hours of the CLEC's request, and the testing will follow routine procedures for clearing and isolating troubles and will use hand-held testing devices selected, provided, and operated by the CLEC (id.). This testing will involve gaining intrusive access to the shared line and connecting the hand-held devices thereto (id.). In addition, the CLEC may begin testing on the MDF within 15 minutes of the agreed-upon time (id.). Finally, both Verizon and the CLEC must present whatever findings each carrier has from testing the loop at the time of the meeting or within 24 hours thereof (id.). Verizon also proposes a non-recurring charge for this meeting only if the error or trouble is one that the CLEC should reasonably have been able to isolate and diagnose through other means (id. at Part A, Section 3.3.2.A.12). The Department finds that Verizon's proposed test access language is reasonable, and accurately captures the agreement it reached with Covad and Rhythms and, therefore, directs Verizon to include this language in its compliance filing.

2. Shielded Cable

DBC has requested that the Department not permit Verizon to charge CLECs for shielded cable in connection with line sharing arrangements (Exh. DBC-1, at 8-9). According to DBC, shielded cable is not technically justified. In response to a record request, Verizon produced a document indicating the potential for damaging levels of noise in central office wiring between ADSL and symmetrical DSL service (RR-DBC-4). Based upon this evidence, it appears Verizon's concern about interference is justified. Therefore, assuming Verizon applies the same standards to its own retail xDSL offering and will apply the same technical standards (i.e., shielded cable) to its data affiliate, the Department declines to adopt DBC's request.

3. Reference to xDSL Metrics in Tariff

The Attorney General requests that the Department notify carriers that provide xDSL service under the tariff of the existence of certain performance metrics applicable to Verizon (Attorney General Brief at 11-12). According to the Attorney General, the

Department should reference these xDSL and line sharing metrics, which were and are being developed in the New York collaborative and which will be reported in Massachusetts pursuant to a Department Order issued in D.T.E. 99-271.[(61)] The Department respectfully rejects the Attorney General's request. The Department does not reference performance measurements for any other Verizon service offering in Verizon's tariffs and thinks it unnecessary to do so in this instance.

Through intensive discussion between Verizon and the CLECs and approval by the NYPSC, these measurements undergo refinement and new metrics are continually added. Reference to these metrics in the tariff would require constant revision by Verizon, for little benefit. Participants to D.T.E. 99-271 receive monthly performance reports from Verizon. Almost all of the Phase III parties are participants in this other proceeding and currently, and will continue to, receive Verizon's reports measuring its performance in accordance with the Carrier-to-Carrier Guidelines, which were created in New York and adopted in Massachusetts for purposes of the Department's review in D.T.E. 99-271. These reports are available on the Department's web site and at our offices in Boston. In addition, the Department's Performance Assurance Plan, issued in D.T.E. 99-271, created a process whereby Verizon is required to provide compensation for poor performance to CLECs offering service in those affected areas. For the aforementioned reasons, additional notice in a tariff is unnecessary.

IV. COSTS AND RATES ISSUES

The Act requires state commissions to set prices for UNEs that are cost-based and nondiscriminatory, and that may include a reasonable profit. Line Sharing Order at ¶ 134, citing 47 U.S.C. § 252(d)(1). In its Local Competition First Report and Order, the FCC found that states should set arbitrated rates for interconnection and access to UNEs pursuant to a forward-looking economic pricing methodology, known as Total Element Long-Run Incremental Cost ("TELRIC"), which sets prices for UNEs based on the "forward-looking costs directly attributable to the specified element, as well as a reasonable allocation of forward-looking common costs." Line Sharing Order, at ¶ 134, quoting Local Competition First Report and Order at ¶ 682.

The FCC concludes that states should set the price for the new line sharing UNE in the same manner as they set prices for other UNEs, consistent with the TELRIC methodology. Id. at ¶¶ 134-135.[(62)] According to the FCC, there are five types of direct costs that an ILEC potentially could incur in providing access to line sharing: loops; OSS; cross-connects; splitters; and line conditioning. Id. at ¶ 136.

In accordance with the Act and the Local Competition First Report and Order, the Department issued a decision in the Consolidation Arbitrations,[(63)] setting forth the model and inputs to be used by Verizon in carrying out its TELRIC studies to determine the prices to be charged for UNEs. The recurring and non-recurring UNE prices in Massachusetts were established in a series of decisions in this Consolidated Arbitrations docket.

A. Line Qualification and Loop Conditioning

1. Introduction

Prior to providing line sharing services, the CLECs and Verizon must determine whether a particular loop will support, or is qualified for, xDSL services. Verizon's proposed tariff provides several options to determine whether a loop is qualified. Part B, Section 5.4.2.A[(64)] of the proposed tariff provides three means of making this determination:

(1) mechanized pre-qualification database;[(65)] (2) manual loop qualification;[(66)] and (3) engineering query.[(67)] The proposed tariff charge for the mechanized pre-qualification database is a recurring charge of $0.65 per month per line. Part M, Section 2.5.4, Page 8. This recurring fee comprises three components: (1) the initial qualification charge of $0.11, which is based on work time estimates; (2) an ongoing maintenance charge of $0.36; and (3) an "additional cost component" of $0.18 (Exh. VZ-MA-2, at exh. I, Workpaper 5). The tariff charge for a manual qualification is a non-recurring charge of $113.67 ($153.84 for expedited service). Part M, Section 2.5.4, Page 8. The proposed tariff charge for an engineering query is a non-recurring charge of $147.91 ($200.05 for an expedited query). Part M, Section 2.5.4, Page 8.

The results of the loop qualification process may indicate that a particular loop requires "conditioning" (i.e., removal of load coils and bridged taps, or the addition of ISDN extensions) prior to its use for xDSL. According to the FCC, except in specific circumstances, ILECs are required to condition loops if necessary to enable CLECs to share a line, regardless of loop length. Line Sharing Order at ¶ 83.

Part B, Section 5.4.6 of Verizon's proposed tariff provides for the removal of load coils and bridged taps, and for the addition of ISDN extensions. Part B, Section 5.4.7.D summarizes when charges for these activities will be assessed, and Part M, Section 2.5.4, Page 9 of Verizon's proposed tariff sets forth the following non-recurring charges for these conditioning activities: $910.35 for the removal of load coils for lines under 21,000 feet in length ($1,177.39 for an expedited order); $1,210.04 for the removal of load coils for lines under 27,000 feet in length ($1,564.99 for an expedited order); $250.60 for the removal of one bridged tap ($324.11 for an expedited order); and $609.92 for multiple bridged tap removal ($799.83 for an expedited order).

Verizon's proposed tariff permits a CLEC to request the addition of ISDN electronics, so that a CLEC may provide service on loops that exceed 18,000 feet in length. Part B, Section 5.4.6.C. Verizon proposes a charge for both the electronics and labor of $894.15 per loop ($901.94 for an expedited order). Part M, Section 2.5.4, Page 9. Finally, in Part M, Section 2.5.4, Page 8, Verizon proposes a charge for the engineering work order that precedes both load coil and bridged tap removal of $671.23 per loop ($905.75 for an expedited order).

2. Positions of the Parties

a. Verizon

Verizon urges the Department to approve its proposed charges for loop qualification for line sharing and stand-alone xDSL loops (Verizon Reply Brief at 16, citing Tr. at 565). According to Verizon, its rates were developed using current work time estimates and labor rates, as well as Department-accepted cost factors (id. at 16-17, citing Tr. at 570-571). Verizon argues that when CLECs benefit from the use of Verizon's database, it is only fair that they be charged for the development and maintenance of that database (Exh. DTE-BA-MA 1-18; Exh. DTE-BA-MA 1-50; Verizon Reply Brief at 18). Verizon notes that this database supports both its xDSL retail service and the provision of ADSL- and HDSL-compatible loops to CLECs (Verizon Brief at 48).

Verizon argues that the FCC permits it to charge for conditioning loops (Exh. VZ-MA-3, at 49). According to Verizon, the FCC acknowledged that when load coils and bridged taps are present on the copper loops, loop conditioning is required and the ILEC is entitled to recover the costs to remove the load coils to provision line sharing (Verizon Reply Brief at 8-9, citing Line Sharing Order at ¶ 148). Verizon contends that the CLECs' position that a fiber-based network must be used for a forward-looking cost study for line sharing is "untenable because it would effectively negate the FCC's requirement that the ILECs be allowed to recover certain costs associated with providing line sharing" (id. at 8, citing

Tr. at 594).

Verizon disagrees with the claim made by Covad and Rhythms that bridged taps and load coils can be removed from multiple lines simultaneously (id. at 20). According to Verizon, loop conditioning work is "rarely requested for multiple loops at the same splice point and at the same time" (id.). Verizon argues that it would have to accumulate line sharing orders in large batches and only perform loop conditioning work when it received a certain number of orders to meet this CLEC demand and that this practice would be discriminatory (id.).

Verizon also disputes the amount of work CLECs claim is involved in loop conditioning (id. at 19). According to Verizon, once a load coil is found, a "construction job" is requested to remove the coil (id. at 19, citing Tr. at 145). The complexity of this job, Verizon asserts, depends on whether the loop is underground, aerial, or a combination thereof (id.). Finally, Verizon argues that there is no duplication of the functions in developing the loop qualification and the loop conditioning charges, as some CLECs contend (id.). According to Verizon, the "engineering work order" entails discrete activities performed by a different division within Verizon than the division that performs work for the "engineering query process" (id.).

b. Attorney General and CLECs

The Attorney General contends that many of the charges set forth in Verizon's proposed tariff were based on collocation activities and not line sharing activities (Attorney General Brief at 5). The Attorney General argues that basing labor rates and costs on non-line sharing activities results in over-inflated costs (id. at 6). The Attorney General asks the Department to reject Verizon's rates and, instead, to impose interim rates that would be subject to adjustment, pending the completion of more appropriate cost studies (id. at 7). The Attorney General proposes the adoption of the Rhythms and Covad pricing proposal, which calls for an across-the-board 50 percent reduction in tariff charges pending the completion of additional cost studies by Verizon (id.).[(68)]

Several CLECs oppose Verizon's proposal to assess a fee for a CLEC's use of the mechanized pre-qualification database (Rhythms Brief at 77; DBC Brief at 28). Rhythms argues that since Verizon has been

permitted to base the monthly recurring charges for UNE loops on a forward-looking network design that assumes ubiquitous deployment of fiber feeder and DLC equipment that does not involve any range-extending equipment, it is inappropriate now to permit [Verizon] to base charges applicable to CLECs in connection with DSL services on a different all-copper network design assumption. To do so is a violation of TELRIC principles and will result in an overstatement of the total costs attributable to a competitor's purchase of unbundled DSL-capable loops.

(Rhythms Brief at 79-80, citing Exh. RLI/CVD-1, at 184-185). Specifically, Rhythms objects to the $0.65 recurring charge because it argues that, "a forward looking cost study would assume that [CLECs] have non-discriminatory access to the . . . LFACS database and other databases relevant to loop qualification, because that is the most efficient method for providing CLECs with loop [qualification] information" (Rhythms Reply Brief at 43).

Rhythms also contends that the costs of populating and maintaining these databases have traditionally been, and continue to be, recovered in other recurring rates (id.). Similarly, DBC argues that since Verizon already provides voice service on a shared loop, it collects charges from customers and long-distance carriers that "fully fund the costs associated with providing that loop, including the costs of maintaining its databases" (DBC Brief at 28, citing Exh. DBC-1, at 12-15). Finally, Rhythms argues that it is inappropriate to charge CLECs for the development of a database originally designed to benefit Verizon (Rhythms Brief at 78). Rhythms and Covad argue that if Verizon is allowed to charge anything for loop qualification, it should only be allowed to charge $0.04 cents per loop, which is based on a 20-year amortization of the loop (Tr. at 602). DBC states that a recurring charge is inappropriate for this service because the loop data

are of no further use to the CLEC once the loop has been qualified for line sharing (DBC Brief at 28).

The CLECs also oppose Verizon's proposed manual loop qualification and engineering query charges (DBC Brief at 27-29; Rhythms Brief at 80; MA CLEC Alliance Brief at 12-13). The MA CLEC Alliance argues that the FCC directed ILECs to provide CLECs with access to loop information so that CLECs could determine for themselves whether a loop satisfies the prerequisites for the service the CLEC intends to provide (MA CLEC Alliance at 12). Therefore, the MA CLEC Alliance argues that the ILEC should be compensated only for providing such information to the CLEC in an electronic format, and not for costs incurred by the ILEC in interpreting such information for the CLEC (id.). Rhythms argues that the mechanized loop qualification process is the most forward-looking, efficient process, and, therefore, consistent with TELRIC principles, the CLECs should not be charged for manual loop qualifications and engineering queries (Rhythms Brief at 90).

DBC notes that the first step of Verizon's manual loop qualification is a check of LFACS (DBC Brief at 28). According to DBC, the only reason this LFACS inquiry is needed is because Verizon has refused to provide direct access to databases that would allow CLECs to make the inquiry themselves (id.). Direct CLEC access to this information would eliminate the need for this "manual" qualification and the associated non-recurring charge (id.). Rhythms and Covad have proposed a monthly recurring charge of $0.04 for all line qualification expenses (Rhythms Brief at 79).

In connection with the CLEC arguments about why the Department should reject Verizon's proposed loop qualification charges, Rhythms argues that Verizon's use of all copper in the feeder to develop non-recurring conditioning charges is inappropriate because of Verizon's assumption of an all fiber network for loop charges (id. at 83). According to Rhythms, the Department has indicated that "it believes in the need to use consistent network assumptions in developing recurring and nonrecurring costs" (id. at 83-84, citing Phase 4-L Order at 19-21). Rhythms argues that the Department should disallow charges for load coil and bridged tap removal because, in a forward looking environment, these pieces of equipment would not be present on least-cost, most efficient fiber loop networks (Exh. RLI-CVD-1, at 124-126; Rhythms Brief at 84). Furthermore, Rhythms argues that it is assumed that the costs associated with conditioning are "built-in" to the higher, recurring costs that are associated with UNE loops (Exh. RLI-CVD-1, at 130; Rhythms Brief at 83).

According to the MA CLEC Alliance, the 100 percent fiber feeder network construct under which the Department established prices for UNE loops was adopted at the insistence of Verizon over the united opposition of the CLECs (MA CLEC Alliance Reply Brief at 1-2, citing Phase 4-L Order). The MA CLEC Alliance argues that having won the right to charge loop prices based on an all fiber feeder assumption, Verizon now seeks to recover costs that are not incurred in a fiber feeder network (id. at 2). The MA CLEC Alliance notes that the Department has recognized the need for methodological consistency in the administration of cost-based pricing (id.). The need for such

consistency, the MA CLEC Alliance argues, is demonstrated by turning the methodological tables: if CLECs had prevailed on the issue of the appropriate network assumption for costing loops, CLECs would now not be able to oppose recovery of loop conditioning, qualification, and testing costs required to provide xDSL service over copper loops (id. at 2-3). Moreover, the MA CLEC Alliance contends that if loop prices were determined under an all copper network assumption, Verizon would certainly not now offer fiber feeder, DLC loops without extra charges for the electronics and other equipment that is not necessary in an all-copper environment (id. at 3).

If the Department permits Verizon to charge for xDSL conditioning, Rhythms argues that the Department should ensure that these charges reflect the least cost, most efficient methods and procedures (Rhythms Brief at 85). Specifically, Rhythms argues that Verizon overstates the amount of time required to remove load coils and bridged tap and fails to calculate the costs for de-conditioning multiple loops at a time, a practice that is technically feasible and efficient (id. at 85-86). DBC argues that Verizon's proposed conditioning charges must be based on the finished length of the loop, measured after the bridged taps have been removed (DBC Brief at 33). To do otherwise, DBC contends, would permit Verizon to charge substantial and unpredictable conditioning charges for loops that should not need to be conditioned (id. at 33-34).

Similarly, the MA CLEC Alliance argues that the Department should reject Verizon's proposed charge for the addition of ISDN repeaters because this cost, like Verizon's other loop conditioning costs, is already recovered by Verizon in the charge for loops (MA CLEC Alliance Brief at 15, citing Exh. RLI/CVD-1, at 233-237). According to the MA CLEC Alliance, Verizon's existing, forward-looking, cost-based, recurring charge for loops should already have included the cost for required electronics, irrespective of loop length (id.). The MA CLEC Alliance also argues that the cost of ISDN repeaters should be recovered, if at all, through a recurring loop charge instead of a non-recurring charge because such costs represent a capital addition to loop plant and ISDN electronic equipment constitutes plant that can be removed and reused to serve other customers (id.). Finally, the MA CLEC Alliance contends that Verizon failed to provide adequate cost support for its non-recurring ISDN electronics charge, relying instead on alternative investment scenarios with significant cost differences, without any explanation and without providing any support for labor rates or time estimates (id. at 15-16).

3. Analysis and Findings

The Department must decide whether the loop qualification and conditioning charges proposed by Verizon conform to TELRIC principles. First, the Department must determine whether these charges should be allowed at all. As mentioned above, the Department has held that a cornerstone of the TELRIC methodology is the use of "a

reconstructed local network [that] will employ the most efficient technology for reasonable foreseeable capacity requirements." (Phase 4 Order, at 14, quoting Local Competition First Report and Order at

¶ 685). We determined previously for recurring UNE rates that "the appropriate forward-looking technology was a network with 100 percent fiber feeder in the loop portion of the network." Phase 4-L Order at 17, citing Phase 4 Order (emphasis added).[(69)] Specifically, the Department found that "the structure of the [Verizon] model [that is, all fiber in the loop] provides a good representation of a reconstructed local network that will employ the most efficient technology for reasonably foreseeable capacity requirements." Id., citing Phase 4 Order at 16-17. In that case, Verizon had proposed to use a network assumption of 100 percent fiber feeder in the loop portion of the network, and the Department approved that proposal over the objections of several CLECs. Phase 4 Order at 15-17.

Subsequent to the Department's decision on recurring UNE rates, Verizon developed a cost study for calculating non-recurring costs which used a network assumption of 90 percent copper feeder in the loop portion of the network. The Department rejected this inconsistency in its Order on non-recurring costs, stating "there is no reason to apply a different set of technology assumptions to the development of [non-recurring charges] from recurring charges." Phase 4-L Order at 19. The Department stated that "we agree with AT&T that this assumption invites undue selectivity or 'cherry-picking,' i.e., producing the higher recurring costs associated with all fiber feeder and the higher [non-recurring charges] associated with a network composed primarily of copper feeder." Id. In this case, by filing cost studies assuming use of copper feeder cable in the loop for its line sharing charges,[(70)] Verizon is asking the Department again to use network assumptions that are not consistent with the assumptions used by the Department in earlier Department Orders on the development of TELRIC rates.

For the reasons stated by the Department in rejecting this inconsistency between recurring and non-recurring cost studies in our Phase 4-L Order, we again reject the use of copper feeder in calculating UNE rates for line sharing. Therefore, the Department rejects the tariff charges proposed by Verizon-MA for the mechanized loop database, manual loop qualifications and engineering queries, as well as any charges for loop conditioning, including adding ISDN electronics.

Loop qualification and loop conditioning would not be necessary in a network with all fiber feeder should not be necessary. The presence or absence of load coils or bridged taps, the length and gauge of copper cable, or a determination of whether the loop is on DLC are all immaterial in a network with 100 percent fiber feeder. Verizon does not dispute this conclusion, but instead argues that "the relevant costs should take into account the network that is being used," and that it is "irrational to develop these costs on a network design . . . that was assumed for the pricing of different types of loops, such as 2-wire analog loops as a surrogate for xDSL loops, considered in the Consolidated Arbitrations proceeding." (Verizon Reply Brief at 7). In so arguing, Verizon ignores our findings in the Phase 4 Order and the Phase 4-L Order where we stated that the goal of

the TELRIC methodology is "to model a forward-looking telecommunications network" (Phase 4-L Order at 19), not the network in place today.

We concede the difficulty in reconciling pricing for a network element that in its very nature is based on the existence of copper plant with a network design that assumes 100 percent fiber feeder, but this difficulty flows directly from Verizon's own proposal in the earlier docket to use 100 percent fiber feeder in its TELRIC cost study. We note, however, that even in a network with 100 percent fiber feeder, there is still copper plant running from the DLC to the customer's premises. In such an environment, line sharing takes place only over the copper plant and does not require any line qualification or conditioning. That environment is the forward-looking telecommunications network that we use in this case to determine that Verizon shall not charge for any line qualification or conditioning.

Concerning Verizon's argument that the FCC has explicitly allowed it to recover its costs for line qualification and conditioning, we find that this is not a correct interpretation of the FCC's Order. We believe that the FCC's directives related to recovery of loop qualification and conditioning costs are only relevant to states that have assumed copper feeder for purposes of calculating TELRIC. The FCC has not directed states to assume copper feeder in calculating TELRIC, and, without such a directive, it would be illogical for the FCC to mandate the recovery of costs that are relevant only to a network assumption that may not have been approved in a particular state. It would be inappropriate and inconsistent for the Department to allow Verizon to base its loop rates on the costs of a fiber feeder, which may be greater than the costs of copper feeder in that context, while it bases its line sharing rates on the costs of a copper feeder, which are greater than the costs of fiber in the context of line sharing. If the FCC in fact were to require the Department to assume the use of copper feeder for calculating TELRIC for line sharing, we would allow Verizon to charge for both loop qualification and loop conditioning, but we also would have to direct Verizon to recalculate its loop costs in order to maintain consistency among our various TELRIC analyses. Otherwise, Verizon would be able to tack back and forth between different network assumptions based solely on whether the network assumption produced higher rates for Verizon in each instance.

B. Wideband Testing System Charge

1. Introduction

Verizon's proposed tariff includes a monthly charge of $1.90 per line charge for WTS, a service described above in Section III.F of this Order. See Part M, Section 2.19.1, Page 32. The Department already decided that Verizon's WTS should be optional, and the issue for discussion here is whether the proposed recurring charge for this optional service is reasonable.

2. Positions of the Parties

a. Verizon

Verizon disputes the CLEC argument that its WTS rate should be reduced to reflect cost savings Verizon gained from a partial contract refund from Alcatel (Verizon Reply Brief at 21 n.15). According to Verizon, the Alcatel refund issue involved a completely different retail service testing system (id.). Specifically, Verizon contends that the $11.2 million Alcatel refund relates to Alcatel's failure to build the functionality of the MTAU into each Alcatel DSLAM (id.). Since, according to Verizon, CLECs will provide their own DSLAMs, this refund has "nothing to do with the costs for testing to provide the wholesale service using the Hekimian system . . . Moreover, Verizon MA never purchased the Alcatel system, so there are no associated costs that [Verizon] is seeking to recover, as Rhythms erroneously alleges" (id., citing Rhythms Brief at 74). Verizon asserts that there is no relationship between these two costs, and Rhythms' argument is an "apples to oranges" comparison (Verizon Brief at 61).

Verizon also argues that its charge of $1.90 is based on cost studies for physical dispatches responding to problems in the data portion of a digital or shared loop (Verizon Reply Brief at 21). According to Verizon, these dispatch charges would be avoided if Verizon incorporates WTS into its line sharing arrangements (id.). Also, contrary to the arguments made by several CLECs, the WTS system implemented by Verizon excludes the optional retail-oriented modules offered by Hekimian, and, instead, focuses on meeting the trouble-isolation requirements of a wholesale service provider (id. at n.17, citing Tr. at 597-598). Finally, Verizon argues that its Hekimian test system includes a variety of functions, but that only those functions that are relevant to testing in a wholesale, line sharing environment are reflected in Verizon's cost study (Verizon Brief at 62).

b. CLECs

According to Covad, there is no record evidence to support Verizon's claim that the additional costs associated with implementing Verizon's WTS would be offset by reduced maintenance dispatch costs (Covad Brief at 25). Covad argues that Verizon has failed to submit a cost study in this regard but, rather, has provided a cost-benefit analysis of the use of WTS with Verizon's retail xDSL service offering (id. at 25-26, citing, Exh. RLI/CVD-60). Covad contends that the Department should not apply the conclusions of Verizon's retail business case to this wholesale pricing proceeding because, among other reasons, there is no evidence that the maintenance dispatch requirements of Infospeed are equivalent to requirements for services to be offered by CLECs (id. at 26).

Rhythms agrees with Covad on the lack of record evidence on dispatches and disputes Verizon's argument that the Alcatel refund is inapplicable to Verizon's proposed rate for WTS (Rhythms Reply Brief at 53). According to Rhythms, the Alcatel refund has "everything to do with the costs for testing that [Verizon] proposes to recover from CLECs through the mandatory wideband test charge" (id.). Rhythms contends that far from being forward looking and efficient, Verizon's WTS is a temporary stopgap, deployed to solve a problem with Alcatel (Rhythms Brief at 73). And, as a result of Alcatel's failure to deliver DSLAMs with the integrated MTAU to Verizon, Alcatel paid Verizon a refund of $11.2 million (id.). According to Rhythms, the WTS rate would be

reduced to $1.10 per month if the Alcatel refund was incorporated into the cost study (Rhythms Brief at 76).

Rhythms also argues that Verizon incorrectly applies the Engineer, Furnish and Install ("EF&I") Factor to investment in developing this rate element (id. at 74). Because of Verizon's use of this factor and other Verizon errors, Rhythms recommends that the Department further reduce this rate by 50 percent, to $0.55 (id. at 76).

3. Analysis and Findings

According to Verizon, there are two components to wideband testing. There is Layer 1 testing, which looks at the "physical health" of the loop to determine, among other things, whether a loop has bridged taps and interferers on it, and whether it has continuity[(71)] (Tr. at 597, 665).[(72)] Verizon states that there are at least two other layers associated with wideband testing, Layers 2 and 3 (Tr. at 597, 664). Layer 2, according to Verizon's witness, is normally referred to as the private virtual circuit. Layer 2 testing can be performed through a test head[(73)] or it could be integrated into the DSLAM (Tr. at 667). This testing monitors the data side of the loop, related to transmission and protocol layers[(74)] (Tr. at 597). According to Verizon, to perform Layer 2 testing a carrier would need an element management system that "looks at the data channel, sees what the connectivity on the pipe is, . . . look[s] at the DSLAM, [and] have it sync up with the DSLAM. It might even be able to do service assurance and set up TCP/IP addresses . . . ." (Tr. at 668).

Verizon's witness testified that the Hekimian system that it purchased to perform wideband testing is capable only of Layer 1 testing (Tr. at 665). Verizon also testified that its data affiliate will use additional functionality to do Layer 2 and 3 testing, and "that's what the credits . . . from Alcatel were for, because [Alcatel] didn't build [the Layer 2 functionality] into [its] DSLAM . . . ." (Tr. at 597). This point was reasserted later during this hearing when the Verizon witness confirmed that "Layer 2 testing can be either independent or it can be integrated into the DSLAM, but it is not Layer 1 testing . . . ." (Tr. at 667). Based upon the testimony of Verizon's witness, which, but for conclusory statements made in briefs, has not been rebutted by the CLECs, we agree with Verizon that the $11.2 million refund from Alcatel is related to Layer 2 (and, possibly, higher), not Layer 1, testing, which is the subject of Verizon's proposed charge for WTS. Therefore, it would not be appropriate to direct Verizon to factor this refund into its proposed WTS rate.

Finally, as mentioned above in Section III.F, Verizon argues that if the Department determines the WTS should be optional and not mandatory, Verizon would seek to file a revised tariff, containing a higher rate to reflect this directive. Verizon may propose a different rate, incorporating the Department's findings related to this service being optional, in its compliance filing. However, the Department agrees with the CLECs that,

unless Verizon can demonstrate that the dispatch rate for CLEC-provided xDSL service is comparable to the dispatch rate for Verizon's retail xDSL service, it would be inappropriate to factor the latter dispatch rate into the WTS charge.

C. Cooperative Testing

1. Introduction

Verizon's proposed tariff contains a non-recurring charge of $33.81 per loop ($45.68 for an expedited order) for cooperative testing. Part M, Section 2.5.4, Page 9. Cooperative testing is required to be performed on loops that are being provisioned for CLECS by Verizon (Exh. VZ-MA-2, at 45). This testing occurs on the day the loop is to be provided to the CLEC by Verizon and ensures that the line was properly provisioned (id.). The test consists of the following steps: (1) providing a "short," i.e., grounding both sides of the cable pair; and (2) removing the short so that the CLEC can perform its diagnostic test (Exh. VZ-MA-2, at 45; Exh. VZ-MA-4, at 70). The final test is for the CLEC to provide a "tone" on the loop (Exh. VZ-MA-2, at 45). Under the proposed tariff, cooperative (or continuity) testing will be performed at the request of a CLEC. Part B, Section 5.4.5.C. The cooperative testing charge is also applicable to stand-alone xDSL loops (Exh. DTE-BA-MA 2-13).

2. Positions of the Parties

a. Verizon

Verizon contends that its cooperative testing tariff charge was properly derived using a TELRIC-consistent cost analysis (VZ-MA-4, at 70). Specifically, Verizon states that actual work time estimates were used to derive the proposed rates (id.). According to Verizon, its rate of $33.81 was calculated by multiplying its labor rates for wiring, provisioning and field installation by the approximately 45 minutes it argues is required to perform the cooperative test (Exh. VZ-MA-2, at exh. III, section 76, Pages 3, 5, 7, 8).

b. CLECs

The MA CLEC Alliance urges that the Department reject Verizon's proposed cooperative testing charge (MA CLEC Alliance Brief at 14). According to the MA CLEC Alliance, the cooperative testing process was created in the New York collaborative proceedings because of the large number of non-qualified loops erroneously provisioned by Verizon-

New York (id.). Until Verizon can demonstrate that it is not responsible for the predominant share of problems that occasion the need for cooperative testing, the MA CLEC Alliance argues that it is unfair to impose charges on CLECs beyond the costs they already incur as a consequence of Verizon provisioning problems (id. at 14-15, citing Exh. RLI/CVD-1, at 231).

Covad argues that it requested Verizon to engage in cooperative testing last year because an "unacceptably high percentage of the loops that Verizon delivered did not work" (Covad Brief at 30). According to Covad, Verizon should not be permitted to assess a cooperative testing charge because this testing would not be necessary if Verizon could properly deliver an xDSL loop (id.). In addition, Covad contends that Verizon's charge amounts to CLECs paying both parties' costs for testing that Verizon's witness indicates is "mutually beneficial" (id., citing Tr. at 688). If the Department does not reject Verizon's proposal, Verizon will have little incentive to improve its loop provisioning performance, especially if it can increase its competitors' costs at no cost to itself (id. at 30-31, citing Exh. RLI/CVD-1, at 230).

3. Analysis and Findings

The Department agrees with Covad that it is inappropriate to permit Verizon to levy a "cooperative testing" charge on CLECs, which is based on costs that are caused by provisioning difficulties experienced by both Verizon and CLECs for stand-alone xDSL loops (Tr. at 132, 217, 688-690). The record shows that CLECs already incur their own cost for the cooperative test. Moreover, the record is clear that Verizon believes such testing is "mutually beneficial"; therefore, Verizon should share in the cost of cooperative testing by absorbing all of its own costs associated with this test, as CLECs do (see Tr. at 688). Finally, the Department agrees that shifting the costs of this test to CLECs relieves Verizon of an incentive to improve its loop performance. Consequently, the Department rejects Verizon's proposed tariff charge for cooperative testing.

D. Collocation Augmentation and Engineering Implementation Charges

1. Introduction

Verizon proposes an application augmentation fee of $1,500 for both Option A (in which a CLEC owns and maintains a splitter in its collocation cage) and Option C (in which the splitter is placed on a relay rack in Verizon's central office space and is maintained by Verizon) arrangements (Exh. VZ-MA-3, at 34; Exh. VZ-MA-4, at 57). Part E, Section 3.5.2A.3. Verizon also proposes an engineering implementation tariff charge to cover the engineering expenses (e.g., site-surveys, cabling measurements) associated with this

augmentation (Exh. VZ-MA-3, at 34). Verizon's proposed non-recurring engineering implementation tariff charge is $1,453.09. Part E, Section 3.5.3.C.

2. Positions of the Parties

a. Verizon

Verizon argues that the work activity required for the initial formation of a collocation area within a central office is identical to that required for augmentations for line sharing arrangements (Exh. VZ-MA-3, at 21; Exh. VZ-MA-3, at 34; Tr. at 590-591; Verizon Reply Brief at 13). According to Verizon, this work activity includes: (1) processing an application; (2) setting up accounts; (3) site-surveying the central office; (4) determining space requirements; (5) buying equipment and supplies; (6) updating systems to include new inventory and locations; (7) cabling run planning; and (8) scheduling workers (Exh. VZ-MA-3, at 34; Tr. at 382-383). Verizon argues that the simplification of the application form for splitters referenced by several CLECs was performed for CLEC convenience only, and not because the nature of the underlying work requirements had decreased (Exh. VZ-MA-4, at

56-57; Verizon Brief at 67-69).

Verizon also argues that unless spare cables sought to be recycled by CLECs are organized into binder groups, have test access units, and do not create interference problems if used for data services, the CLEC-suggested option of recycling existing cable for splitter connections would entail additional costs or would not be available at all (Verizon Reply Brief at 14-15). Unless prior planning and preparation by the CLECs obviate the need for cabling rearrangements when line sharing is introduced, Verizon argues, the collocation augmentation and implementation charges are valid and should apply (id.).

b. CLECs

The CLECs maintain that the augmentation and engineering activities required for line-sharing do not warrant the same tariff charges that are in place for collocation augmentation and engineering activities (Exh. RLI/CVD, at 173; Tr. at 324-3; DBC Brief at 30; Rhythms Brief at 101-102). The CLECs argue that Verizon has not shown how processing splitter applications would be as costly as other collocation augmentations (Rhythms Brief at 101; Vitts Brief at 11-12; Covad Brief at 31; Rhythms Reply Brief at

54). Instead, the CLECs argue that Verizon's augmentation and engineering costs related to line-sharing are overstated, and Verizon should develop new rates based strictly on line-sharing specific activities (Tr. at 585; Rhythms Brief at 99-102; Covad Brief at 31). In the interim, the CLECs argue that the Department should approve a 50 percent reduction in the rates proposed by Verizon, subject to true-up (Tr. at 585; Rhythms Brief at 99-102; Rhythms Reply Brief at 54).

The CLECs further argue that if a CLEC has spare cabling coming into its collocation arrangement, it should be able to use that cabling without applying for a collocation augmentation, conducting additional engineering, and incurring additional charges (Rhythms Brief at 100-101). The CLECs urge the Department to follow the holding of the NYPSC, which did not allow collocation augmentation fees when a CLEC uses existing cabling (id. at 101). The CLECs further argue that because Verizon-NY streamlined its collocation application form for splitters, Verizon-MA likewise is able to simplify the splitter application process (Vitts Brief at 11-12; Rhythms Reply Brief at 54).

3. Analysis and Findings

Consistent with the Department's findings in Section III.E.2 above, the Department directs Verizon to submit a line sharing-specific cost study for its proposed non-recurring application augmentation and engineering implementation charges. We determined earlier in this Order that the work activities that Verizon must perform to provision an augmentation request are not as numerous as those required to provision a new collocation arrangement (see pages 59-73, above). Therefore, we deny Verizon's proposed charges.

E. Splitter Installation Charge

1. Introduction

If the CLEC does not wish to install its own splitter, the CLEC retains the option of having Verizon install the splitter in an Option C environment.[(75)] Verizon has proposed a one-time installation charge of $1,215.00 applicable to Option C arrangements. Part M Section 5, Page 6. According to Verizon, this figure is derived by multiplying the total investment of the splitter (cost and labor) by the EF&I factor (Verizon Brief at 57-58).[(76)] Verizon states that this factor, in turn, is derived by the calculation of operating expense factors, including maintenance and directly attributable joint and common cost factors (Exh. VZ-MA-2, at 55).

2. Positions of the Parties

a. Verizon

Verizon claims that its cost methods for splitter installation are proper (Verizon Brief at 57 n.47; Verizon Reply Brief at 9). Verizon argues that the installation charge is intended to recover all EF&I costs for the splitter equipment, which includes vendor engineering, Verizon engineering, transportation, warehousing, Verizon installation, and acceptance testing (Verizon Brief at 57). Verizon claims that it properly applied the EF&I factor in accordance with the method established in the Department's Consolidated Arbitrations proceeding (Verizon Reply Brief at 9). Verizon further argues that in the Phase I Order, the Department recognized Verizon's use of the EF&I factor as an appropriate means of determining installation costs for relay rack equipment in connection with virtual collocation (Verizon Brief at 58, citing Phase I Order at 188; Verizon Reply Brief at 10).

b. CLECs

The CLECs argue that the $1,215.00 fee for splitter installation is unreasonable (Exh. RLI/CVD-1, at 166; Vitts Brief at 10; Rhythms Brief at 103; Covad Brief at 27-28). The CLECs contend that the EF&I factor, when applied to the total investment for the splitter, dramatically over-estimates the real cost of installation (Vitts Brief at 10; Rhythms Brief at 103; Covad Brief at 27-28). According to the CLECs, this overstatement occurs for two reasons. First, the EF&I factor was derived from historical data, based on the company's historical plant, and not on the most efficient, forward-looking network (Exh.RLI-CVD-1,

at 154). As a result, the factor produces higher rates since it is, in a sense, inflated due to the high embedded costs characteristic of the historically functioning network (Exh. RLI/CVD-1, at 154; Vitts Brief at 10).

The second reason that the use of the EF&I factor can over-estimate installation costs is that, according to the CLECs, this factor would have already been recovered when the CLEC paid for the new collocation arrangement (Exh. RLI/CVD-1, at 154; Rhythms Brief at 56, 96; Rhythms Reply Brief at 49). According to several CLECs, using Verizon's labor rate of $51.70 per hour, Verizon's proposal assumes an installation time of 23.5 hours for a task that amounts to inserting (i.e., snapping or sliding) 24 splitter "cards" into slots and screwing in four screws (Exh. RLI/CVD-1, at 166-167; Rhythms Brief at 102; Covad Brief at 10; Vitts Brief at 10). The CLECs assert this operation can be accomplished in less than a minute (Rhythms Brief at 103). Moreover, because the CLECs did not contest the use of Verizon's EF&I methodology in other contexts, that does not mean these CLECs agree such methodology is appropriate in all contexts

(Rhythms Reply Brief at 49-50). The CLECs recommend that the Department reject the proposed installation fee and adopt the CLECs' proposed rate of $25.85 per splitter, which the CLECs assert is based on direct estimates of specific line sharing splitter installation work with an installation time of thirty minutes (Exh. RLI/CVD-1, at 171; Rhythms Brief at 103; Covad Brief at 28).[(77)]

3. Analysis and Findings

As Verizon notes, in the Consolidated Arbitrations, the Department approved an EF&I installation factor for UNEs of 45 percent of material investment. See Phase 4 Order; Phase 4-A Order;[(78)] Phase 4-B Order.[(79)] Since then, Verizon and the Department have used that same factor for installation costs for new UNEs. For example, in the Department's Phase 4-N Order,[(80)] we rejected a request by AT&T to require Verizon to calculate a stand-alone work time estimate for connecting a dark fiber pair, finding that such an approach is "inconsistent with the Department's approved approach to TELRIC studies." Phase 4-N Order at 11-12 (citation omitted). Similar to the arguments the CLECs make here concerning the splitter installation charge, AT&T had argued that the general UNE installation factor was inappropriate for application to dark fiber, that the factor would produce inflated installation costs, and that the work involved was minimal. Id. at 11. As we did in the Phase 4-N Order, we find that the general UNE installation factor is appropriate for determining splitter installation costs, and, therefore, we approve Verizon's splitter installation charge. In this way, we maintain consistency among our various TELRIC analyses. However, we note that the data supporting the factor may be getting stale. Therefore, the Department intends to review the UNE installation factor during its review of all TELRIC rates next year.

F. Splitter Monthly Administration and Support Charges

1. Introduction

Verizon proposes a monthly administration and support charge of $24.85 per shelf for splitters placed in a CLEC's collocation cage, i.e., Option A. Part M, Section 5.2.10. For Option C arrangements, Verizon proposes a monthly $26.28 charge for maintenance, administration, and support. Part M, Section 5.2.10, page 6. According to Verizon, these charges support product management, negotiation of CLEC agreements, development of new CLEC products, improvement of existing CLEC services, and the development of marketing materials such as handbooks, training materials, and a web site (Exh. VZ-MA-2, at 55; Verizon Reply Brief at 12). To calculate these costs, Verizon applies an Annual Carrying Charge Factor ("ACCF") to the entire splitter investment (Exh. VZ-MA-2, at exh. II, Workpaper Section 1).[(81)] The applicable ACCF is 0.0806 (id.).

2. Positions of the Parties

a. Verizon

Verizon contends that the ACCF has historically been acceptable to the Department as a method for allocating common overhead for Verizon's various products and services based on the underlying investment (Verizon Reply Brief at 11). Verizon argues that it is entitled to receive an "administrative and support charge" as a means of allocating the administrative and marketing costs that exist under both Options A and C (id.). Verizon believes that it is entitled to these charges because the CLEC is the "cost-causer," and argues that to exempt line sharing CLECs from these costs would be discriminatory since the ACCF is included in rates paid by non-line sharing CLECs (id. at 13).

b. CLECs

The CLECs argue that the administration and support fee should not apply to Option A splitter configurations (Exh. RLI/CVD-1, at 157; DBC Brief at 30; Rhythms Reply Brief

at 47). The CLECs contend that because Verizon does not own, install, or maintain the investment (e.g., the splitter) in an Option A environment, it is inappropriate to apply the ACCF (Exh. RLI/CVD-1, at 158; Rhythms Brief at 97; Vitts Brief at 11). The CLECs urge the Department to follow the lead of the NYPSC and reject Verizon's imposition of additional maintenance or overhead-related recovery based on CLEC investment within their own collocation arrangements (Rhythms Brief at 98). With regard to Option C, the CLECs suggest that the Department reject Verizon's proposed monthly charges and adopt tariff charges as calculated by the CLECs (Exh. RLI/CVD-1, at 160; Rhythms Brief at 98; Covad Brief at 29-30; Vitts Brief at 11; Rhythms Reply Brief at 47-48).[(82)] Alternatively, the CLECs suggest that the Department direct Verizon to develop a new, lower charge for maintenance, administration, and support based on forward-looking experience with line sharing applicable only in Option C environments (Rhythms Brief at 99).

3. Analysis and Findings

The Department agrees with Verizon that a monthly administration and support charge for Option A and Option C is reasonable; however, as explained below, the Department finds that Verizon's calculation of this charge for Option A is unreasonable. Pursuant to the FCC's TELRIC method, ILECs are entitled to recover a "reasonable allocation of forward-looking common costs" in their provision of UNEs. Local Competition First Report and Order at

¶ 682. CLEC arguments that overhead costs are not applicable to Option A, where CLECs own the splitters, miss the point. Overhead costs, by definition, are not

attributable to a particular service or investment. Therefore, ownership of equipment is irrelevant to the appropriate recovery of these costs.

However, in calculating the administration and support charge, Verizon included the installation investment of $1,215.00 as part of the entire splitter investment to which the ACCF is applied to derive the rate. This is discriminatory to CLECs that install their own splitters under Option A. Therefore, in its compliance filing, Verizon shall recalculate the administration and support charge for Option A by removing the splitter installation investment from the entire splitter investment to which the ACCF is applied to derive the rate.

G. Splitter Equipment Support Charge

1. Introduction

In Option C, the CLEC's splitter is installed in Verizon's space and on Verizon's relay rack equipment.[(83)] In consideration for the provision of this equipment and space, Verizon proposes a recurring splitter equipment support charge that varies for each of the geographic zones established by the Department in its Phase 4 Order. The proposed splitter support charges are as follows: $3.94 per shelf for Metro space; $3.38 per shelf for Urban Space; $3.34 per shelf for Suburban space; and $3.69 per shelf for Rural Space. Part M Section 5.3.13, Page 6.

2. Positions of the Parties

a. Verizon

Verizon argues that the splitter equipment support charges are proper because they are based on the "virtual collocation, relay rack per full shelf" cost adjudicated and tariffed in its April 21, 2000 Virtual Collocation Compliance Filing (Exh. VZ-MA-2, at 57, as corrected by Verizon on August 10, 2000). Verizon asserts that since some splitters are purchased in shelves, the recurring charges for splitter support are appropriately developed on a per shelf, not on a per line, basis, as suggested by the CLECs (Verizon Reply Brief at 12).

b. CLECs

Rhythms asserts that the splitter equipment support charges proposed by Verizon are unduly cumbersome and will not provide CLECs with sufficient flexibility to respond to market forces (Rhythms Brief at 94). The CLECs request that the Department reject Verizon's proposed charges and instead adopt a monthly recurring per line, rather than per splitter shelf, charge of $0.09 for a CLEC-owned splitter under Option C (Exh. RLI/CVD-1, at 164; Rhythms Brief at 94).

3. Analysis and Findings

The Department rejects the per line tariff proposals of the CLECs. The Department finds that the splitter equipment support charge, as proposed by Verizon, is just and reasonable. In Section III.C, the Department rejected the CLECs request to direct Verizon for access to Verizon's splitters on a per line or per shelf basis. Under the Option C scenario, Verizon is providing CLECs with access to its floor space and access to its relay racks in one-shelf increments, not on a per line basis. Based upon our earlier finding in Section III.C, it is appropriate and reasonable that we permit Verizon to recover its costs for providing CLECs with such access.

H. Cross-Connects

1. Introduction

Two service access connection ("SAC") charges are proposed by Verizon for an Option C scenario. The first SAC is the connection of the shared voice/data line to the end-user outside plant cable and pair to a termination block located on the MDF (Exh. VZ-MA-2, at 59, as corrected by Verizon on August 10, 2000). The second SAC is the cable connection of the splitter voice port to a termination block located on the MDF (id., as corrected by Verizon on August 10, 2000). According to Verizon, the cross-connection charges are derived from an earlier filed cost study for a two-wire digital link, submitted to the Department on February 9, 2000[(84)] (id. at 58). The proposed charge is $11.17 per link. Part M, Section 1, page 12.

2. Positions of the Parties

a. Verizon

According to Verizon, the FCC noted that for a line sharing arrangement, if a splitter is not located in the ILEC's MDF, the ILEC should be permitted to adjust the cross-connection charges to reflect any cost differences arising from the different location of the splitter, compared to the MDF (Verizon Brief at 59, citing Line Sharing Order at ¶ 145). Verizon argues that its proposal complies with the FCC's Order and notes that, as mentioned above, there is no NEBS-compliant MDF mountable splitter presently on the market (id. at 59-60).

Verizon states that use of a rack-mounted splitter requires only two frame cross-connects and a reasonable amount of cabling for connecting the splitter (id. at 59). According to Verizon, one SAC cable must connect the splitter to the MDF, and the second SAC cable runs from the collocation area to the splitter and onto the MDF (VZ-MA-3, at 32; Tr. at 789).

In addition to its NEBS-compliance argument against MDF-mounted splitters, Verizon argues that its frames have limited space, which Verizon must conserve to provide basic local exchange service (Verizon Brief at 60). In addition, Verizon notes that a federal appellate court agreed with Verizon that an ILEC, acting as a landlord, may determine where in its central offices a CLEC can place its equipment (id., citations omitted).

Finally, Verizon argues that contrary to statements made by Rhythms and Covad, a CLEC's existing cross-connections do not provide the necessary termination for line sharing (Verizon Brief at 69).

b. CLECs

The CLECs maintain that there should be only one SAC or tie cable charge (Exh. RLI/CVD-1, at 113; Tr. at 593; DBC Brief at 35). The CLECs argue that the most efficient network design would have the splitter mounted directly to the MDF through a block on the horizontal side of the MDF (Exh. RLI/CVD-1, at 60; Exh. RLI/CVD-1, at 113; Tr. at 780, 792; Vitts Brief at 8). According to Rhythms and Covad, with pre-connection to the data side of the splitters at the MDF and to a CLEC's collocated DSLAM via a cross-connect tie cable, line-sharing would be possible with just two additional jumpers (Exh. RLI/CVD-1, at 60). According to these CLECs, one jumper would connect the end-user's line on the block to the splitter and the second jumper would run from the splitter to the office equipment of the customer (id.; Tr. at 780).

Regardless of whether Verizon permits splitter mounting on its MDF, Rhythms argues that Verizon should be required to price line sharing elements based upon the efficient splitter placement at the MDF (Rhythms Reply Brief at 51). According to Rhythms, whether Verizon is willing to permit MDF-mounted splitters in its central offices is not a necessary precondition to the pricing decision (id.). Rather, Rhythms argues, pricing based on the least cost option is a fundamental TELRIC principle (id.).

3. Analysis and Findings

The Department has previously noted that a particular technology should be in common use in order for it to be included as a network assumption in a TELRIC analysis. See Phase 4 Order, at 14. In Section III.C of this Order, the Department did not direct Verizon to permit MDF-mounted splitters at this time, for the reason that there are currently no NEBS-compliant MDF-mounted splitters available that are compatible with Verizon's frame. Therefore, for purposes of calculating TELRIC, we assume a network that does not include MDF-mounted splitters. Based upon this earlier decision, we approve Verizon's proposal to assess fees for two SAC cables as part of each line sharing arrangement, because the two SAC fees accurately match the costs of a line sharing arrangement without MDF-mounted splitters.[(85)] Even if there were NEBS-compliant MDF-mounted splitters available, we are not persuaded by the limited record on this issue that MDF-mounted splitters are any less complicated or, more importantly, any more cost efficient than the configuration proposed by Verizon (see RR-DTE-14; Tr. at 780-782, 788-793).

I. POT Bay/Splitter Termination Charge

1. Introduction

Verizon's proposed tariff assesses a recurring monthly fee for two two-wire voice grade POT Bay terminations for each line sharing arrangement. Part E, Section 2.6.4.A. Verizon proposes a charge of $0.08 per termination for a total fee of $0.16 for each line sharing arrangement (see Exh. VZ-MA 3, attachment 1).

2. Positions of the Parties

a. Verizon

According to Verizon, the POT Bay is the demarcation point between the CLEC's network and Verizon's network, and there are two POT Bay terminations for each line sharing arrangement (Verizon Reply Brief at 69). Verizon argues that the POT Bay provides an appropriate point for testing and isolating troubles on each carrier's network; therefore, a fee for two two-wire voice grade POT Bay terminations for each line sharing arrangement is appropriate.

b. CLECs

Rhythms and Covad argue that direct connection to Verizon's network at the MDF remains technically feasible, making a POT Bay unnecessary in a line sharing arrangement (Rhythms Brief at 91). According to Rhythms, the POT Bay serves the same function as an MDF -- to provide a point of demarcation between Verizon's and the CLEC's facilities (id.). Rhythms contends that requiring CLECs to use the POT Bay only serves to increase unnecessarily collocators' expenses and needlessly reduces the amount of space available within the central office (id.). For these reasons, Rhythms urges that the Department make the POT Bay charge optional so that it would be imposed only on those CLECs who wish to terminate at that location (id., citing Tr. at 583).

3. Analysis and Findings

The Department finds in favor of Verizon. We agree with Verizon that the appropriate termination point for line sharing arrangements is the POT Bay. Also, use of the POT Bay is consistent with the termination point for access to other UNEs. See Tariff No. 17, Part A, Section 1.3.2 (defining POT Bay as "The intermediate distributing frame system which serves as the point of demarcation for physically collocated interconnection"); Part E, Section 2.2.3.B (stating that CLECs must choose one of three POT Bay options regarding termination of their facilities at multiplexing node); see also Greater Media Arbitration, 99-52, at 12-15 (September 24, 1999). Verizon provided sufficient cost support for its proposed POT Bay termination charges, and no party specifically challenged the level of these charges, so they are approved.

J. Miscellaneous Costs and Rates Issues

1. Request to Make Permanent Verizon's Proposed Zero Loop Charge

Verizon has not proposed a charge for access to the high-bandwidth portion of a shared loop facility, though it indicates that it reserves the right to do so in the future (Verizon Brief at 45). Rhythms and Vitts argue that the Department should establish a permanent recurring charge of $0.00 for the data portion of a line-shared loop (Vitts at 7-8; Rhythms at 64-69). The Department denies the CLECs' request. The rates set forth in Department-approved tariffs are never "permanent" in the sense of unchanging (as opposed to "interim"). Rather, a carrier could at any time petition the Department to modify current rates based upon a new or revised cost study. Should Verizon file a proposed charge for access to the high-bandwidth portion of a shared loop together with a cost study, the Department will docket Verizon's proposal and carriers such as Vitts and Rhythms will have the opportunity at that time to argue why Verizon's proposal is unreasonable and should be rejected by the Department.

2. Retroactive Recovery of Costs to Enhance Verizon's OSS

Similar to its position with respect to loop allocation costs, Verizon has not proposed a charge for the OSS upgrades, discussed earlier, in this Order but proposes to set a $0.00 "placeholder" rate for OSS cost recovery, subject to a retroactive true-up (Verizon Brief at 45). Vitts and Rhythms oppose Verizon's request to make the costs for the OSS enhancements retroactive (Vitts Brief at 9; Rhythms Brief at 81-82). According to Rhythms, it is inappropriate for CLECs to be charged for OSS upgrades if the CLECs have not had the benefits of the upgrades but instead have had to deal with inferior manual order processing (Rhythms Brief at 82).

The Department will not, in this Order, prohibit Verizon from seeking recovery of its costs to enhance its OSS. When Verizon files a revised tariff, supported by a cost study, to address its cost recovery for the OSS upgrades, the Department then will consider the appropriateness of applying retroactively these charges to CLECs. Again, Vitts and Rhythms will be afforded the opportunity at that time to present their case why retroactive cost recovery is unreasonable.

V. ORDER

Accordingly, after due notice, hearing, and consideration, it is

ORDERED: That the Compliance Filings for Tariff No. 17 of Verizon New England, Inc. d/b/a Verizon Massachusetts, filed with the Department on May 5, 2000 and June 14,

2000 for effect on June 4, 2000 and July 14, 2000, be and hereby are APPROVED in part and DENIED in part; and it is

FURTHER ORDERED: That Verizon shall file, within four weeks of the date of this Order, a compliance tariff consistent with the findings herein, and it is

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

By Order of the Department,

_____

James Connelly, Chairman

_____

W. Robert Keating, Commissioner

_____

Paul B. Vasington, Commissioner

_____

Eugene J. Sullivan, Jr., Commissioner

_____

Deirdre K. Manning, Commissioner

Appeal as to matters of law from any final decision, order or ruling of the Commission may be taken to the Supreme Judicial Court by an aggrieved party in interest by the filing of a written petition praying that the Order of the Commission be modified or set aside in whole or in part.

Such petition for appeal shall be filed with the Secretary of the Commission within twenty days after the date of service of the decision, order or ruling of the Commission, or within such further time as the Commission may allow upon request filed prior to the expiration of twenty days after the date of service of said decision, order or ruling. Within ten days after such petition has been filed, the appealing party shall enter the appeal in the Supreme Judicial Court sitting in Suffolk County by filing a copy thereof with the Clerk of said Court. (Sec. 5, Chapter 25, G.L. Ter. Ed., as most recently amended by Chapter 485 of the Acts of 1971).

1. Upon federal approval of the Bell Atlantic Corporation and GTE Corporation merger, the entity formerly known as New England Telephone and Telegraph Company d/b/a Bell Atlantic-Massachusetts, now operates in Massachusetts as Verizon New England, Inc. Although the tariff proposals that are the subject of this Order were filed before the merger approval, for convenience's sake, the Department will refer to the petitioner as Verizon.

2. The Massachusetts CLEC Alliance consists of Adelphia Business Solutions Operations, Inc. ("Adelphia"); CoreComm Massachusetts, Inc.; MGC Communications, Inc. d/b/a Mpower Communications Corp. ("Mpower"); RCN Telecom Services of Massachusetts, Inc.; and Vitts Networks, Inc. ("Vitts") (MA CLEC Alliance Brief at 1 n.1).

3. Implementation of the Local Competition Provisions of the Telecommunications Act of 1996, CC Docket No. 96-98, First Report and Order, 11 FCC Rcd 15499 (1996) ("Local Competition First Report and Order") (further citations omitted).

4. The Line Sharing Order is the subject of an appeal before a federal district court. See United States Tel. Assoc. v. FCC, No. 00-1012 (D.C. Cir. Jan. 18, 2000).

5. "Non-loaded" means the loop is conditioned. See page 12 n.9 for an explanation of loop conditioning.

6. ISDN is defined as "A unified end-to-end digital network, in which data originating from all types of communication (e.g., voice, text, data, still and moving pictures) are transmitted from one port (terminal) in the exchange (switch) over one access line to and from the subscriber." 15 C.F.R. § 772

7. Pursuant to the FCC's approval of the merger of Bell Atlantic Corporation and GTE Corporation, Verizon is required to establish a separate affiliate for the provision of xDSL-based services. Application of GTE Corporation and Bell Atlantic Corporation For Consent to Transfer Control of Domestic and International Sections 214 and 310 Authorizations and Application to Transfer Control of a Submarine Cable Landing License, FCC 00-221, CC Docket No. 98-184, Memorandum Opinion and Order, at Appendix D (rel. June 16, 2000).

8. Deployment of Wireline Services Offering Advanced Telecommunications Capability, CC Docket No. 98-147, First Report and Order and Further Notice of Proposed Rulemaking, 14 FCC Rcd 4761 (rel. Mar. 31, 1999) ("Advanced Services Order").

9. According to the FCC, "conditioned" loops are copper loops from which bridged taps, low-pass filters, range extenders, and similar devices have been removed. Implementation of the Local Competition Provisions of the Telecommunications Act of 1996, CC Docket No. 96-98, Third Report and Order and Fourth Further Notice of Proposed Rulemaking, FCC 99-238, at ¶ 172 (rel. Nov. 5, 1999) ("UNE Remand Order"). The FCC notes that ILECs add these devices to the basic copper loop to gain architectural flexibility and improve voice transmission capability. However, it states that such devices diminish the loop's capacity to deliver advanced services, and thus preclude the CLEC from gaining full use of the loop's capabilities. Loop conditioning requires the ILEC to remove these devices, paring down the loop to its basic form. Id.

10. See Line Sharing Order at ¶ 71 n.156.

11. In accordance with this decision, Verizon is directed to modify Part B, Section 19.1.3.C, which states "Line sharing arrangements must comply with TR 72575." Rather, Verizon shall substitute industry-approved documents for the technical specifications for line sharing. The Department agrees with the MA CLEC Alliance that Verizon's reliance upon its own technical manuals could delay the introduction of advances in technology by CLECs in favor of Verizon's own retail offerings (MA CLEC Alliance Brief at 5).

12. See p. 25-26 for the definition of a "splitter."

13. According to Verizon, LFACS inventories and assigns all loop facilities from the serving terminal to the main distribution frame in the central office (Exh. VZ-MA-2, 18). Verizon states that LFACS may contain information regarding the presence or absence of load coils, bridged taps, the length and gauges of the copper cables, and whether the loop is on digital loop carrier (id. at 19).

14. For example, Verizon's witness testified that the eleven OSS enhancements that Telcordia will perform involve 25 million lines of code (Tr. at 86-87).

15. Another Verizon witness testified that Verizon began negotiations with Telcordia last February, identifying the work that had to be completed. Also this witness stated that Telcordia began to perform system changes absent a signed contract with Verizon (Tr. at 92-93).

16. 120 F.3d 753, 812-13 (8th Cir. 1997).

17. 205 F.3d 416, 423-24 (D.C. Cir. 2000).

18. In the Matter of Application by SBC Communications Inc., Southwestern Bell Telephone Company, and Southwestern Bell Communications Services, Inc. d/b/a Southwestern Bell Long Distance Pursuant to Section 271 of the Telecommunications Act of 1996 to Provide In-Region, InterLATA Services in Texas, CC Docket No. 00-65, Memorandum Opinion and Order (rel. June 30, 2000) ("SBC Texas Order").

19. A standard splitter shelf is comprised of 96 lines (see e.g., Tr. at 768). Splitter access on a per shelf basis is generally understood to involve all 96 lines. Splitter access on a per line basis could involve any increment of the 96-line total; however, standard line cards, which slide into splitters shelves, are in four-line increments (id.). While parties disagree about whether Verizon is required to make available its splitters to CLECs, there is agreement that it is technically feasible to make splitters available on a per line or per shelf basis (see Tr. at 239).

20. AT&T's arguments about line splitting over UNE-P are addressed in Section III.D, below.

21. Section 51.319(h)(4) reads: "In situations where a requesting carrier is obtaining access to the high frequency portion of the loop, the [ILEC] may maintain control over

the loop and splitter equipment and functions, and shall provide to requesting carriers loop and splitter functionality that is compatible with any transmission technology that the requesting carrier seeks to deploy using the high frequency portion of the loop, as defined in this subsection, provided that such transmission technology is presumed to be deployable pursuant to section 51.230." 47 C.F.R. § 51.319(h)(4).

22. See AT&T Reply Brief at 4, citing Tr. at 224-225, 237; WorldCom Reply Brief at 2.

23. "Force to load" is Verizon's workload measured against Verizon's available workforce (see Exh. VZ-MA-1, at 11).

24. A pair swap, or line and station transfer, involves moving a customer's voice service to an adjacent or alternative loop and is performed when conditioning the existing loop to support xDSL service would significantly degrade the voiceband service. See Line Sharing Order at ¶ 86.

25. In April, 78 percent of Verizon's orders were completed without a dispatch. By July, that figure had increased to 87 percent (Covad Reply Brief at 6, citing Exh. DTE-BA-MA 2-9-Supp.)

26. According to Verizon's witness, MTUs are devices that are placed on the side of an end-user's premises and are used when Verizon has trouble with access to the end-user (Tr. at 141). This device reverses the polarity of the circuit and enables the electronics in the MTU to disconnect the inside wire from the outside wire (id.).

27. The SMARTS clock is Verizon's system that queues outside installation dispatch requests on a first-come, first-served basis and indicates to the requester (either a CLEC or a Verizon employee) the first date that a Verizon technician could be dispatched (see Exh. VZ-MA-1, at 11).

28. Verizon Initial Brief at 15, citing Deployment of Wireline Services Offering Advanced Services Telecommunications Capability, Order on Reconsideration and Second Further Notice of Proposed Rulemaking in CC Docket No. 98-147 and Fifth Further Notice of Proposed Rulemaking in CC Docket No. 96-98 at ¶ 27 (rel. August 10, 2000) ("Advanced Services Reconsideration Order").

29. Covad's witness testified that vendors "stockpile cabling . . . like 50-pair cables, 25-pair cables, [vendors] have reels of them . . ." (Tr. at 407). Verizon's witness did state it has been waiting almost three months for its vendor to deliver "89 pieces of equipment," though the witness did not specify what type of equipment (Tr. at 342, 400). In any event, a 23 business day interval, which can translate into as much as 33 calendar days, seems unwarrantedly protracted.

30. In Massachusetts, Verizon does not use external installation vendors but rather uses its own equipment installation work force. Before Verizon could employ an external installation vendor, Verizon would first have to redeploy its own work force from other

areas within the Verizon footprint. Only after exhausting those resources could it hire an external installation vendor (Exh. DTE-1-11).

31. If the Department's interpretation of RR-CVD-6, Supp. is correct, Verizon allows one calendar month to begin and complete a splitter capacity or cabling augmentation (i.e., beginning by day 53 and finishing the installation by day 76).

32. The Department notes that this information request, now Exh. RLI/CVD-84, asked Verizon to provide collocation augmentation activities for both Option A and Option C. Verizon only provided a response for Option C. Since under Option A, the CLEC will install and maintain the splitter, it is logical to assume that fewer Verizon activities are needed to complete these types of collocation augmentation applications.

33. For reasons stated above, the Department finds the first two functions can be performed in hours, not days.

34. "Processing the application fee" means Verizon deposits the CLEC's check and notes in its records that the CLEC paid some portion of the installation fee (Tr. at 355). Again, the Department finds this function can be accomplished in hours (i.e., no more than one day).

35. For reasons stated above, Verizon may omit its verification of NEBS compliance if a CLEC proposes to use the same model of splitter for which Verizon has already ascertained its compliance (Tr. at 359-360). Over time, the universe of compliant splitters should be very well scoped, and time saved thereby.

36. The Department believes this notification can and should be performed via e-mail and, thus, will require no significant amount of time to complete.

37. As mentioned above, the Department finds that the issuance of the CCR should take minutes, not hours or days. In its response to RR-DBC-2, Verizon provided three examples of a CCR, which is a one-page, computer-created document containing approximately 30 fields to be completed (e.g., CLLI code), though several fields were left blank. Based upon our review of these examples, and the basic level of detail requested for the fields, we find that the completion of this form can occur in one day.

38. Verizon has stated that it does not allocate time within this interval for this step, "CLEC orders splitters," rather, it appears to be a placeholder (Tr. at 364).

39. According to Verizon, the TEO "kicks off" any equipment that is necessary, including frame termination blocks not mentioned in Verizon's response to Exh. RLI/CVD-84 (Tr. at 365).

40. For the four preceding activities beginning with "coordinate delivery of equipment to installation vendor," the record supports the conclusion that these steps can be completed within days because, as mentioned above, Verizon does not use external installation

vendors. Scheduling these activities should be straightforward, resulting in fewer delays, since Verizon's internal work force performs the equipment installations.

41. Verizon indicates this step may be performed simultaneously with other activities

(RR-DTE-11).

42. Again, Verizon states these last two activities, distribute CFA to CLEC and initiate billing, can occur while Verizon updates its inventory in its systems (RR-DTE-11).

43. See AT&T Communications of New England, Inc., D.T.E. 98-58, at 14 (1999).

44. In addition, the FCC states "Indeed, we encourage states to adopt shorter provisioning intervals in circumstances where the nature of the collocation arrangements may render shorter provisioning intervals particularly appropriate." Advanced Services Reconsideration Order at ¶ 37.

45. Other than a brief exchange between Verizon's witness and counsel for Covad, our record is silent on cabling augmentations for voice providers (Tr. at 372).

46. D.T.E. 98-58, at 16.

47. Verizon states that it is willing to provide CLECs with the results of the WTS, but argues that direct third-party access to the WTS is not technically feasible at this time (Verizon Reply Brief at 22 n.18). Should the necessary gateway systems and associated methods and procedures for direct access to the WTS be developed, Verizon would expect CLECs to share the costs of those systems. Lastly, Verizon states its retail DSL unit has no direct access to WTS (id.).

48. According to Verizon, the mechanized loop test ("MLT") determines the effective length of a loop by measuring its capacitance (Exh. VZ-MA-2, at 14 n.13). Verizon states that this test involves sending a voltage pulse from the testing equipment located in an MLT test center, through a central office switch port, and down the loop being tested (id.). Finally, Verizon notes that only working loops, i.e., loops connected to a switch port and provided with dial-tone, can be MLT-tested (id.).

49. Verizon argues that dispatch charges alone do not capture all of Verizon's "hidden charges" that would occur absent WTS -- namely, the disruption of the technician's routine, customer dissatisfaction, and the likelihood of disputes between Verizon and the CLEC about the appropriateness of the dispatch charge in particular cases (Verizon Brief at 66).

50. Covad and Rhythms also argue that a requesting CLEC should have direct access to Verizon's WTS, not merely the results of this test (Covad Brief at 27; Rhythms Brief at 75).

51. According to Verizon, the MTAU enables opening the circuits to look in both directions, towards the customer and back towards the equipment. This testing can be performed from a remote location (Exh. DTE-BA-MA 2-13(b)).

52. Hekimian is a vendor of WTS equipment. In this Order, references to "Hekimian" should be understood to be references to this vendor's WTS equipment only.

53. We note that the NYPSC similarly declined to mandate CLEC acceptance of WTS for shared lines. See Opinion and Order Concerning Line Sharing Rates, Case 98-C-1357, Opinion No. 00-07, at 25-27 (rel. May 26, 2000).

54. RETAS, or Repair Trouble Administration System, is Verizon's gateway system available to CLECs for their maintenance and repair inquiries.

55. See Verizon Reply Brief at 21 n.16.

56. Ameritech Corp., Transferor, and SBC Communications, Inc., Transferee, For Consent to Transfer Control of Corporations Holding Commission Licenses and Lines Pursuant to Sections 214 and 310(d) of the Communications Act and Parts 5, 22, 24, 25, 63, 90, 95, and 101 of the Commissions Rules, CC Docket No. 98-141, Second Memorandum Opinion and Order, FCC 00-336 (rel. Sept. 8, 2000).

57. According to Verizon, as of September 1999, 13 percent of Massachusetts loops are served by integrated DLC (see DTE-MCIW 2-26 filed in D.T.E. 99-271).

58. From the time Verizon filed its proposed tariff in the instant proceeding to the date the Department issued this Order, approximately four and a half months elapsed, and we considered this proposal on an accelerated schedule since Massachusetts law provides for a maximum six-month tariff investigation. Moreover, we doubt any party would disagree that the issues to be considered in Phase I are complicated.

59. Under the terms of the Bell Atlantic/GTE merger conditions, only Verizon's separate affiliate may own line cards (see Covad Brief at 15 n.24).

60. Verizon Reply Brief at 39.

61. D.T.E. 99-271 is the Department's proceeding to investigate Verizon's compliance with certain federal requirements set forth in 47 U.S.C. § 271. See January 14, 2000 Letter Order on Final OSS Master Test Plan, Attach. A, D.T.E. 99-271.

62. The FCC's TELRIC methodology was vacated and remanded by the Eighth Circuit Court of Appeals on July 18, 2000. Iowa Utils. Bd. v. F.C.C., 219 F.3d 744 (8th Cir. 2000). On September 22, 2000, the Eighth Circuit granted the FCC's motion for partial stay of a portion of the Court's decision, which vacated 47 C.F.R.

§ 51.505(b)(1), pending the filing and ultimate disposition of a petition for certiorari with the Supreme Court. Iowa Utils. Bd. v. F.C.C., No. 96-3321 (and consolidated cases). The Department has determined that it will maintain the status quo, which is TELRIC, pending either a higher court ruling overturning the 8th Circuit's findings or an FCC decision on remand. Therefore, the Department will follow TELRIC principles in setting recurring and non-recurring rates for line sharing.

63. Consolidated Arbitrations, D.P.U. 96-73/74, 96-75, 96-80/81, 96-83, 96-94-Phase 4 (December 4, 1996) ("Phase 4 Order").

64. At the request of the Department, Verizon filed substitute pages for this section on August 16, 2000, to better match the information contained in its mechanized pre-qualification database. When the Department cites to this tariff section, the reference will be to the August 16 version.

65. According to the proposed tariff, the mechanized pre-qualification database provides the following information: total metallic loop length (including bridged taps, presence of load coils, presence of DLC facilities, presence of interferors, presence of digital single subscriber carrier, and qualification for ADSL/HDSL per Verizon standards. Part B, Section 5.4.2.A.1.

66. The proposed tariff indicates that the same information provided in the mechanized database will be made available through the manual loop qualification, but that a CLEC may request this latter process "where the mechanized loop qualification database is not available." Part B, Section 5.4.2.A.2.

67. According to the tariff, a CLEC may request information about a loop from Verizon's records beyond information supplied by either the database or the manual loop qualification. This loop information may include: length, number and location of bridged taps; number and location of load coils; location of DLC; or cable gauge at specific locations. Part B, Section 5.4.2.A.3.

68. The Attorney General's request for a 50 percent reduction in Verizon's proposed rates applies to all of its rates applicable to line sharing. Therefore, it is not necessary for the Department to repeat the Attorney General's position on rates throughout the remainder of this Order.

69. The feeder portion of the network is the trunk line leading back to the central office from the feeder distribution interface, which is where the distribution plant (i.e., line branching out to the subscriber) meets or interfaces with the feeder. UNE Remand Order at ¶ 206.

70. See Exhibit VZ-MA-2, at 60.

71. Continuity is an uninterrupted electrical path. See Newton's Telecom Dictionary, 15th Ed. 1999, at 206.

72. In response to an information request, Verizon stated that its Hekimian wideband testing equipment provides the following information: "POTS supervision CO [central office] Noise, Loop Noise, Dial Tone, Loop Wiring, ADSL Signal, and ATU-R [ADSL Terminal Unit - Remote] Detection" (Exh. RLI/CVD-71).

73. A Verizon witness described a "test head" as a "test box," which does the physical testing and which "electronically map[s] to the correct cable and pair" (Tr. at 688).

74. Generally speaking, protocols allow like devices to communicate with each other by providing a common language and set of rules. Devices communicate over the Internet using a suite of protocols called TCP/IP (transmission control protocol/Internet protocol). Annabel Z. Dodd, The Essential Guide to Telecommunications (1998).

75. As mentioned above, in Option A, the splitter is located within the CLEC's collocation space, and the CLEC is required to do its own installation work (Verizon Brief at 57).

76. The numerical value of the EF&I factor is 0.45 (Exh. VZ-MA-2, at exh. I, Workpaper 4).

77. The proposed $25.85 cost was derived by multiplying a per minute labor charge ($0.86 per minute) by a time estimate provided by the CLECs (Exh, RLI-CVD-1, at 169).

78. Consolidated Arbitrations, D.P.U./D.T.E. 96-73/74, 96-75, 96-80/81, 96-83, 96-94-Phase 4-N (February 5, 1999) ("Phase 4-A Order").

79. Consolidated Arbitrations, D.P.U./D.T.E. 96-73/74, 96-75, 96-80/81, 96-83, 96-94-Phase 4-B (May 2, 1997) ("Phase 4-B Order") (approving NYNEX's February 14, 1997 UNE rates compliance filing).

80. Consolidated Arbitrations, D.P.U./D.T.E. 96-73/74, 96-75, 96-80/81, 96-83, 96-94-Phase 4-N (December 13, 1999) ("Phase 4-N Order").

81. The installation charge calculated using the EF&I factor of 0.45 is also included in the investment total.

82. The charge proposed by the CLECs is a monthly recurring per-line splitter charge of $0.09 for a CLEC-owned splitter (Exh. RLI/CVD-1, at 9; Rhythms Brief at 99 n.384).

83. In an Option A environment, the CLEC provides its own space and rack support for the splitter. Splitter equipment and support charges are not assessed on a CLEC opting for an Option A configuration.

84. The Department approved this filing in Phase 4-F of the Consolidated Arbitrations. Consolidated Arbitrations, D.P.U./D.T.E. 96-73/74, 96-75, 96-80/81, 96-83, 96-94-Phase 4-F (September 15, 2000).

85. [85] Rhythms does not propose an alternative rate to Verizon's proposed SAC cable charge but, rather, disputes Verizon's proposed splitter configuration that results in the two SAC cable charges (Rhythms Brief at 93-94).