BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

In the Matter of the Continued Costing and	**)**	
Pricing of Unbundled Network Elements,	**)**	**Docket No. UT-003013**
Transport, Termination, and Resale	**)**	**Phase B**

REPLY POST HEARING BRIEF OF VERIZON NORTHWEST INC.

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1. Verizon Northwest Inc., f/k/a/ GTE Northwest Incorporated ("Verizon NW" or the Company"),[1] by counsel, submits this Reply Post Hearing Brief.

I. Introduction

2. The Commission is addressing technically complex issues in this phase that present challenging cost and price questions. The volume of testimony filed underscores the challenge before the Commission. Yet, that testimony and how it withstood cross-examination will help the Commission accomplish the task before it.

3. Verizon NW's testimony included cost models and cost studies that complied with the pricing rules that the Commission currently follows and reflected, where appropriate, its own network and processes. If properly performed and documented, these models and studies must reflect most accurately Verizon NW's costs to provide the network elements that the Commission is addressing. No competitor filed a competing or alternative model or study. Instead, the competitors and, in some instances, the Staff simply offered conclusions or results intended to lower cost. Those conclusions or results were not based on a model or study, but reflected the opinion of the relevant competitor or staff witness. Where there is conflicting evidence, Verizon NW believes that the evidence it presented that is substantiated by a model or

[1] For purposes of this brief, the term "Verizon NW" will be used to refer to Verizon Northwest Inc., the company that is a party to this proceeding. The term "Verizon" is used to refer to the merged company, Verizon Communications. The term "GTE" is used to refer to the former GTE companies.

study or the opinion of an expert familiar with Verizon NW's network and processes is more compelling than the opinion of someone not familiar with the network and processes that will actually generate the costs.

4. Accordingly, based on its evidence, Verizon NW respectfully requests that the Commission adopt the costs and prices explained in detail in Verizon NW's opening brief.

II. Legal And Policy Issues

A. The Commission Must Develop Local Competition Consistent With The Pricing Mandates Of The Act

5. As in Phase A, the CLECs contend that the Commission's primary responsibility in this docket is to price UNEs so as to foster competition. Joint Submitters Brief at ¶ 3; Tracer Brief at ¶ 4. The CLECS, as well as Staff, point to both state and federal law as the source of the Commission's pro-competition responsibilities.

6. The Commission, however, cannot promote competition in a vacuum. Instead, federal law requires the Commission to set UNE prices at a level that permits Verizon NW to recover all of its costs to provide these elements. *See* Verizon NW Phase A Post Hearing Brief at ¶¶ 6-9, 13, Verizon NW Phase A Reply Brief at ¶¶ 3-4. Washington law is consistent with this mandate. Section 80.36.080 of the Revised Code of Washington expressly requires that all rates "shall be fair, just, reasonable and sufficient." WASH. REV. CODE ANN. § 80.36.080 (West 1998). Moreover, the Commission's own rules require that rates and regulations be fair and just, and provide reasonable compensation to the utility. WASH. REV. CODE ANN. § 80.36.140 (West 1998). Thus, under both state and federal law, the Commission may only implement competition in such a way as to ensure Verizon NW an opportunity to recover its costs to meet its obligations to competitors. Attempts to assume away costs through unrealistic modeling assumptions are not consistent with this mandate.

7. Additionally, the Commission must proceed with caution in setting UNE rates given the uncertainty of the TELRIC methodology adopted by the FCC and used in Docket UT-960369, *et al.* to set loop rates. The Joint Submitters ignore this uncertainty, claiming that the FCC's pricing rules "remain in full force and effect." However, as the Eighth Circuit recently concluded, notwithstanding its stay and pending review by the Supreme Court, its decision in *Iowa Utilities II*[2] is not vacated and remains the law. *Southwestern Bell Tel. Co. v. Miss. Pub. Serv. Comm'n*, 236 F.3d 922, 924 n.4 (8th Cir. 2001), *petition for cert. filed*, (U.S. May 8, 2001) (holding that invalidation of the FCC's TELRIC pricing methodology required that an arbitrated interconnection agreement using that methodology also be invalidated). Thus, the Commission should be mindful that blind adherence to the TELRIC pricing methodology could very well violate the Act if it prevents an ILEC from recovering all of its costs to provide UNEs. Consequently, any prices set in this proceeding should be interim in nature pending resolution of the proper pricing standard.

B. ILECs Are Not Obligated To Build Facilities For CLECs

8. Based on the nondiscrimination provision of § 251(c)(3), the Joint Submitters seek far more than that to which they are entitled under the Act by arguing that ILECs must build facilities for CLECs where no facilities currently exist. Joint Submitters Brief at ¶¶ 5-9. This request blatantly disregards federal law and the Act's preference for facilities-based competition. It is well settled that § 251(c)(3) of the Act "requires unbundled access only to an incumbent LEC's ***existing*** network—not to a yet unbuilt superior one." *Iowa Utils. Bd. v. FCC*, 120 F.3d 735, 812-813 (8th Cir. 1997), *aff'd in part, rev'd in part*, 525 U.S. 366 (1999) ("*Iowa Utilities*

[2] *Iowa Utilities Board v. FCC*, 219 F.3d 744 (8th Cir. 2000), (*cert granted*, in part), 121 S.Ct. 877, 878-89 (2001).

Board I") (emphasis in original). Thus, the Eighth Circuit vacated FCC Rules 315(c)-(f), which would have required ILECs to do what the CLECs currently seek—combine network elements that are not already combined for the customer at issue at the time of the CLEC request for such combination. *Id.* On remand from the Supreme Court, the Eighth Circuit reaffirmed its action vacating FCC Rules 315(c)-(f).[3] *Iowa Utilities Board II* 219 F.3d at 751.

9. The Joint Submitters seek to explain away the Eighth Circuit's decision as one made in the context of rejecting the FCC's superior quality rules, and thus not applicable to the issue of whether ILECs must construct additional facilities that are "at least equal in quality" to existing ILEC network facilities. Joint Submitters Brief at ¶ 6. However, the Eighth Circuit's rationale equally applies to any request that an ILEC build facilities. Any other result would be ridiculous given the overall structure and purposes of the Act. The duty to provide access to network elements was designed to give a jump-start to competition by allowing competitors to use some parts of the existing network while at the same time promoting the ultimate goal of ***facilities-based*** competition. The Act would have undermined any incentive for entrants to develop their own facilities or to adapt existing equipment to their use if they could automatically demand that an ILEC build facilities for them.

10. Indeed, in passing the Act, Congress expressed a preference for "meaningful ***facilities-based*** competition." 104th Congress Report 104-458 (1996) at 148. The FCC has

[3] In affirming its earlier action vacating FCC Rules 315(c)-(f), the Eighth Circuit stressed that the Supreme Court did not address these rules, and that the Eighth Circuit applied entirely different reasoning to its invalidation of FCC Rules 315(c)-(f) than it applied to the reinstated FCC Rule 315(b). FCC Rule 315(b) required a finding as to what constituted "unbundled" access. FCC Rules 315(c)-(f), in contrast, deal only with the issue of ***who*** shall be required to combine unbundled network elements. The Eighth Circuit found that the vacated rules were not supported by the language of section 251(c)(3) of the Act, which states that an ILEC "shall provide such unbundled network elements in a manner that allows requesting carriers to combine such elements in order to provide such telecommunication service." The Eighth Circuit reiterated its position that the "Act does not require the incumbent LECs to do ***all*** the work." (emphasis added).

endorsed Congressional preferences for facilities based competition. *See* FCC Rule 317(c)(2); *see also UNE Remand Order*[4] ¶ 110 ("consumers benefit when carriers invest in their own facilities because such carriers can exercise greater control over their networks thereby promoting the availability of new products that differentiate their services in terms of price and quality"). A requirement for ILECs to build facilities on demand undermines this goal.[5]

11. Lastly, the Joint Submitters rely on Washington law to require ILECs to build facilities. Joint Submitters Brief at ¶ 8. Specifically, the CLECs rely on the "service on demand" provision of WASH. REV. CODE ANN. § 80.36.090, which has absolutely nothing to do with building facilities on demand for competitors. This decades old statute predates CLECs and was intended to ensure that potential ***end users*** would have reasonable access to telephone service. This statute certainly has no relevance to a request from a CLEC to an ILEC for facilities that do not exist, but that they hope to use to compete with the ILEC.[6] Moreover, the Joint Submitters' creative interpretation of this statute would be contrary to the Act, so that the Commission is preempted on the issue and cannot adopt their position.

12. The same analysis applies to the Joint Submitters' reliance on another pre-CLEC statute, WASH. REV. CODE ANN. § 80.36.170. This statute also was intended to protect end

[4] *In re Implementation of the Local Competition Provisions of the Telecommunications Act of 1996,* Third Report and Order and Fourth Further Notice of Proposed Rulemaking, 15 F.C.C.R. 3696 (1999).

[5] The CLECs' desire to turn ILECs into forced construction companies for new entrants is particular egregious given the lack of any requirement that CLECs continue to use facilities built on demand until their cost has been recovered, thereby increasing an ILEC's risk of stranded investment.

[6] Indeed, taken to its logical conclusion, the CLEC's argument would likewise require CLECs to build facilities for ILECs. WASH. REV. CODE ANN. § 80.36.090 (West 1998) applies to "Every telecommunications company." The Commission has noted several times that this means CLECs as well as ILECs. *See e.g. Washington Utilities and Transportation Commission v. U S WEST Communications,* Docket UT-961638, Fourth Supplemental Order (1/16/98) at 21-22.

users; it does not provide CLECs an "end-run" around the pro-competitive parameters and restrictions of the Act.

13. Nor can the Joint Submitters rely on WASH. ADMIN. CODE § 480-120-061. First, contrary to the Joint Submitters' contention, this section does not purport to be an exclusive list of situations in which an ILEC may refuse service. More significantly, however, the WASH. ADMIN. CODE § 480-120 rules relating to telephone companies generally apply only to ***retail*** services—i.e. services offered to the "public"—as opposed to wholesale services offered to other carriers.[7] *See* WASH. ADMIN. CODE § 480-120-011. Moreover, the Commission has classified this section of the administrative code as a ***consumer*** protection rule, not a source of additional ILEC obligations to CLECs. *See e.g. Rulemaking for Telecommunications Operations,* UT-990146, Draft Rules and Notice of Opportunity to File Written Comments and Notice of Workshop (5/2/01). Customer means only end users, not CLECs. *See e.g. U S WEST Communications v. Washington Utilities and Transportation Commission*, 86 Wash. App. 719, 937 P.2d 1326 (1997) (defining customer in RCW 80.36.320 to mean end user). More importantly, the Commission cannot implicitly do by its rules what neither state or federal law permits. Thus, if WASH. ADMIN. CODE § 480-120-061 purported to impose additional unbundling rules upon ILECs (especially without undertaking a necessary and impair analysis), it would violate—and be preempted by—§ 251(d)(3) of the Act.

C. Dark Fiber

14. Contrary to the Joint Submitters' allegations, Verizon NW offers unbundled dark fiber to CLECs in Washington as required by the *UNE Remand Order* in a non-discriminatory

[7] The WAC 480-120 rules refer to public service companies, which include telephone companies, as "utilities," not "consumers," "customers," or "the public." *See* WASH. ADMIN. CODE § 480-120-011.

manner and without unreasonable restrictions.[8] Where spare facilities are available, Verizon NW will provide access to dark fiber at Verizon NW's existing hard termination points. Available interoffice dark fiber consists of any unused fiber strands that exist between a fiber patch panel, or its functional equivalent, located within the Verizon NW central office at one end of the network segment, and the fiber patch panel located in the central office at the other end of the network segment. Exhibit T-1130:8 (Lee). For dark fiber in a loop or subloop, the unused fiber must terminate on a fiber patch panel, or functional equivalent, at the central office end of the facility, an accessible remote terminal location, and/or the customer's premises. *Id.* In addition, dark fiber will be offered to CLECs in the condition that it is found in Verizon NW's network at the time that the CLEC submits its request (*i.e.*, "as is"). Dark fiber will not be spliced or re-spliced for a CLEC's use, nor will Verizon NW convert lit fiber to dark fiber for a CLEC's use. *Id.* at 8-9. Verizon NW's limited restrictions on dark fiber access are not only just and reasonable, but are contemplated by the applicable FCC rules.

1. <u>Access To Dark Fiber And The "No-Build" Rule</u>

15. The Joint Submitters seek access to dark fiber at "any termination point, including not only fiber patch panels but splice points in manholes, controlled environmental vaults, or any other location in Verizon NW's network." Joint Submitters Brief at ¶ 11. However, CLECs are only entitled to access dark fiber that terminates at a fiber patch panel. Thus, the Joint Submitters' proposal is directly contrary to the Act, the Eighth Circuit's ruling, and FCC rules.

16. A fiber patch panel is a readily accessible point of access to the fiber. Exhibit T-1136:14 (Lee). Verizon NW generally terminates fiber cables to a patch panel when they are installed. *Id.* However, in cases where the fiber has not been terminated to a patch panel, a work

[8] See *UNE Remand Order* at ¶ 65, et seq.

order would be required to engineer, splice and extend the cable to the patch panel. *Id.* This would, in effect, be building the facility so the CLEC could have access to it. As discussed above, however, Verizon NW is obligated to provide access only to its existing network, not to build facilities for a CLEC. The *UNE Remand Order* itself incorporates this view. The FCC has defined dark fiber as unused fiber that is "in place and easily called into service" and "can be used by competitive LECs ***without installation*** by the incumbent." *UNE Remand Order* at ¶ 174 and n.323 (emphasis added). Moreover, in an analogous situation regarding transmission facilities the FCC further stated: "we do not require incumbent LECs to construct new transport facilities to meet specific competitive LEC point-to-point demand requirements for facilities that the incumbent LEC has not deployed for its own use." *Id.* at ¶ 324. In addition, the FCC has "limited an incumbent LEC's transport unbundling obligation to ***existing*** facilities and ***did not require incumbent LECs to construct facilities to meet a requesting carrier's requirements where the incumbent LEC has not deployed transport facilities for its own use***." *Id*. (emphasis added) (citing the *Local Competition Order* at ¶ 451).

17. Dark fiber is defined as "unused transport capacity" and "unused loop capacity." *UNE Remand Order* at ¶¶ 326, 174, and n.323. The Joint Submitters' request that Verizon NW build "unused" transport or loop capacity is illogical. The CLECs not only claim entitlement to a network that Verizon NW has not built; they claim entitlement to a network that, by definition, Verizon NW would not use even if it did build it. However, a CLEC cannot require Verizon NW to install additional fiber and then claim entitlement to it because Verizon NW is not using it. Verizon NW is not a construction company for CLECs. There is no obligation for Verizon NW to install dark fiber. If a CLEC wants Verizon NW to build dark fiber on its behalf, it should be willing to do so through a standard business arrangement in the competitive marketplace.

18. Additionally, to the extent a CLEC seeks access to dark fiber at a splice point between points where it is physically interconnected to Verizon NW's network, it seeks a subloop. CLECs, however, are permitted access to subloops only at "accessible terminals," which are points "on the loop where technicians can access the wire or fiber within the cable without removing a splice case to reach the wire or fiber within." *UNE Remand Order* at ¶ 206. A splice point in the outside plant design is not an accessible point or access because a field technician would have to open a splice case to reach any fiber within the cable.

19. Furthermore, Verizon NW is only required to provide access to dark fiber at technically feasible locations. The Joint Submitters have not–and indeed cannot–provide any evidence that it is technically feasible to access dark fiber at locations other than hard termination points–which do not include splice points. Among other reasons, continual accessing of existing fiber optic splice points either renders the fiber strands unusable or degrades the transmission capabilities of the fiber optic facilities by infringing on the integrity of the fiber. If either a Verizon NW or a CLEC technician needed to access and/or test its portion of the optical fiber, the splice point would have to be breached. These disruptions to working customer services are unacceptable.

20. For these reasons, the Commission should reject the Joint Submitters' request for access to dark fiber at locations other than a fiber patch panel.

2. <u>"Take Back" Provisions</u>

21. Verizon NW, as a carrier of last resort ("COLR"), is concerned about ensuring that sufficient network transmission capacity exists to meet its service commitments. Accordingly, Verizon NW reserves the right to take back leased fiber from CLECs with twelve months notice, upon establishing the need to the satisfaction of the Commission, and also reserves the right to

take back underused (less than OC-12) fiber. Exhibit T-1130:9 (Lee). This reasonable condition will ensure that Verizon NW can meet its COLR obligations, as well as enable routine maintenance and emergency restoration activities. The FCC has granted states the flexibility to establish reasonable limitations and technical parameters for dark fiber unbundling. *UNE Remand Order* at ¶ 352. Although the take back limitation first originated at the Texas Commission, the FCC specifically mentioned it as a reasonable limitation on the availability of dark fiber that should be left in place to help address the legitimate concerns of ILECs in meeting their COLR obligations. *Id.* at n.694.

22. Contrary to the CLECs' claims, Verizon NW's right to revoke a carrier's dark fiber lease would not curtail the usefulness of dark fiber. Under Verizon NW's proposal, a CLEC would be given significant advance notice of one year that Verizon NW intended to take back the fiber. In addition, Verizon NW would seek permission from the Commission before any take back occurred, and would have the burden to demonstrate need for the fiber to provide basic local exchange service based on demand or growth estimates in a particular area. Tr. 2479, 2508-09 (Lee). The advance notice would give the CLEC plenty of time to migrate its services to another provider or to Verizon NW's tariffed special access services (*i.e.* lit fiber applications) so that service interruptions would not occur. Exhibit T-1136:15 (Lee).

D. Termination Liability For UNE Conversion

23. The Joint Submitters seek to convert existing services (such as special access) to UNEs or UNE combinations. The FCC, of course, has considered this proposal and specifically rejected it in its *Supplemental Order of Clarification* to the *UNE Remand Order*.[9] In that

[9] In re Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, Supplemental Order Clarification, 15 F.C.C.R. 9587 (2000).

Clarification, the FCC established specific prohibitions on these types of service conversions unless the CLEC could prove that "a significant amount of local exchange service" is being provided to a particular customer. *Supplemental Order of Clarification* at ¶ 22.

24. The Joint Submitters unabashedly propose to brush aside the *Supplemental Order of Clarification* and have this Commission overrule these service conversion restrictions. Specifically, the Joint Submitters seek to nullify their special access contract terms with Verizon NW, by which liabilities will be imposed for early termination of a contract. The FCC has held already that contract termination liability provisions are enforceable when there are such conversions: "any substitution of unbundled network elements for special access would require the requesting carrier to pay any appropriate termination penalties required under volume or term contracts." *UNE Remand Order* at n.985. The Commission cannot allow the Joint Submitters to ignore this contractual liability. When carriers contract for Verizon NW's access long term discount plans, they pay considerably less than they would have if they had taken month-to-month service. Carriers are eligible for lower access rates because they agree to use those access services for the full term of the plan. The tariffed termination liabilities are designed to make Verizon NW whole if the services are canceled prematurely, which is what happens when a carrier seeks to replace them with unbundled network elements.

25. Some CLECs have purchased special access facilities to connect their collocated area in a Verizon NW central office to CLEC facilities located elsewhere. While some purchases may have pre-dated the availability of EELs, allowing unfettered conversion of these special access facilities to UNEs would allow CLECs to circumvent the Act's "no build" rule. When Verizon NW builds facilities it incurs substantial up-front cost to engineer and install the facilities. These costs can become stranded if the ILEC is not allowed to recover them once they

are converted to TELRIC-base-priced UNEs. *See* Tr. 2520-22 (Lee). Under the terms of the tariff, Verizon NW is entitled to a termination liability when a carrier that has previously committed to a term and volume agreement elects to terminate that agreement early. By ordering out of the tariff, the CLEC has already agreed to these terms and conditions and should be made to abide by them just as any other customer. Of course, if the CLEC is purchasing the special access facilities on a month-to-month basis, then there would be no termination liability. Exhibit T-1136:12 (Lee).

26. In addition, CLECs should not be allowed to intentionally circumvent the no build rule by ordering tariff services and subsequently converting them to UNEs once they are built. The Commission should affirm this restriction and consider establishing a minimum time frame before facilities that were ordered via tariff or resale can be converted to UNEs (for example, two years). In the alternative, the Commission should require CLECs to reimburse Verizon NW for any up front costs it incurred to build the tariffed services. At a minimum, however, the Commission should reject the Joint Submitters' attempts to avoid termination liability for the conversion of special access circuits to EELs.

III. UNE Costs And Prices

A. Qwest

27. Verizon NW does not reply to positions stated on Qwest's proposed costs and prices.

B. Verizon NW

1. Non-Recurring Costs And Rates

a. Study Methodology

28. The Joint Submitters complain that Verizon NW's non-recurring cost ("NRC") Studies filed in this proceeding are a "black box" that prevents them from analyzing Verizon NW's methodology. Joint Submitters Brief at ¶ 87. The Joint Submitters ignore the fact that in

Phase II of Docket UT-960369, *et al*., and Phase A of this proceeding, Verizon NW proposed, and the Commission approved, the same methodology—with certain modifications—employed by Verizon NW in this proceeding.

29. Moreover, Verizon NW's NRC Studies are anything but a "black box." In fact, they provide a high level of detail regarding each and every step taken by Verizon NW to determine its costs. The methodology on which Verizon NW's NRC Studies are based is well known:

Activity Time x Probability of Occurrence x Labor Rate = Cost.

The main NRC Study, Exhibit CR-1160, clearly and methodically takes the reviewer through each and every calculation and reveals every assumption taken into account. In addition, Verizon NW explained each step taken and the relevant assumptions in prefiled testimony. *See* Exhibits T-1161, T-1163, T-1666, T-1167 (Richter).

30. For example, Verizon NW's evidence makes clear that work times were either obtained through work sampling, through time and motion studies, from subject matter expert ("SME") estimates, or a combination of these. Exhibit CR-1160:7WA-3; Exhibit T-1161:6-21, 24-25 (Richter); Exhibit T-1166:3-7 (Richter); Tr. 2551, 2598, 2612, 2616 (Richter). In addition, Verizon NW explained how it derived the work times used in the above calculation. *See* Exhibit CR-1160:8WA-1-7 and 9WA-1-7; Exhibit C-1162:2; Exhibit T-1166:3-4, 6 (Richter). Even so, the CLECs claim that the work times are made up, or "hard coded." Joint Submitters Brief at ¶ 87. The fact that Staff witness Roth was able to identify and evaluate each step taken by Verizon NW in its studies to determine its costs—from initial work time to cost—reveals the disingenuous nature of the Joint Submitters' criticism. *See* Exhibit T-1360:5 (Roth).

31. The fact is, Verizon NW's NRC Studies provide more than adequate detail regarding the sources of inputs used and the calculations performed to arrive at Verizon NW's costs, and are open to inspection.

(1) Level Of OSS Modification Assumed

32. The Joint Submitters argue that the costs calculated by Verizon NW should be rejected because they continue to assume that the ordering and provisioning process will be undertaken manually even though CLECs have been ordered to pay for OSS modifications. Joint Submitters Brief at ¶ 88. Instead, Joint Submitters recommend adopting Verizon NW's costs as modified by Messrs. Weiss and Klick. *See* Exhibit C-1318; Exhibit C-1332. Those recommended modifications merely populate the "mechanized" field of Verizon NW's NRC Studies with zeros for all provisioning and ordering activities, reflecting their assumption that all such activities would be accomplished by an efficient OSS, even though no such OSS is available today. *See* Exhibit T-1330:25 (Weiss). The Joint Submitters' argument misses the mark, and their proposed modifications should be rejected.

33. Joint Submitters fail to understand that the OSS modifications for which CLECs are currently being charged—through a Commission approved per-LSR charge—are to compensate Verizon NW for OSS modifications that *have already been completed.* *See* Thirteenth Supplemental Order at ¶¶ 144-45 (ordering that ILECs may recover the costs already incurred to modify their OSS to provide CLEC access). To be sure, the costs incurred by Verizon NW thus far have provided the enhancements that provide CLECs with a level of access that did not exist only a few years ago. Exhibit T-1166:21 (Richter). For example, Verizon NW has provided CLECs with the ability to query, in real time and in an electronic format, all information necessary to process a pre-order request, and to receive electronically from Verizon NW any

responses, error messages, or selection information necessary to complete each request. *Id.* These examples demonstrate that Verizon NW is currently providing access to electronic interfaces that fully meet the requirements of providing CLECs access to the same functionalities available to Verizon NW. *Id.* at 21-22.

34. In short, the CLECs are now paying for the modifications that put the functionality currently available in place. Verizon NW's NRC Studies reflect that level of mechanization—not a final full flow through capability that is not available today. Exhibit CR-1160:7WA-1-3; Exhibit T-1166:21-22 (Richter). Further modifications are necessary to obtain the flow-through level that Joint Submitters argue should now be assumed. *See* Exhibit CR-1160:7WA-2 (In the NRC Studies, Verizon NW "developed service order costs for manual and semi-mechanized order processing and will over time develop costs for the more fully mechanized order process as OSS solutions are determined and planned for implementation."). Thus, there is no inconsistency between the level of OSS enhancements implemented by Verizon NW for CLECs and the level of recovery sought for the costs of implementing those enhancements.

35. Moreover, TELRIC provides that costs include the most forward looking technology *currently available*. *See*, *e.g.*, *Local Competition Order* at ¶¶ 683, 690 (forward-looking costs should be computed based on the least-cost, most efficient technology *currently available*). No party produced evidence that 100% flow through technology was available today, much less that Verizon NW's enhancements are any less forward looking that other ILEC's. Indeed, Mr. Weiss admitted that he made changes to Verizon NW's NRC Studies without having performed any analysis of Verizon NW's OSS or its capabilities. Tr. 3670-71. (Weiss). Furthermore, on cross-examination, Mr. Weiss acknowledged that CLECs themselves, not Verizon NW, choose whether to submit orders manually, *i.e.* via facsimile. Tr. 3647-48 (Weiss). The hypothetical

changes made by the Joint Submitters' witnesses have no relationship to Verizon NW's actual costs nor to the level of OSS currently available. Accordingly, they should be rejected.

(2) Faulty Links Corrected Months Ago Had No Effect On Costs

36. The Joint Submitters complain that certain links in Verizon NW's NRC Studies are faulty. Joint Submitters Brief at ¶ 89. The Joint Submitters pointed this out to Verizon NW by way of prefiled testimony early in this proceeding. Exhibit T-1310:51-52 (Klick). As a result, Verizon NW corrected the links in question, and informed the Joint Submitters of the correction in prefiled testimony. Exhibit T-1166:20-21 (Richter). Contrary to the Joint Submitters' claim, correction of these links had no effect on the summary of costs included in Verizon NW's NRC Studies. *Id.* Accordingly, this argument is moot.

(3) Service Ordering

(a) Order Entry Time Study (ASRs)

37. The Joint Submitters and Staff take issue with Verizon NW's Order Entry Time Study, conducted with Arthur Anderson, to develop accurate time estimates for tasks completed at Verizon NW's National Access Contact Center ("NACC"). Joint Submitters Brief at ¶ 91; Staff Brief at 12. Both advocate using the sample times observed during a brief study of a limited number of employees at the NACC, rather than the statistically valid time estimates calculated in conjunction with Arthur Anderson. Joint Submitters' and Staff's simplistic view of Verizon NW's study disregards its valid methodology and the accuracy with which it determines—from the initial sample of times—accurate estimates of work times experienced by NACC employees for all of the activities necessary to process CLEC orders.

38. In August 1999, Verizon NW in conjunction with Arthur Anderson, undertook to determine the most accurate work time estimates for the activities performed at the NACC.

Exhibit T-1166:4 (Richter). Step one in that process was to observe a small group of employees (small relative to the number of employees at the NACC) and record the time it took them to complete each task they performed over a two week period. Verizon NW did not conduct a time and motion study on all employees in the NACC because it is not practical or necessary to observe every employee for a given period of time due to the size and amount of activity that occurs at this center. *Id.* According to the Joint Submitters and Staff, Verizon NW should have stopped here and used the observed times of a few employees over a short period of time and assume that those times apply to all employees at all times. Arguably, if Verizon NW had done so, the Joint Submitters and Staff would have found fault with that methodology—and rightfully so.

39. Nevertheless, both the Joint Submitters and Staff recommend that the Commission use those times to determine Verizon NW's costs. In addition, Staff recommends that those times be reduced, in some cases to zero. The Joint Submitters and Staff fail to recognize that the next steps taken by Verizon NW use those initial sample times to produce more accurate estimates of the time it takes, on average, to complete each of the myriad of tasks necessary to process all types of CLEC orders received at the NACC. Specifically, Verizon NW's time and motion study uses a "Time Base Calculation" methodology that allocates the productive time of each NACC employee to the different processes involved in CLEC service orders. Exhibit T-1166:4 (Richter).

40. Due to the nature of the work involved at the NACC, it was impossible to observe every minute of work time attributable to a ***particular*** work activity because the work is not of a continuous, uninterrupted nature. *Id.* For example, a service representative may begin the process of order production, then distribute the shell order to other departments within Verizon

NW that must provide critical information for the order (e.g., reservation of facilities). Accordingly, the service representative must wait for the order to be returned for further processing. In the meantime, the same service representative will begin another activity that is unrelated to the processing of the first service order. Because there are numerous activities that must be performed for each individual order type and such activities are not performed on a continuous, uninterrupted basis, it is impossible to accurately attribute every production hour expended to a particular type of order. However, the total time expended for all of the activities studied may be readily obtained from the time cards of employees that complete the work. Thus, the study conducted by Verizon NW captures the basic nature of the work performed, indexes the individual work activity types based on the weight each type of order carries (in terms of the employee's total work activity time), then allocates all of the expended hours accordingly. *Id.*

41. The sample of times observed—or the raw data—does not provide an adequate basis on which to estimate how much time it takes, on average, to perform a certain task. Thus, additional steps were taken to produce more accurate estimates of the work time spent by NACC employees on each discrete task necessary to process CLEC orders. These calculations result in work times that permit Verizon NW to recover its costs related to the time spent by NACC personnel processing CLEC orders. Therefore, this method ***prevents*** Verizon NW from over compensation.

42. The time base calculation methodology was used in determining order processing times for ASRs, which are processed at the NACC. Only dark fiber, EELs, dedicated transport and SS7 are ordered via ASRs submitted to the NACC. Because Verizon NW's method accurately estimates the time necessary to process these orders and prevents over compensation, the Commission should reject the Joint Submitters' and Staff's arguments to use the sample data

as the work times on which Verizon NW's costs are determined, and adopt the costs presented by Verizon NW for processing orders for EELs, dark fiber, dedicated transport and SS7 as proposed.

(b) Other Service Ordering Time Reductions Should be Rejected

43. **Production Order Entry.** Staff also recommends additional modifications to order processing times for LSRs, although Staff witness Roth does not differentiate between LSRs and ASRs. Staff Brief at 12. Ms. Roth proposes to reduce the work times for "production order entry" to six minutes. Exhibit T-1360:6 (Roth). This is the same work time adjustment made in the Seventeenth Supplemental Order in UT-960369, *at al*. *Id.* The work times used in the cost studies submitted in earlier proceedings were based on time estimates obtained when Verizon's CLEC ordering processes were in a start-up mode. T-1166: 7-8 (Richter). Thus, many assumptions had to be made at that time by Verizon's SMEs in order to estimate the time necessary to complete those future activities. *Id.*

44. Since that time, Verizon NW has conducted work time studies of actual wholesale LSRs being completed that reflect the impact of OSS enhancements for projects in progress and anticipated OSS enhancements projected within the foreseeable future. *Id*. Accordingly the same basis does not exist to change the work times included in the NRC Studies filed by Verizon NW in this proceeding. Ms. Roth states no basis for her proposed reduction other than the fact that the reduction is equivalent to that contained in the Seventeenth Supplemental Order. Thus, Staff's proposed reduction in production order entry time should be rejected. In addition, no party has presented any evidence that the work times in Verizon NW's NRC Studies for LSRs are inaccurate. Therefore, Verizon NW's work times for LSRs should not be altered.

45. **Error Correction and Jeopardies.** Staff Witness Roth recommends reducing the work times for error correction and jeopardies to zero, even though Verizon NW's NRC Studies indicate that these tasks are necessary to complete CLEC orders in some cases. *See* Staff Brief at 12. A probability of occurrence is applied to the work times associated with these tasks to accurately develop Verizon NW's costs related to these tasks. *See e.g.* CR-1160:A9WA-49. Ms. Roth does not provide a reason for her proposed reduction or any argument to justify totally removing a task that is necessary, at the percentages reflected in Verizon NW's NRC Studies, to complete CLEC orders. Accordingly, the proposed reduction should be rejected.

46. **Meet Point.** Ms. Roth also proposes an arbitrary reduction of the work time related to the meet point activity everywhere it is located in Verizon NW's NRC Studies. *See* Staff Brief at 12. In response to Ms. Roth's criticism, as well as that of the Joint Submitters, Verizon NW reevaluated whether the "Meet Point" item is appropriately included in its ordering costs. Verizon NW determined that it was not in fact appropriate to retain the meet point item in the ordering cost for EEL migration. As a result, Verizon NW removed that item from its cost study relating to EEL migration and has modified its costs—and the corresponding charge. *See* Attachment B to Verizon NW's Opening Brief. The meet point item is appropriate and should remain at the level presented where it is resides elsewhere in Verizon NW's NRC Studies.

b. Dark Fiber

47. The Joint Submitters' criticism of Verizon NW's proposed service inquiry charge misrepresents the prefiled and hearing testimony of Verizon NW and should be disregarded. Specifically, the Joint Submitters claim that the service inquiry fee is to compensate Verizon NW to physically inspect its network in order to determine whether dark fiber is available on the

route requested by a CLEC, because Verizon NW maintains no records of its own network. Joint Submitters Brief at ¶ 95. This statement is false.

48. In prefiled testimony and at the hearing, Verizon NW witness Kirk Lee described the service inquiry as involving queries of two Verizon NW inventory systems that house two types of information regarding Verizon NW's network—-including fiber. *See* Exhibit T-1136:16 (Lee); Tr. 2527-29 (Lee). The first system contains information relating to cable sizes and locations. The second system contains information about which cables on a given route are being used. A comparison of the results of the two queries for the route requested provides the information necessary to determine whether the fiber requested is available for CLEC use. For example:

> The first system tells you the size of the cable, so it might say, okay, there's 100 fibers. The second system says there are 20 fibers being used on this route. It doesn't tell you the size of the cable.

Tr. 2529 (Lee). Contrary to the Joint Submitters' claim, Verizon NW does in fact keep accurate records regarding dark fiber, and no physical inspection is required.

49. In addition, at the hearing, Mr. Lee explained to Commissioner Hemstad why Verizon NW does not have an "inventory" system with specific information relating to spare dark fiber. Tr. 2527-28 (Lee). Mr. Lee explained that Verizon NW has never been in the business of offering dark fiber as a product, or any other transport facilities for that matter. Verizon NW sells and has sold transport ***services***, which is not the same as selling the facilities themselves. Thus, the existing process is sufficient for Verizon NW's internal planning needs. *Id*.

50. Verizon NW's proposed costs are all based on the same process Verizon NW uses to determine whether dark fiber is available on its network for its own use. Exhibit T-1136:16

(Lee); Tr. 2527 (Lee). Each CLEC request for dark fiber on a given route requires Verizon NW to engage in this process. Thus, the CLEC, the cost causer in that situation, is rightly required to pay for it. The Joint Submitters do not attack the amount of the charge, or the cost on which it is based—just the existence of the charge itself. That being justified, the Commission should adopt the service inquiry fee as proposed.

c. EEL Migration

51. The Joint Submitters criticize Verizon NW's ordering costs for an EEL migration from a special access circuit to a UNE because they include work activities for administratively disconnecting the special access circuit and entering a new order for an UNE-EEL. Joint Submitters Brief at ¶ 98. As explained by Verizon NW witness Larry Richter, in order to process an EEL migration order, Verizon NW must perform the same administrative steps required for a new order, because new circuit information is necessary. Tr. 2561-62 (Richter); Exhibit T-1167:7 (Richter). Moreover, Verizon NW's systems and protocols require the disconnect and new order steps in order to accurately record the necessary information relating to the early termination of the special access relationship and relating to the establishment of the new UNE relationship. *See id.* Billing and circuit identification information for special access and UNEs are contained in separate databases. Tr. 2652-53 (Richter). Thus, necessary changes must be completed in both. Tr. 2558-59 (Richter).

52. There is nothing unreasonable about these steps, each of which is required to properly track and record the necessary information for Verizon NW's network. Accordingly, the Joint Submitters' criticism should be disregarded.

53. For the same reason, Staff's recommendation regarding use of the "change order" charge for UNE migration ordering should also be rejected. *See* Staff Brief at 16. A change

order charge recovers costs associated with merely changing an item on an existing account, such as when a billing address changes. Each of the tasks described above is necessary to migrate a special access service to a UNE, making the change order charge inappropriate. Application of that charge would prevent Verizon NW from recovering its costs when CLECs migrate special access services to UNEs. Accordingly, Staff's recommendation should be rejected.

54. Staff also recommends that one of the two line items relating to "MOG," or mass order generator, be removed from the ordering charge for EEL migration. Staff Brief at 12. Two testimony, two separate cost elements that accomplish separate functions are associated with MOG activity. Exhibit T-1167:9 (Richter). The "MOG Template" activity reflects the amount of time it takes for the Verizon NW service representative to create a new and disconnect MOG template to allow the processing of multiple orders received from one CLEC. The second cost element, "MOG Order Entry," reflects the time it takes the Verizon NW service representative to place the information regarding the individual orders into the MOG template. However, both of the MOG activities are required only when orders for fifty or more circuits are received. As a result, Verizon NW applies the "MOG Order Entry" charge only on a probability of occurrence basis. In response to Staff's criticism, Verizon NW reevaluated the application of the "MOG Template" activity and determined that the probability of occurrence factor applicable to that task should be adjusted downward. However, Verizon NW has not yet been able to quantify the appropriate downward adjustment.

d. Loop Conditioning

(1) CLECs Must Pay For All Requested Load Coil And Bridged Tap Removal, Regardless Of Loop Length

55. Joint Submitters argue that they should not be charged when they request that Verizon NW remove bridged taps or load coils from loops that are 18,000 feet long or less. There is no basis for this argument. The *Line Sharing Order*[10] makes clear that Verizon NW is entitled to recover its costs of conditioning loops at the request of CLECs—-without regard to loop length: "[W]e conclude that incumbent LECs should be able to charge for conditioning loops" when such conditioning is requested. *Line Sharing Order* at ¶ 87. There is no qualifying language regarding loop length. Moreover, the Commission has adopted the FCC's position that the cost to remove the load coils or bridged taps should be recovered from the requester, *i.e.* the cost causer. Eighth Supplemental Order at ¶ 155. There is no qualifying language regarding loop length in that Order. Accordingly, CLECs should continue to compensate ILECs for the costs caused when they request that load coils and bridged taps be removed from any loop, regardless of length.

(2) Verizon NW's Proposed Loop Conditioning Costs Are Accurate And Reasonable

56. Instead of attacking the individual tasks listed in Verizon NW's loop conditioning cost study, the Joint Submitters, Covad and Staff attack the result. Both claim Verizon NW's costs are "unreasonably" high and that the Commission should impose Qwest's costs on Verizon NW because the total costs developed by Verizon NW's cost study for removal of load coils and

[10] In re Deployment of Wireline Services Offering Advanced Telecommunications Capability, CC Docket No. 98-147 and In re Implementation of the Local Competition Provisions of the Telecommunications Act of 1996, CC Docket No. 96-98, Third Report and Order in CC Docket No. 98-147 and Fourth Report and Order in Docket No. 96-98, 14 F.C.C.R. 20912 (1999).

bridged taps are higher than those the Commission adopted for Qwest in a previous docket. Essentially, the Joint Submitters, Covad and Staff—none of which have provided any evidence that the tasks listed in Verizon NW's loop conditioning cost study are not required—ask this Commission to ignore those tasks and the times associated with them.

57. As an initial matter, the Act requires that state commissions set rates based on cost. 47 U.S.C. § 252(c)(1)(A)(i). In this case, Verizon NW has presented a valid cost study demonstrating the actual costs of the Company to remove load coils and bridged taps at the request of CLECs. The methodology used in the loop conditioning study is the same as the methodology adopted by the Commission for Verizon NW's non-recurring cost studies in UT-960369, *et al*. and Phase A of this proceeding. The Joint Submitters', Covad's and Staff's criticisms provide no basis on which to disregard Verizon NW's costs.

58. Nevertheless, the Joint Submitters, Covad and Staff recommend that Qwest's rates be imposed on Verizon NW. Those costs will not compensate Verizon NW for the costs it will incur in performing the necessary tasks to remove load coils and bridged taps at the request of CLECs. For example, in the Eighth Supplemental Order, the Commission concluded that 60 minutes was a reasonable time for a Qwest engineer to identify the location of the load coils. ¶151. This particular activity is only one of several sub-activities that are required to complete activity number eight noted on page 16 of Verizon NW's loop conditioning study, Exhibit C-1162. In fact, activity number eight requires a great deal more time to complete, even without taking into account the amount of time required for the remaining *fourteen* engineering activities. T-1166:11 (Richter). The activities required for step number eight include:

> Draw work order, and permit in the CAD systems (ICGS), populate work order number assignment, and labor scheme.

> Automatically preposts upon work approval through ICGS & CPMS. (Exhibit LR-2C; Pg. 16).[11] *Id.*

59. The first sub-step of activity number eight is to "draw the work order" which requires the engineer to log into the ICGS system and retrieve a work order shell. *Id*. at 12. The second sub-step of "permit in the CAD systems (ICGS)" requires the engineer to retrieve a diagram of the current make-up of those facilities that require deloading. The third and last sub-step, which takes the most time to perform, is to "populate the work order number assignment and labor scheme." This sub-activity requires the engineer to go to the CPMS system and retrieve the work order number. The system will ask the engineer several questions regarding the work to be performed. The engineer must develop a work order narrative describing all work activities to be performed and estimate the financial costs, including the hours required for the engineer and the technician, based on the activity to be performed. The engineer must also make any necessary changes to the existing diagram of the facilities to be deloaded and include any notes to ensure the technician will precisely understand what changes are required to those facilities. Finally, the engineer must review the work order and issue it for the appropriate internal approvals. *Id.*

60. Even if activity number eight is excluded, which would be inappropriate, the remaining fourteen engineering activities require significantly more than 60 minutes to complete. *Id.* In fact, activity number one, four, and five each require over sixty minutes to complete. *Id.* at 12-13. For example, step one requires the engineer to input the customer's address information into the AAIS/mark system to determine the cable number and pair assignment associated with that particular address. Once this information is accessed, the cable number and pair assignment information is input into the ICGS system to retrieve a diagram of the current

[11] ICGS is the Integrated Computer Graphics System and CPMS is the Capital Program Maintenance System.

facilities make-up. The information accessed from ICGS is then checked against a plat map to determine whether there are any pending work orders that will impact the current facilities make-up. *Id.*

61. Activity number four requires the engineer to develop an outline of the necessary work to be completed. This activity includes identifying whether any city or county permits are required; what parties need to be involved in completing the work order; what approvals are required based upon the estimated cost of completing the work order; and the actual modification to the facilities that are required. The outline of this information is then used to complete the detailed work order functions noted in activity number eight. *Id*.

62. Activity number five requires the engineer to fill out the necessary forms for requesting permit approval from the city or county. The engineer must also deliver the forms to the appropriate department for the city or county. Once the city or county receives the request for a permit, the engineer must also respond to any questions concerning the permit request. *Id.*

63. In addition to the engineering activities, there are numerous construction activities involved in actually traveling to the work cites (Verizon NW's costs include removal of multiple load coils or bridged taps, depending on the length of the loop) and actually removing the load coils or bridge taps, as the case may be. *See* Exhibit T-1166:13 (Richter).

64. Again, none of the criticisms levied against Verizon NW's loop conditioning cost study state that the tasks that Verizon NW has included in its study do not need to be completed in order to perform the requested removal. However, the changes suggested by the Joint Submitters, Covad and Staff disregard the necessary tasks and urge the Commission to impose Qwest's rates on Verizon NW, regardless of whether they reflect Verizon NW's costs. In support of their recommendation, no party cites any evidence that those rates reflect Verizon

NW's costs. They merely state in a conclusory fashion that there is no reason that Verizon NW should be able to charge more than Qwest. In contrast to the detailed support Verizon NW provided for its loop conditioning costs, the Joint Submitters, Covad and Staff offered no documentation to support their work time estimates and they disregarded Verizon NW's actual engineering protocols, systems, network and processes. For example, no party states that it has any experience with Verizon NW's engineering protocols, systems, network and processes with respect to loop conditioning. Accordingly, the Commission should decline the Joint Submitters', Covad's and Staff's requests to apply Qwest's rates to Verizon NW.

65. In addition, Covad asks this Commission not to merely apply Qwest's rate for load coil removal as is, but to apply it after dividing it by twenty-five. Covad Brief at 12-13. In that case, the per-pair cost would be $8.01. *Id.* It is unreasonable to order such a rate for loop conditioning, which undisputedly is a labor-intensive activity that Verizon NW would not perform but for CLEC requests. That cost will not compensate Verizon NW for even a fraction of its costs. As a result, it would violate the Act's requirement that rates be based on cost, and thus should be rejected.

(3) The Commission Should Not Order That All 25 Pairs In A Binder Group Be Deloaded

66. Both Joint Submitters and Covad claim that it is "typical" to deload all 25 pairs in a binder group when only one pair needs deloading. Joint Submitters Brief at ¶ 61, Covad Brief at 9. They make this incorrect statement only because they seek to pay only 1/25th of the ILECs' actual costs for loop conditioning. Neither the Joint Submitters nor Covad has any basis to claim that such deloading is "typical" for Verizon NW—in fact, it is not. Exhibit T-1166:17-18 (Richter). Moreover, as stated above, whenever a CLEC requests removal of load coils or

bridged taps, as the cost-causer, it should fully compensate the ILEC for its costs in complying with the request—not for some fraction of its costs.

67. Verizon NW's practice to deload one pair at a time—as opposed to a full complement of 25 cable pairs—when it receives a request to deload a single pair is reasonable. Exhibit T-1166:17-18 (Richter); Tr. 2586-87 (Richter). First, if one of the 25 cable pair requires deloading in order to provision advanced services, it does not mean that the remaining 24 cable pairs will be used in the same manner. *Id.* Conditioning the pairs in advance presumes a demand for an application of those pairs that may not be correct. This may result in additional, unnecessary work later to restore the pairs to their original configuration. *Id.* For example, although a vacant loop may be less than 18,000 feet in Verizon NW's current network, future demand for voice service may materialize in a location beyond the length of the current 18,000 foot loop. In order to serve such future demand, Verizon NW could then use the "short" loop in conjunction with another facility pair to form a single longer loop. In this case, the provisioning of voice service would require Verizon NW to re-condition the loop in order to serve this more distant customer. There is currently no mechanism in place to force the CLEC that causes Verizon NW to incur the costs of conditioning multiple loops to pay for such costs. *Id.* Accordingly, if Verizon NW is required to condition more loops than those requested and paid for by a CLEC, it will be able to recover only a fraction of its loop conditioning costs. Conditioning pairs as they are ordered keeps cost recovery current with incurred costs.

e. <u>High Capacity Loops</u>

68. The Joint Submitters are correct that Verizon NW did not propose new non-recurring charges for high capacity loops, but proposes to charge CLECs at the same level as the non-recurring charges adopted in Docket UT-960369, *et al.* Thus, the Joint Submitters' request to

require a cost study to demonstrate why such charges are not overstated is unnecessary. *See* Joint Submitters Brief at ¶ 41. Such a request is merely an attempt to re-litigate costs and prices previously adopted by this Commission that are not at issue in this proceeding. Accordingly, the Joint Submitters' request should be denied.

69. Moreover, with respect to migration charges, Joint Submitters assert the same argument they presented with respect to EEL migration. For the same reasons stated above with respect to EEL migration in section III(B)(1)(c), Verizon NW's presented costs accurately account for the steps necessary to effect a change from special access to UNE. Accordingly, the Joint Submitters' proposal should be rejected.

2. Recurring Costs and Rates

a. ICM Cost Methodology

70. Criticisms of ICM can be divided into two categories: objections to the use of the model itself and criticisms over user-adjustable inputs. None of these criticisms, however, withstand scrutiny or justify rejection of ICM. Thus, the Commission should join the two states that have completed their review of ICM in adopting the model.[12]

(1) Use Of A New And Improved Model In This Proceeding Is Appropriate

71. Many of the CLEC and Staff criticisms of ICM and Verizon NW's proposed recurring costs and rates hinge on their desire to use the cost models submitted in Docket UT-960369, *et al.*, in this proceeding. However, there is a fundamental procedural roadblock to their desired course: none of the models introduced in that proceeding were introduced into the record in this proceeding.

[12] *See* Exhibit 1354.

72. The Commission anticipated that new cost studies would be filed in this proceeding. In its Nineteenth Supplemental Order in Docket UT-960369, *et al.*, the Commission determined that it would open this proceeding to address, among other issues, "cost and pricing issues for UNEs ***for which new or modified cost studies are required*** and which could not be resolved in Docket Nos. UT-960369." Nineteenth Supplemental Order at 6 (emphasis added); Notice of Prehearing Conference in Docket UT-003013 (Feb. 18, 2000). Verizon NW made perfectly clear during the prehearing conference held on March 3, 2000 that it intended to introduce a brand new cost model. Prehearing Conf. Tr. 26, 36-37, 45-46. No other party indicated an intention to introduce any model—new or old—for determining Verizon NW's recurring rates. During the June 23, 2000 prehearing conference, the parties were specifically asked whether they intended to file any cost studies or rely on those filed in the previous docket. The Joint Submitters, by counsel, indicated that they were contemplating introducing previously filed costs studies into the record. Prehearing Conf. Tr. 72-73. However, on the filing date for direct testimony and cost studies, they failed to do so. Likewise, no other party filed any model or moved to admit models from the previous docket into the record at any time for determining Verizon NW's costs. Had the CLECs or Staff intended for the Commission to rely on any of the models used in Docket UT-960369, *et al.*, it was incumbent upon them to introduce them as exhibits in this proceeding, not to reach beyond the current record.

73. Even if the models introduced in Docket UT-960369, *et al.* were properly before the Commission in this proceeding, they should be disregarded, as all were so flawed as to be rejected by the Commission. Moreover, the Commission concluded that "none of the current versions of the models should be adopted for use in future proceedings." Eighth Supplemental Order at ¶ 35. Indeed, the Commission expressly contemplated that it would receive new and

updated studies in future dockets, and indicated a desire to have models that are open to review with inputs that can be validated. *Id.* at ¶¶ 35-37.

74. Curiously, WorldCom, which advocates the same positions as the Joint Submitters with respect to Verizon NW's cost evidence, undercuts the very idea that the models from Docket UT-960369, *et al.*, should be used in this proceeding to develop UNE costs. In its separate post hearing brief, WorldCom notes:

> Finally, all of the cost models that were considered by the Commission in arriving at the rates currently in effect have been substantially revised since they were presented in 1997. Moreover, as the Commission acknowledged in the 8th Supplemental Order entered in UT 960369 none of the models presented in that proceeding were appropriate for adoption for use in future proceedings. Rather, as the Commission noted the models were in a process of evolution. WorldCom submits that the time is now ripe to examine the results of the revised models and to make the effort to set a rate that will both compensate the ILECs for their costs and promote competition in all local exchange markets in Washington.

WorldCom Brief at ¶ 7 (footnote omitted).

75. From a modeling perspective the CLECs are essentially correct that ICM is different from the models considered in Docket UT-960369, *et. al.* ICM's different design and characteristics provide it with an advantage over the other models, each of which had shortcomings that led this Commission to choose not to endorse any one of them. ICM is completely open to inspection, including the model code and all preprocessing functions. Exhibit T-1170:10 (Collins). ICM also possesses superior testing capabilities, which allow model reviewers to test both intermediate and final outputs *Id.* at 11-13. In addition, the data sources are included in the ICM filing package contained in Exhibit 1171/C-1171. ICM's vast superiority over the already rejected cost models used in Docket UT-960369, *et al.*, in the areas

of openness, flexibility, testability, and network design provide this Commission with the type of model it can endorse, which was not available to it in the previous docket.

76. Thus, the appropriate analysis is not whether ICM is the same as the ***cost models*** used and rejected in Docket UT-960369, *et al.*, but whether it is consistent with the ***cost methodology*** approved by the Commission in the Eighth Supplemental Order. Contrary to the Joint Submitters' claims, the record shows that it is. ICM follows the TELRIC methodology adopted by the Commission at ¶ 10 of its Eighth Supplemental Order in Docket UT-960369, *et al.*:

> The TELRIC methodology 1) assumes the use of best available technology within the limits of existing network facilities; 2) makes realistic assumptions about capacity utilization rates, spare capacity, field conditions, and fill factors; 3) employs a forward-looking, risk-adjusted cost of capital; 4) uses economic depreciation rates for capital recovery; and 5) properly attributes indirect expenses to network elements on a cost-causative basis.

77. ICM assumes the use of best available technology within the limits of existing network facilities by starting with existing node locations and building a network that includes 100% digital switching, fiber-fed DLCs, and SONET rings. ICM makes realistic assumptions about capacity utilization rates, spare capacity, field conditions, and fill factors by building an entire network according to Verizon NW's current engineering practices and guidelines that reflect the unique demand and environmental characteristics of Verizon NW's serving territory in Washington. ICM employs the forward-looking, risk-adjusted cost of capital prescribed by the Commission in Docket UT-960369, *et al*. (See Tab 14, pg. 14_049).[13] Similarly, ICM uses

[13] Although Verizon NW used the Commission-prescribed cost of capital, it advocates a forward-looking, risk-adjusted cost of capital of 12.737%. Exhibit T-1174:2 (Collins).

Commission prescribed economic depreciation rates for capital recovery.[14] Finally, ICM properly attributes indirect expenses to network elements on a cost causative basis. Exhibit T-1174:2-3 (Collins).

78. In support of their claim that ICM develops costs inconsistent with those adopted in Docket UT-960369, *et al.*, the Joint Submitters claim that Verizon NW "effectively proposes that the Commission establish a higher cost for a four wire loop when it is part of a DS-1 loop than the Commission previously established for the four wire loop." Joint Submitters Brief at ¶108. While the Joint Submitters provide no cite to the record, this statement can only be based upon Mr. Klick's incorrect contention that ICM developed a DS-0 loop cost approximately 25% higher than the 2-wire loop cost developed by the Commission in Docket UT-960369, *et al*., Exhibit T-1310:38 (Klick). As demonstrated by Mr. Collins, ICM presents the separate costs of the subloop components of the previously ordered 2-wire loop, and Mr. Klick incorrectly added the separate costs for feeder, distribution, drop, and NID to get such a high DS-0 loop cost. However, Verizon NW's calculated separate distribution cost already included the cost of the drop and NID. As a result, the cost for these items were double-counted by Mr. Klick. Exhibit T-1174:10 (Collins).

79. Tracer incorrectly states that "[i]nstead of modeling a network that would be built by an efficient firm, Verizon NW essentially assumes that its existing network and facilities represent an acceptable measure of how an efficient firm would meet current and future demand. Tracer Brief at ¶ 21. However, Tracer's criticism is not an accurate characterization of ICM.

[14] Although Verizon NW advocates the use of economic depreciation rates, the depreciation rates used in Verizon NW's ICM study are those prescribed in Docket UT-960369, *et al*. (See Tab 14, pg. 14_046). Verizon NW concedes that ICM and its resulting costs should be adjusted to reflect subsequent depreciation rates adopted in Docket UT-992009. Exhibit T-1174:2 and n.1 (Collins).

While ICM does reflect certain characteristics of the current network such as node locations, terrain, and customer locations, it does not simply use the current facilities in place to construct the network. ICM models the network as if it is all built at once, using all new plant and technology. The modeled network is designed to meet the transmission parameters required for voice grade services as well as services requiring transmission speeds up to 6 mbps. For example, ICM constrains copper loop lengths to 12 kilofeet by placing fiber fed digital loop carriers ("DLCs") even though Verizon NW's existing network has copper loops greater than 12 kilofeet. ICM also constructs SONET rings to provide interoffice transport even though that technology is not in place today in all areas. Exhibit T-1174:3-4 (Collins).

80. One of the bases for Tracer's criticism appears to be Mr. Klick's unsubstantiated belief that the GTD-5 switches assumed by the model are not forward-looking. Exhibit T-1310:13 (Klick) (cited in Tracer's Brief at ¶ 21). Mr. Klick's belief has its origin in rumors spread in the mid 1990s that AGCS, the original GTD-5 switch manufacturer, was no longer supporting the GTD-5. Tr. 3720-21 (Klick); Exhibit T-1174:4 (Collins). During that time the GTD-5 was not capable of supporting ISDN BRI service, which was an area of concern. Today, however, the GTD-5 is now ISDN BRI-capable, and continues to be developed by Lucent along with the 5ESS switch. Exhibit T-1174:4 (Collins). Mr. Klick also assumes that the GTD-5 is not forward-looking because Verizon NW is no longer purchasing the GTD-5 base unit. *See* Tr. 3720 (Klick). However, Verizon NW is no longer purchasing ***any*** new base units in Washington since its network is already 100% digital. Exhibit T-1174:5 (Collins).

81. Tracer further criticizes ICM for designing a network to meet both existing and future demand, and then assigning spare capacity to working lines in existence today, and suggests that such an assumption requires a higher fill factor than that observed in the network today. Tracer

Brief at 22. Tracer tries to argue that inclusion of spare capacity required to serve future demand forces today's customers to subsidize customers who will enter the market in the future. *Id.* Essentially, Tracer argues that objective fill rate,[15] rather than actual or projected fill rates, should be used to establish TELRICs. Tracer's flawed argument has already been rejected by the California Commission in D.96-08-021 (R.93-04-003, I.93-04-002), and was twice rejected by this Commission. In the Eighth Supplemental Order, the Commission rejected AT&T's argument that spare capacity placed to serve future demand is not appropriately part of TELRIC:

> it is not appropriate to use the objective fill rate in TELRIC studies….Whereas the objective fill is greater than the actual and projected fill rate, the use of an objective fill is contrary to the concept of deriving TELRIC.

Eighth Supplemental Order at ¶171.

82. In Docket UT-980311(a), Dr. Zepp, on behalf of Tracer, put forth the same argument. The Commission rejected Tracer's argument:

> We do not accept TRACER's proposed adjustment for growth. This matter was litigated in the generic cost docket. TRACER's proposal is essentially identical to the proposal made by ATT/MCI witness Cornell in the generic docket. See, Docket No. UT-960369, ex. 1, pp. 33-35. We see no reason to change our position regarding fill rates that we adopted in the Eighth Supplemental Order at Pars. 172-73.

Tenth Supplemental Order, Docket UT-980311(a) at ¶ 296. Witness Klick in this proceeding essentially repeats the same arguments that the Commission has already rejected, and admits that he did not perform any alternative calculations for the Commission to consider. Tr. 3724-29 (Klick).

[15] As the Commission has explained, "objective fill is the level of utilization at the point at which additional equipment is installed to meet the level of demand. The objective fill is almost always greater than the actual fill." Eighth Supplemental Order at ¶ 168.

83. Tracer contends that the sizing of distribution plant for the local loop in ICM is inconsistent with prior decisions of the Commission and the FCC regarding the proper modeling of TELRIC loop costs because it designs plant to meet ultimate demand rather than current demand. Tracer Brief at ¶ 23. Specifically, Tracer criticizes ICM's assumption of 2.34 lines per lot when current demand is about 1.12 lines per lot. *Id.* In support of this contention, Tracer states that in Docket UT-960369, *et al.*, US WEST argued that 3.0 lines per household should be modeled, even though current demand was significantly less than that. Tracer goes on to state that the Commission adopted a value of 1.25 lines per household instead of the 3.0 lines modeled by US WEST. *Id*. Tracer gives the impression that the Commission ordered US WEST to adjust its model so that it would only place 1.25 lines per household. However, Tracer's "interpretation" of the Eighth Supplemental Order is entirely incorrect. First, the Commission did not order US WEST to change its model so that it models 1.25 lines per household instead of 3.0 Tracer has confused the meaning of the two numbers. The number "3.0" refers to the number of lines in the distribution portion of the network that US WEST's RLCAP model placed per household. *Id*. at ¶ 174. The number "1.25" refers to a measure of demand, *i.e.* average number of lines in use at each household. *Id*. at ¶ 180. These are two entirely different measures.

84. As indicated in the Eighth Supplemental Order, the RLCAP model placed 3.0 lines per household while assuming that each household would have only 1.0 line. The Commission evaluated two methods by which the effective fill factor for distribution plant in US WEST's RLCAP Model could be increased: US WEST suggested that the number of lines placed per household (*i.e.* 3.0) could be reduced, while AT&T/MCI proposed that the demand value of 1.0 lines per household be increased to 1.50. *Id.* at ¶¶ 176-77. The Commission explained that the

unit cost of production is the total cost divided by total demand. US WEST's proposal to adjust the 3.0 lines placed per household affected the numerator of the fraction while AT&T/MCI's proposal to increase the demand measure of 1.0 lines per household affected the denominator. With the AT&T/MCI method, there is no change in the total cost (the numerator) but there is a large increase in the level of demand (the denominator). *Id.* at ¶¶ 178-79. As a result, the Commission selected the demand value of 1.25 lines per household, which was higher than US WEST's original 1.0 figure. *Id*. at ¶ 180. Because the numerator of the per unit calculation did not change, the Commission, by mathematical necessity, adopted the RLCAP model's placement of 3.0 lines per household. In short, the Eighth Supplemental Order resulted in US WEST's RLCAP model placing 3.0 lines per household while the average household was assumed to have a demand of 1.25 lines.

85. The equivalent numbers for ICM are 2.34 and 1.12. Tr. 2712-13 (Collins). ICM constructs approximately 2.34 distribution pairs per household in accordance with its engineering practices. In addition, ICM takes into account the current demand level for second lines (*i.e.* 1.12 per household). These figures are combined together into a single user-adjustable input to ICM that is entirely consistent with the Eighth Supplemental Order.

86. Tracer incorrectly alleges that ICM's expense ratios overstate costs by dividing embedded expenses by forward-looking investments. Tracer Brief at ¶ 25. In developing costs, Verizon removed expenses associated with non-forward-looking investments. Exhibit T-1172:12 (Collins/Abs). ICM then used expense-to-investment ratios specific to each type of equipment. Thus, when ICM assembles a forward-looking network, the shift in technology mix is matched by a specific expense-to-investment ratio. For example, longer loops in today's

copper network were replaced by fiber fed DLC technology and its associated expense levels for costing purposes. *See* Exhibit 1171/C-1171, Binder 1, Tab 2, Book I at 2 and Book II at 7-9.

87. Lastly, Tracer contends that ICM improperly double-counts the effects of inflation if in the future the Commission updates UNE prices to reflect the effects of inflation. Tracer Brief at ¶ ¶ 27-28. Tracer prematurely[16] requests that the Commission avoid this hypothetical problem by selecting today one of two approaches to take in the future. *Id*. at 16. As explained by Verizon NW witness Mr. Collins, Tracer's flawed argument violates basic TELRIC principles. Implicit in Tracer's argument is the assumption that somehow the network "built" in today's TELRIC studies should be held constant until the end of its useful life. This is a clear violation of the "long-run" costing principle of TELRIC, which requires that the firm in question not be constrained in terms of the size and type of plant. Tracer would have the Commission believe that the long-run forward-looking network constructed for today's TELRIC study will still be the long-run forward-looking network five or ten years from now. For example, a TELRIC study three years from today (assuming TELRIC is ruled to be a valid costing methodology at that time) would require all new inputs for such items as material, labor, depreciation, and rate of return. The hypothetical network would be constructed using technologies that are forward-looking at that time. A TELRIC would not keep the same network that was conceptually built three years prior and it would not assume that the plant in place is three years old with seven years of life remaining. Exhibit T-1174:7-8 (Collins).

[16] Indeed, as the Administrative Law Judge recognized during the hearings "this is an issue three years from now," not one the Commission should address in its Phase B order. *See* Tr. 3742 (Statement of Judge Berg).

88. Moreover, Tracer's concern is only relevant if ICM indexes material and labor costs. *Se* Tr. 3737-42 (Klick). It does not ICM reflects the material and labor costs Verizon pays today based on its current contracts. Exhibit T-1170:8 (Collins).

89. Staff incorrectly contends that ICM's programming code is not open to inspection and that all of its data is complied. Staff Brief at 19-20. This argument totally ignores Mr. Collin's rebuttal testimony. ICM was specifically designed so that potential model reviewers could not legitimately make this claim. First, Exhibit 1173 included both a hard copy (Tab 4 of the filing package) and an electronic copy of the ICM source code. This code is set up in a modular format so that the reviewer can easily find the desired area for review and testing. In fact, ICM does more than simply make the code open to review, which appears to be Mr. Spinks' criterion for distinguishing between open and closed models. The model documentation provides the reviewer with four levels of information on how ICM operates. At the very highest level, the Conceptual Framework (Tab 2, Book I of VII) provides an overview of ICM, its modules and the process flow. Exhibit T-1174:22-23 (Collins). The next level of detail is found in Books II through VII at Tab 2 of the filing package. These are separately bound booklets for each of the ICM modules: loop, switch, transport, SS7, expense, and mapping. They each provide a description of the module inputs, operation, and output, along with reference materials. Descriptions of the module operation explain in words the general operation of ICM algorithms, allowing a model reviewer to gain a high-level understanding of how ICM operates. Exhibit T-1174:23 (Collins). If a model reviewer wishes to go more in depth, then a third level of detail is available in the form of annotated versions of the actual ICM algorithms. These algorithms can be found by looking at the table of contents in the front of the filing package. Under the section entitled "ICM MODULE SUPPORT DOCUMENTATION," each of the ICM modules is listed

along with the location of the respective inputs, sources, and algorithms. For example, to review how ICM places conduit, turn to Tab 10 to see that algorithm. The table of contents at the beginning of Tab 10 identifies a 13-page section covering the ICM conduit placement algorithm. Turning to that 13-page section, the model reviewer would first see a description of what is to be covered, and an identification of this conduit subroutine as being a part of "OSPInvest.pas", which is the outside plant (OSP) section of the actual ICM code. Also on this page is a list of user inputs, labor rates, and material costs, all with associated "test" values to be used for explanatory purposes. What follows are lines of the ICM code interspersed with actual calculations using the "test" inputs from the first page of the section. Also included throughout are comments, which allow the reviewer to follow along with the logic of the particular operations. Exhibit T-1174:24 (Collins). Finally, a fourth level of detail is available in the form of the actual model code. A hard copy of the model code is Book II at Tab 4.

90. In addition to offering four levels of detailed documentation, culminating in the production of the actual code, ICM provides the model reviewer with a wealth of other testing capabilities, which were discussed in Verizon NW's opening brief. These capabilities include easy sensitivity analysis, access to extensive intermediate outputs, an integrated table query function, a database export function, a visual interface output, and numerical output integrated with the visual interface. The mapping module, which provides the user the capability to define UNEs and services, can also be used as a testing tool.

91. Moreover, the ICM model programming code is in fact open to inspection. The uncompiled source code was included in Exhibit 1171/C-1171 in two forms: a hard copy in Binder 2, Tab 4, and electronically on the CD. It appears that Staff arrived at its conclusions based on Mr. Spinks' limited review of the ICM model itself and not on a review of the

supporting documentation or the files on the CD contained in Exhibit 1171/C-1171. In addition to the source code, Mr. Collins described how annotated versions of the code were included in Exhibit 1171/C-1171 to help a reviewer test the logic. Exhibit T-1174:24 (Collins). Included with the annotated code are "test" values for the inputs which are used to show how the code actually calculates costs. These calculations are written out for the model reviewer and can be easily replicated using a pocket calculator.

92. Despite overwhelming record evidence to the contrary, Staff's continued insistence that ICM's model programming is not open to inspection is baffling. In spite of Mr. Collins' efforts to clarify the situation, Staff is still confusing the concepts of "source code" and "compiled code." For example, if one were to use Microsoft Excel to calculate the equation 2 + 2 = 4, this operation would be done using a source code. Source code is generally written in languages that humans can understand. In the case of Excel, the source code would be the code that we all use when creating a spreadsheet, e.g. entering the formula "=2 + 2" in a spreadsheet cell. An Excel user can review and test the operation of a spreadsheet because the commands are based on either English or mathematical operation commands. However, in order for Excel to perform the desired functions, the source code must be translated into a machine-readable language, which is basically a compiled version of the source code. This can be confirmed by reading any .xls file into a notebook program. The result will be a large number of odd characters that are practically indecipherable by humans, but not by machines. If Staff's arguments regarding ICM were applied to this example, then both Excel and the spreadsheet program with the formula of "=2 + 2" would be rejected on the grounds that it was compiled and not open to inspection. In fact, the briefs filed by Staff would also have to be rejected because the word processing program used and the file created are both compiled, thus denying Staff the

opportunity to review the brief before it was filed. Of course Staff could, and likely did, review and edit the source code of their brief, which is the written English language that appears on the screen within the word processing program. The very same applies to ICM. The source code is the human-readable code that gives the computer instructions to complete a desired set of tasks. The source code for an Excel spreadsheet, a word processor document, or ICM provides all that is needed to test and verify that the set of instructions to the computer is correct.

93. Staff's contention that a sensitivity analysis is the only way to determine whether ICM contains any programming errors is equally false. *See* Staff Brief at 20. A model reviewer need only look at the source code as described by Mr. Collins, Exhibit T-1174:22-26, or follow along the test calculations provided in the annotated source code provided. *Id*. at 24. Moreover, ICM allows one to view intermediate inputs, which Staff readily admits is one method of determining whether the model was consistent with the documentation. Tr. 3868-69 (Spinks).

(2) <u>ICM Loop Length Estimates</u>

94. Staff expresses concerns with the "inaccuracies" produced by ICM's loop length estimates. Staff Brief at 20-21. As explained by Mr. Collins, attempts to compare modeled versus actual average loop lengths generally run into difficulty for two reasons. First, modeled loop lengths should not be expected to equal actual loop lengths because, as Staff recognizes, modeled networks that adhere to TELRIC principles do not replicate the current network in place. Tr. 3875 (Spinks). As a result, the modeled loop lengths will be either shorter or longer than actual loop lengths. Exhibit T-1174:34 (Collins).

95. Second, and most importantly, it is very difficult to obtain accurate data on actual loop lengths. Exhibit T-1174:34 (Collins); Verizon NW Response to Record Request 105. Average loop lengths have not traditionally been measured in the normal course of business.

Consequently, Verizon NW has in recent years begun to develop a process for measuring individual loops in direct response to bench requests such as the ones previously issued by this Commission. As with any new process, there has been a continuous review to uncover and correct errors. Construction of this data requires the extraction of relevant data from disparate databases to be combined in a manner to allow measurement of loop lengths. The combination of separate database extracts leads inevitably to mismatches, causing the sample size to fall relative to the total number of loops that need to be measured. Mismatches can cause errors to occur in two ways. First, if mismatches occur in any systematic way, then the resulting loop sample will be biased. Second, mismatches that occur during processing can disturb the synchronization of the two databases, causing erroneous results. Verizon NW is working to improve the process and to correct errors that have occurred during this learning process. Exhibit T-1174:35 (Collins).

96. The difficulty of obtaining accurate loop length data is evidenced by the significant differences in "actual" loop lengths found in the 1997 and 1998 surveys. *See* Exhibit T-1174:34-35 (Collins). In the case of the 1997 data, some significant errors occurred that were addressed in the 1998 data. For example, six of the wire centers in the 1997 data showed average loop lengths in the 20-40 mile range. While these large errors appear to have been corrected, Verizon NW is in the process of reviewing the 1998 data to locate and correct any other errors. Verizon NW Response to Record Request 105.

97. To illustrate, the 1997 actual data for Mansfield and Waterville show average loop lengths of 127,075 feet and 210,837 feet, respectively. The 1998 data for these wire centers shows average loop lengths of 19,595 feet and 15,956 feet. Even though the correction yielded numbers that seem much more plausible, it is not known whether all of the error was corrected

out of the original numbers. ICM shows average loop lengths of 4,510 feet and 3,065 feet for these wire centers, which produces ICM/Actual ratios of 0.23 and 0.19. Verizon NW cannot yet determine whether this means that ICM places too little plant in these wire centers. Both of these wire centers are peculiar in that they have very, very compact downtown areas with very little population outside of these dense areas. This would indicate very short average loop lengths. However, these wire centers are also very large in terms of land area. Any customers residing in the outer areas would have extremely long loops, which would tend to drive the average length upward. With questions like these outstanding, it is entirely inappropriate to draw any conclusions based on the assumption that the average "actual" data is accurate. *Id*.

98. Even if all remaining errors are identified and corrected, a comparison with modeled loop lengths is still not appropriate. For example, assuming that the 1998 actual data for Stevens Pass is correct (and Verizon NW does not yet know if it is), then the 2.16 ICM/Actual ratio would lead one to the conclusion that ICM is placing far too much plant in this wire center. However, drawing such a conclusion based on this ratio would be incorrect. The actual loop length measure in Stevens Pass does not account for the existence of radio systems, *i.e.* the distance over which the radio waves travel is not counted in the loop length calculation. ICM, on the other hand, adheres to the TELRIC principles and places cable where radio systems exist today. *Id*.

99. Staff's comparison of actual to modeled loop lengths also ignores the reality of the TELRIC cost methodology, which by definition will not reflect Verizon NW's actual existing network. While required by the FCC's TELRIC rules, ICM's assumption that the network is built all at once with all new plant and technology from the ground up does not reflect Verizon NW's existing network or how networks are built in the real world. Obviously, Verizon NW's

network and any real-world network evolve through time and reflect a mix of technologies, some of which are no longer considered forward-looking.

100. Additionally, ICM builds the network to serve one hundred percent of the market; this implies that no other company will install facilities, which is contrary to fact. While the results of such a model can be useful, they only serve as a lower bound on the actual forward-looking incremental costs of provisioning UNEs to new entrants for several reasons. First, a TELRIC model assumes economies of scope and scale that do not exist in the real world. For example, suppose that along a particular route, ICM places a 400-pair cable. In the real network, the required capacity may be provisioned with a 300-pair cable, followed by a 100-pair cable, because of the way that demand was realized through time.

101. Comparing the modeled network with the real-world network leads to several other examples:

> - In the modeled network, pole lines are assumed to run down only one side of the street, whereas in the real network clearance considerations may require poles on both sides;
>
> - In the modeled network, pair-gain devices are often assumed to be located in the center of a carrier serving area, while in the real network, they may be located elsewhere due to topographical and right-of-way constraints, or due to the development of demand through time;
>
> - In the modeled network, one pedestal may be provisioned for every four drops, when in the real network some pedestals will serve fewer drops simply because there isn't always an even number of customer locations on a street; and
>
> - In the modeled network, distribution plant may be built only to serve existing customers, whereas in the real network plant is built to serve both vacant and planned structures.

Exhibit T-1170:25 (Collins).

102. For these reasons, as its response to Record Request 105 makes clear, Verizon NW strongly cautions against using the "actual" data relied upon by Staff to compare with modeled loop lengths. Instead, Mr. Collins provided a far more reasonable test of sheath feet placed by a model compared to the actual sheath feet in a network. Tr. 2746-47 (Collins); Verizon NW Response to Record Request 105. ICM places approximately 17% less cable than is currently in Verizon's Washington network. Differences between modeled and actual sheath feet can be expected to arise due to the following:

a) Modeled (TELRIC) and actual networks should not be expected to be identical.

b) ICM will place one sheath where the actual network might have more than cable along a particular route – because a real network evolves over time.

c) ICM utilizes optimization routines, which mathematically minimizes the amount of cable placed. No mathematical routine can be expected to account for all of the Verizon NW Response to Bench Request 36.

(3) <u>Input Criticisms</u>

103. The CLECs and Staff criticize certain user-adjustable inputs used in ICM. As a preliminary matter, Verizon NW notes that disagreement over inputs is not a valid basis for rejecting ICM outright. All of the inputs criticized by the CLECs and Staff are user adjustable.[17] Thus, even if their criticisms were valid—which they are not—the Commission could simply change these inputs to reflect the CLECs' or Staff's views. The record shows, however, that the inputs assumed by ICM are just and reasonable.

[17] In its default mode, ICM does not use fill factors as an input, but produces a fill factor as an output. However, the model contains a manual override to allow a user to define a specific fill factor as an input. Tr. 2764 (Collins).

(a) <u>Model Inputs Should Reflect Verizon NW's Experience</u>

104. The Joint Submitters and Tracer vaguely criticize ICM for using inputs based on Verizon NW's own experience, rather than the Commission's determinations on structure sharing, cable sizing, fill factors, plant mix, and placement costs. Joint Submitters Brief at ¶ 107; Tracer Brief at ¶ 21. As Verizon NW explained in Verizon NW's opening brief, and through the testimony of Mr. Collins, the Commission should establish ***Verizon NW's*** forward-looking costs to provide UNEs, which it cannot do unless the cost estimates reflect ***Verizon NW's*** experience. Verizon NW Opening Brief at ¶¶ 62-63; Exhibit T-1170:7 (Collins).

(b) <u>Structure Sharing</u>

105. Staff provides unfounded criticisms of ICM's structure sharing inputs. First, Staff argues that ICM should use the Commission's prior structure sharing determinations from Docket UT-960369, *et al*. However, in the previous cost docket, the structure sharing percentages were not applied to Verizon NW's cost model. Instead, they were determined in accordance with the other models considered by the Commission. In this case, Verizon NW has utilized structure sharing inputs that reflect not only Verizon NW's actual structure sharing experience, but also match the input structure of the models proposed herein. Exhibit T-1174:30 (Collins).

106. Second, Staff's contention that no party has been able to verify whether Verizon NW correctly reflects its actual structure sharing experience again ignores the detail provided by the Company showing the calculation of the ICM sharing inputs. Exhibit 1171/C-1171, Binder 9, Tab 21. A quick look at the table of contents for Tab 21 reveals that the support behind the structure sharing inputs for distribution and feeder plant are found in sections B and C, respectively. The same information was also provided on the CD in a file called "washare." For

example, the duct sharing calculation identifies the total duct feet owned by Verizon NW in Washington. It then takes the total footage of shared conduit as a percentage of total duct feet to arrive at the percent of total duct feet that is shared. The user can then see how the sharing inputs are used in ICM by simply looking at the loop module methodology. Exhibit 1171/T-1171 (Binder 1, Tab 2, Book II of VII, pages 2_17 through 2_24). Included on these pages is an explanation of how sharing works in the model and the sharing formulas themselves. Further detail is provided in Binder 4, Tab 10, where the actual ICM source code is provided in annotated form, complete with explanations and example calculations. For example, there is a section entitled "Calculation of Pole Investments," which shows exactly how pole sharing is reflected in the ICM code. Finally, the user can look at the actual ICM source code to see how sharing is being reflected. Specifically, lines 1044 through 1154 of the source code file entitled "OSPInvest.pas" contain the pole sharing subroutine. This code is all a part of the System Manual (which includes all ICM source code) found in Tab 4 of the filing package. The "OSPInvest.pas" file is also included on the CD. On line 1044 of OSPInvest.pas, the source code states, "This subroutine calculates the investment for poles required to support the aerial cables being placed." Line 1147 indicates that the next line of code serves to "weigh investments for non-shared and shared poles." Line 1148 simply states that the weighted average pole investment is calculated by taking the investment for shared poles and multiplying it by the percent of poles that are shared. The result is then spread over the number of users sharing these poles. This is then added to the total investment in non-shared poles multiplied by one minus the percent of poles that are shared. Thus Verizon NW provided a significant amount of detailed documentation supporting its structure sharing percentages.

107. Staff's criticism that ICM does not allow structure sharing to be reflected on a density zone basis is likewise incorrect. *See* Staff Brief at 23. While ICM does not have zone-specific inputs for sharing, it is capable of measuring the effects of differing sharing inputs by zone.

(c) <u>Pole Costs</u>

108. Staff contends that ICM's pole costs are too high, and are unsupported by documentation. Staff Brief at 21-22. However, Verizon NW provided significant documentation in support of the pole costs and all other material cost inputs used in ICM. Mr. Collins provided a step-by-step review process for the documentation supporting the ICM pole cost inputs. *See* Exhibit T-1174:32-33 (Collins). Staff also ignores the pole placement cost documentation provided in Exhibit 1171/C-1171 in Binder 4, Tab 10, which includes Verizon NW's actual vendor contracts in Washington to place poles today. Verizon NW likewise provided substantial documentation regarding how its loading factors were determined. Moreover, the source for the loading factors—the Company's financial records—is the same as for other filings approved by the Commission over the years. Exhibit 1171/C-1171, Binder 3, Tabs 7-9. These factors are calculated based on actual expenditures booked to the pole account for freight, sales tax, provisioning (e.g. supplier procurement, warehousing, and handling), engineering, and minor materials (e.g. anchors, down guys, cross arms, ground wires, ground plates, etc.).

109. Lastly, Staff appears to criticize the use of 1995-1997 supply factor data. However, this was the most recent data available to Verizon NW. More recent data would likely be higher.

(d) NID Assumptions

110. Staff contends that ICM either produces unreasonably high costs using a 12-pair NID or incorrectly provisions plant by using a 25-pair NID for 7-12 line customers. ICM does not use a 12-pair NID at all, but does use a 25-pair NID to serve customers with 7-12 lines. Tr. 2743-44 (Collins). However, the impact of this assumption on costs is insignificant. Of the 699,442 NIDs placed by ICM, only 0.2% of them (1,495) are 25 pair NIDs. *See* Exhibit 1171/C-1171, "inventory.db" in ICM's table viewer. The impact on the monthly loop cost from using 25-pair NIDs is extremely small. In the extreme case, if the ICM input price for 254-pair NIDs is set at zero, the monthly loop cost would fall approximately $0.01.

b. External Cost Studies

111. The Joint Submitters allege that Verizon NW's dark fiber and high capacity loop studies—particularly its DS-3 study—fail to include documentation or explanation demonstrating that the estimated costs are consistent with the methodology or results adopted by the Commission in Docket UT-960369, *et al.* Joint Submitters Brief at ¶ 110. In support of this contention, the Joint Submitters merely cite to the testimony of Mr. Klick that Verizon NW should have used "less expensive" OC-12 and OC-48 technology instead of OC-3 technology in its DS-3 Study. Exhibit T-1310:40-41 (Klick). However, Mr. Klick failed to consider the customer set for which a DS-3 loop UNE is intended. Mr. Klick cited the technology distribution used in Verizon NW's high capacity digital facility study as evidence that the Company used incorrect technology in its DS-3 loop study. The high capacity digital facility study provides the cost for CLEC dedicated transport, and its technology distribution reflects customers with significant bandwidth demand (*i.e.*, interexchange carriers). The DS-3 loop study, on the other hand, is intended for facilities that serve end user customers, not carriers that

can aggregate traffic from numerous end users. Exhibit T-1174:20-21 (Collins). Thus, Mr. Klick's comparison of the two studies on this point is meaningless, and should be disregarded.

112. Messrs. Klick and Weiss also advocated an unreasonable fill factor of 85% for DS-1 and DS-3 loops. By implication, the use of an 85% fill factor coupled with the use of an OC-3 technology choice leads to the absurd conclusion that the average end user DS-1 customer has a demand for 71 DS-1s. Exhibit T-1174:20 (Collins). Verizon NW's individual end user customers do not have anywhere near that average level of demand. Customers with demand for one or two DS-1s, if served uneconomically by an OC-3 with 84 DS-1s, would have fill factors on those facilities of 1.2% and 2.4% respectively. *Id*. at 21. Application of Messrs. Klick and Weiss' flawed logic simply represents an attempt to understate the UNE DS-1 cost by utilizing the economies of scale of larger capacity technology while at the same time ignoring the underlying demand for which the UNE is intended.

113. Moreover, neither Mr. Klick nor Mr. Weiss provided any evidence to support a 85% fill factor. Indeed, neither the Joint Submitters' nor their witnesses would not demonstrate whether they experience any where near an 85% fill factor. Tr. 3585 (Weiss); Exhibit 1338. Nor could Mr. Weiss provide any examples of a competitive market experiencing such a high fill. Tr. 3585 (Weiss). In short, an 85% fill factor assumptions cannot be supported, and should be rejected.

114. Tracer contends that Verizon NW's external studies "that calculate costs on an element-by-element basis" are inconsistent with the way the Commission established costs in Docket UT-960369, *et al*. Tracer Brief at ¶ 29. While it does not cite to the record, Tracer appears to rely on Mr. Klick's testimony that the cost model runs relied upon by the Commission in that proceeding included DS-1 and DS-3 loops. Exhibit T-1310:35 (Klick). However, DS-1

or DS-3 loop costs were not established in the previous generic cost docket, and none of the models submitted in that proceeding calculated those costs. *See* Tr. 3887-8 (Spinks). While the demand for such loops may have been included in the various loop models, they were likely included for the purpose of reflecting the appropriate economies of scale in calculating UNE loop costs.

115. Citing the Eighth Supplemental Order at ¶ 205, Mr. Klick's argument referred to the issue of derived circuits. However, ¶ 205 addresses a flaw in the Hatfield Model. Embedded in that model's structure is an inappropriate calculation of the per-line loop cost. That is, the model summed the total investment and cost for all loops and divided by a total loop count that included derived channels in the denominator. In essence, this flaw spread the cost of the appropriate amount of copper facilities over a loop count that includes "phantom" loops (*i.e.*, derived channels). Exhibit T-1174:12-13 (Collins). As explained by Mr. Collins, ICM—which served as a starting point for Verizon NW's external studies—does not have this problem since the copper portions of voice grade and DS-1 loops are costed in the manner in which the costs are incurred. That is, if a voice grade UNE loop and a DS-1 loop require the same type and amount of copper plant, then they will both have the same cable and structure cost. In the case where a voice grade UNE loop and a DS-1 loop are provided via fiber fed DLC, the costs will differ in accordance with the primary cost driver (*i.e.*, the amount of capacity required over the fiber facility). A voice grade UNE loop requires only one channel over the fiber facility while the DS-1 loop requires 24 channels of the fiber circuit capacity. *Id*. at 13.

116. Tracer also contends that Verizon NW's external studies do not comply with TELRIC because UNE models should be designed to build the entire network, thereby incorporating into the cost estimates the full economies of scale and scope available to an ILEC.

Tracer Brief at ¶ 29. However, no witness provided any evidence that Verizon NW's external studies fail to reflect the entire network.

c. Common Costs

117. The Joint Submitters and Tracer criticize Verizon NW's use of the common cost factors developed in Docket UT-960369, *et al.*, to develop prices in this proceeding. Joint Submitters Brief at ¶¶ 111-12; Tracer Brief at ¶ 30. The CLECs argue that the 24.75% common cost factor should apply to prices established in this proceeding only if Verizon NW's cost models directly assign the same percentage of total costs to UNEs as did those in the previous proceeding. *Id.*

118. Staff recommends that the Commission develop a common cost markup based on Verizon NW data, reflecting actual expense incurred by the Company, based on the calculations contained in its response to Bench Request 43. Staff Brief at 25. Alternatively, Staff recommends that Verizon NW's common cost markup be reduced from 24.75% to 24.47%. *Id.* at 26.

119. Verizon NW's opening brief outlined in detail why the 24.75% common cost factor should apply to all UNEs. *See* Verizon NW Opening Brief at ¶¶ 76-79.

d. Recurring Rates

(1) High Capacity Loops

120. The CLECs recommend that the Commission establish rates for high capacity loops by subtracting the cost of "plug-in electronics implicit in the TELRIC" for loop costs established in Docket UT-960369, *et al.*, and add an appropriate TELRIC cost for plug-in electronics associated with DS-1 and DS-3 loops. Joint Submitters Brief at ¶ 113; Tracer Brief at ¶ 31. However, there is no way to determine which portion of the loop costs adopted in that

proceeding are attributable solely to "plug in electronics." The loop costs adopted by the Commission were the average of three separate models. Tr. 3871 (Spinks), Tr. 3714 (Klick).

121. Moreover, the rates proposed by the Joint Submitters are particularly suspect in that they yet again rely on models that are not in the record that have been previously rejected by the Commission for use in future proceedings. Specifically, Mr. Klick used the Hatfield Model to measure the percent increase in loop costs that they believe would occur by subtracting the plug-in electronics implicit in the previously adopted rates. *See* Tr. 3748 (Klick). Yet nothing in the record supports the investment cost for the electronics assumed by Mr. Klick in his calculations. Tr. 3750 (Statement by Ms. Steele). Nor is there anything in the record to permit any meaningful analysis of the calculations performed by Mr. Klick. Tr. 3752-53 (Klick).

122. The Joint Submitters further allege that Verizon NW's DS-3 cost estimates are overstated and should be adjusted to reflect Messrs. Klick and Weiss' inappropriate modeling assumptions. Joint Submitters Brief at ¶ 115. Specifically, the Joint Submitters criticize Verizon NW's assumptions that all DS-1 loops are provided over copper facilities and all DS-3 loops are provisioned over OC-3 facilities when Verizon NW can and does use less expensive options. *Id*. However, the Joint Submitters ignore the fact that copper facilities may be the most economical technology given a DS-1 end user's needs. As explained by Mr. Collins, an end user with a demand for a single DS-1 loop is not more economically served by a facility with 84 or 336 times the needed capacity.[18] *See* Exhibit T-1174:15-16 (Collins).

[18] To illustrate, if a four-passenger car costs $20,000 and a 100-seat double-decker touring bus costs $200,000, the bus would be less expensive on a per-seat basis ($2000 for the bus as compared to $5000 for the car). The Joint Submitters logic would require a family of four to buy the bus because of the per-seat price. However, the family would not need the additional 96 seats, and thus would not pay an additional $180,000. Exhibit T-1174:15-16 (Collins).

123. Likewise, the Joint Submitters' reliance on the 85% fill factor assumed by Mr. Weiss is inappropriate. Mr. Weiss provided no evidence to support his 85% fill factor. Indeed, neither the Joint Submitters nor their witness could demonstrate whether they experience any where near an 85% fill factor. Tr. 3585 (Weiss); Exhibit 1338. Nor could Mr. Weiss provide any examples of a competitive market experiencing such a high fill. Tr. 3585 (Weiss). In short, Mr. Weiss' assumption cannot be supported, and should be rejected.

(2) Dedicated Transport

124. The Joint Submitters propose recurring rates for DS-1 and DS-3 transport based on modifications made by Messrs. Klick and Weiss to Verizon NW's model outputs. Joint Submitters Brief at ¶ 118. These modifications are based on the same flawed assumptions used to adjust Verizon's DS-1 and DS-3 loop costs. For the reasons outlined in sections III(B)(2)(b) and III(B)(2)(d)(1), Verizon's cost estimates are reasonable, and the CLECs' modifications should be rejected.

(3) Dark Fiber

125. The Joint Submitters argue that the recurring charges for dark fiber should be no higher than the 2-wire analog loop rate when the fiber is to be used as a loop, and no higher than the IDT DS-1 Transport Facility per ALM when the fiber is used for transport. Joint Submitters Brief at ¶ 120. However, the CLECs do not cite anything in the record to substantiate this claim, and merely state that the underlying facilities are the same. In reality, the underlying facilities are not the same and are not used in the same manner. For example, a two-wire analog loop consists of either copper or a combination of copper and fiber (with associated DLC). The cost for such a loop is determined on a per voice grade channel basis. That is, on the copper portion, the cost is on a per pair basis and on the fiber portion the cost is expressed on a per DS-0 basis

(*i.e.* based on a fraction of the total bandwith traveling over a single fiber). Exhibit T-1174:13-14 (Collins). On a dark fiber loop, however, a single fiber is provided throughout the length of the loop; a customer uses the entire fiber, not just a fraction of the bandwith traveling over it as in the case of "lit" facility services. *See* Exhibit 1171/C-1171 at Binder 9, Tab 22, Section A.

126. Covad contends that the recurring price for dark fiber should exclude any capacity costs, including costs for fiber itself, the structure supporting the fiber, and the placement of fiber. Covad Brief at 11-12. Covad further contends that Verizon NW is already recovering the costs of any unused spare fiber through application of a fill factor or utilization adjustment to its costs. Covad Brief at 12. Covad incorrectly assumes that somehow the cost characteristics of providing dark fiber change if the ILEC is not obligated to install dark fiber capacity at the request of CLECs. Because Verizon NW will only offer dark fiber when there is spare capacity, Covad contends that the Company should have only studied the operations and maintenance cost of the fiber. *Id.* at 12. This is a classic case of trying to apply a short-run cost approach to something that requires a long-run cost approach. Covad ignores the fact that a long-run cost study assumes that the firm does not face any capital constraints (*i.e.*, it can change its technology mix and size of plant). Exhibit T-1174:37 (Collins). Stated another way, a long-run study does not hold constant the capacity or the size of the network, but accounts for whatever capital costs are required to accommodate demand. Tr. 2705 (Collins). The same principle applies to UNE loops, the vast majority of which are already in place today. It makes no difference from a long-run forward-looking cost perspective whether the customer request for service causes the ILEC to purchase new capacity or to offer some of its existing capacity. Exhibit T-1174:37 (Collins). Consequently, Covad's criticisms are invalid.

(4) Subloop Elements

127. The Joint Submitters recommend that the loop runs previously adopted by the Commission should be used to determine subloop rates. Joint Submitters Brief at ¶ 121. As explained above, however, the Commission should completely disregard the models used in Docket UT-960369, *et al*.

128. ICM was used to provide subloop percentages, not subloop costs *per-se*. The model calculated subloop percentages of 30% feeder to 70% distribution. *See* Tr. 2671 (Collins). Verizon NW then applied these percentages to the deaveraged 2-wire loops rates adopted by the Commission in Docket UT-960369, *et al.*, to determine the appropriate deaveraged feeder and distribution rates. Verizon NW's approach is a reasonable method for "unbundling" the loop rates adopted by the Commission based on feeder and distribution percentages found in Verizon NW's network.

129. Staff contends that Verizon NW's subloop percentage estimates show little or no variation between density zones. Based on estimates developed with the HM3.1 model, Staff argues that the ratio of feeder to distribution would be closer to a 50-50 split in dense urban areas, with distribution investment increasing relative to feeder in less dense rural areas. Staff Brief at 27. As discussed above, the Commission should disregard any cost or rate estimates based on the HM3.1 model since it is not in the record of this proceeding and has been rejected for use in any proceeding to establish UNE rates. *See* Section III(B)(2)(a) above. Moreover, as explained by Mr. Collins, it is more likely that feeder as opposed to distribution lengths increase as loop lengths increase in more rural areas. Exhibit T-1174:31-32 (Collins). Thus, Staff's estimates showing an increase in distribution lengths are even more suspect.

130. Staff also expresses a concern with Verizon NW's proposal to establish a separate rate for drop wire since, in their view, drop costs are already included in the deaveraged zone rates. Staff Brief at 26. Staff contends that if the Commission establishes a separate rate for the drop as part of the subloop, it should remove drop costs from the full loop rate established in Docket UT-960369, *et al*. *Id.* Alternatively Staff recommends that the Commission subtract the drop rate from the distribution rate, or adopt Qwest's estimated drop rate for Verizon NW. *Id*. at 27.

131. As discussed above, models from the previous cost docket should not be considered at all in this proceeding. With respect to the drop, the Commission expressed serious concerns over the validity of each of the models' drop estimates. *See* Eighth Supplemental Order at ¶¶ 111-136. Moreover, the fact that the Commission "averaged" the results of three disparate models to yield a loop cost estimate should not make anyone comfortable with the average cost of a small sub-element. Indeed, the Eighth Supplemental Order does not identify a specific cost attributable to the drop, nor does Staff offer a methodology for determining that cost. Tr. 3871-72 (Spinks).

132. Lastly, there is no reason to impose Qwest's drop costs on Verizon NW when no party has provided any evidence that Verizon NW's drop cost estimates are inaccurate or that a drop would cost the same in the two companies' networks. Consequently, the Commission should disregard Staff's proposals and adopt Verizon NW's proposed subloop rates.

(5) UNE-P

133. The Joint Submitters do not oppose Verizon NW's proposed UNE-P rates except to the extent that they include separate charges for vertical features. The basis for this limited

objection is their contention that the switching rates adopted in Docket UT-960369, *et al.*, include the cost of vertical features. Joint Submitters Brief at ¶ 123.

134. The Commission has expressly stated that it has not ruled out the "possibility that in some future proceeding, a separate charge for vertical features could be established." Eighth Supplemental Order at ¶ 282. Switching costs that ignore the costs of vertical services violate the principle of cost causation since these services do indeed utilize switching resources in order to function. Exhibit T-1174:11 (Collins). For example, any vertical feature that requires separate pieces of equipment to function have separate identifiable costs that are not reflected in Verizon NW's switching costs and rates. Mr. Collins listed over twenty such features that require Verizon NW to separately purchase equipment from its switch vendors. *Id.* In addition to the special equipment that Verizon NW must purchase for such features, its vendor contracts are structured such that Verizon NW must pay separately for hardware and software. Thus, Verizon NW pays for switch hardware out of one contract, and for feature software out of another contract. *Id.* The Act requires Verizon NW to be compensated for these incremental costs arising from the existence of switch features over and above those costs arising from a feature's use of the switch processor through its UNE rates. Moreover, principles of cost causation require that these costs be recovered through Verizon NW's switching rates.

IV. Reciprocal Compensation

A. Legal And Policy Issues/Jurisdiction/Rate Structure

135. The Staff is wrong in contending that, even though the FCC adopted in its *ISP Remand Order*[19] a comprehensive federal rate regime for compensating Internet traffic, the

[19] Implementation of the Local Competition Provisions in the Telecommunications Act of 1996; Intercarrier Compensation for ISP-Bound Traffic, Order on Remand and Report and Order in CC Docket Nos. 96-98 & 99-68 (rel. Apr. 27, 2001).

Commission nevertheless has the legal authority to regulate Internet compensation rates. The FCC's Order is crystal clear that the FCC has assumed exclusive jurisdiction over rates and rate making for Internet traffic. Indeed, Qwest and the Joint Submitters agree with Verizon NW that the FCC preempts this area from Commission action. Qwest Brief at 8, 43-45; Joint Submitters Brief at ¶¶ 29, 129-132. In its *ISP Remand Order*, the FCC determined that Internet traffic is "information access," a form of interstate exchange access traffic. *Id*. at ¶ 36. The FCC has exclusive jurisdiction over interstate exchange access traffic. *E.g.*, *New York Tel. Co. v. FCC*, 632 F.2d 1059, 1064-66 (2d Cir. 1980).

136. The FCC interpreted § 251(g) as evidencing Congress' intent to exclude information access from the reciprocal compensation requirement in § 251(b)(5). *Id*. at ¶ 34. The FCC elected not to modify that exclusion, but, instead, to regulate Internet traffic under § 201. *Id*. at ¶ 40. This Commission does not have authority to act under § 201. Without qualification, § 201(b) provides: "The Commission [the FCC] may prescribe such rules and regulations as may be necessary in the public interest to carry out the provisions of this Act." By determining that Internet traffic is interstate traffic and by electing to regulate under § 201, the FCC therefore forecloses state commission action on Internet traffic rates and rate making. The FCC made this very point in its *ISP Remand Order* when it declared: "Because we now exercise our authority under section 201 to determine the appropriate intercarrier compensation mechanism for ISP-bound traffic . . . ***state commissions will no longer have authority to address this issue***." *Id*. at ¶ 82 (emphasis added).

137. Notably, Staff has not identified any legal basis under which this Commission can continue to regulate Internet compensation rates, nor is there one. As explained above, the FCC has construed § 251(g) as evidencing Congress' intent to exclude Internet traffic from § 251(b).

This exclusion means that this Commission cannot act under §§ 251 and 252(e), the provisions in the Act that provide the legal basis for state commission action with respect to the rates and other terms in parties' interconnection agreements.

138. In addition, the Commission is preempted because Staff's proposed regulations for Internet traffic would be in actual conflict with the FCC's rate regime and the FCC's findings as to what is in the public interest. In its *ISP Remand Order*, the FCC tentatively found that "a bill and keep approach" — under which carriers "recover the costs of delivering traffic to ISP customers directly from those customers" — is "likely to be more economically efficient than recovering these costs from originating carriers" because it "is likely to send appropriate market signals and substantially eliminate existing opportunities for regulatory arbitrage." *Id.* at ¶ 67; *accord, id.* at ¶ 6. Adoption by this Commission of an entirely different Internet rate structure conflicts with the FCC's determination that a "bill and keep" regime is most likely to facilitate competitive entry. Moreover, the FCC ordered that carriers that were not exchanging Internet traffic pursuant to an interconnection agreement prior to the adoption of its *ISP Remand Order* would exchange Internet traffic on a bill and keep basis until further FCC action. *Id.* at ¶ 81. Presumably, were the Commission to establish its own rate regime for Internet traffic, it would expect those rates to be incorporated into any new interconnection agreements. Here, again, there is an actual conflict between the FCC's regulations and the Commission's.

139. Despite the FCC's unequivocal statement in its *ISP Remand Order* that "state commissions will no longer have authority to address this issue" and the clear implication of its invocation of § 201, Staff believes that the FCC's use of the word "cap" implies that the Commission continues to have legal authority to regulate in the area of Internet traffic as long as charges are lower than the FCC's rates. Staff is mistaken. The term "cap" merely refers to the

fact that some carriers in the past entered into interconnection agreements that include compensation for Internet traffic. As explained by the FCC: "[B]ecause the [transitional] rates . . . are caps on intercarrier compensation, they have no effect to the extent that states *have ordered* LECs to exchange ISP-bound traffic either at rates below the caps . . . or on a bill and keep basis (or otherwise *have not* required payment of compensation for this traffic). The rate caps are designed to provide a transition toward bill and keep . . . and no transition is necessary for carriers *already* exchanging traffic at rates below the caps." *Id.* at ¶ 80 (emphasis added) (footnote omitted). Therefore, when state commissions have already imposed, or parties have already negotiated, intercarrier compensation rates covering ISP-bound traffic that are lower than the newly-established rates prescribed by the FCC, the FCC's new rules do not prohibit those arrangements or require that they be increased up to the level of the FCC rates.

140. In its opening brief, Staff cited the dissenting comments of Commissioner Harold Furchtgott-Roth. In that dissent, Commissioner Furchtgott-Roth complained but conceded that the *ISP Remand Order* places Internet traffic "under exclusive federal jurisdiction." He further complained that: "In holding that essentially all packetized communications fall within federal jurisdiction, the Commission has dramatically diminished the States' role going forward[.]"

141. In sum, the Commission retains jurisdiction over the establishment of just and reasonable rates applicable to the reciprocal compensation obligations under § 251(b)(5). Such rates apply to all telecommunications traffic, except those categories enumerated in § 251(g). Internet traffic is information access traffic, *i.e.* one of the exempt categories of traffic enumerated in § 251(g), and thus is exempt from reciprocal compensation requirements and any applicable rates. The FCC has exclusive jurisdiction over the intercarrier compensation regime

and rates for such traffic. Accordingly, only the FCC—to the exclusion of the states—may adopt a compensation regime for such traffic.

142. Lastly, with respect to reciprocal compensation as it applies to non-Internet traffic, Staff's recommendation should be rejected. The reciprocal compensation rates proposed by Verizon NW, which are contained in Exhibit 1191 and Attachment A to Verizon NW's Opening Brief, were uncontested and should be adopted.

B. Tandem Switching Issue

143. Verizon NW agrees with the positions of Staff and Qwest as stated in their respective opening briefs that CLECs should not be permitted to receive the tandem rate, because it would result in over-compensation. Staff Brief at 39; Qwest Brief at 47. Verizon NW also agrees with Qwest that in light of the *ISP Remand Order*, the issue of whether to charge the end office or tandem rate arises only in the context of voice traffic, not Internet traffic.[20] Qwest Brief at 47.

144. Moreover, the record in this matter is insufficient to determine whether CLECs' switches, serving areas, or customer bases meet the requirements in FCC Rule 51.711(a)(3). In fact, the CLECs advocating application of tandem rate pursuant to that rule made no attempt to introduce any such evidence. The CLECs merely state in a conclusory fashion that their switches, in some cases, serve the same geographic areas that ILEC switches do. Thus, the Joint Submitters seek a Commission order that simply states "the rule states what it says"—*i.e.* if the requirements of FCC Rule 51.711(a)(3) are satisfied, then the tandem rate should apply. Verizon NW takes no issue with the rule itself. However, a general order stating that an FCC rule will

[20] As discussed above, the FCC's assertion of jurisdiction over ISP-bound traffic establishes that all issues relating to intercarrier compensation for ISP-bound traffic shall be decided by the FCC, not state commissions.

apply if triggered is useless. The Commission has no basis in the record to state whether the requirements of FCC Rule 51.711(a)(3) have been met by any party to this proceeding, and thus whether it is triggered. Accordingly, Joint Submitters' request for a general order merely restating the rule should be rejected.

C. Interconnection Cost Sharing

145. In their opening brief, the Joint Submitters contradict the cross-examination testimony of their witness on this issue, Rex Knowles. Specifically, the Joint Submitters attempt to put forth a "revised" proposal regarding cost sharing for collocation when used to provide interconnection facilities, Joint Submitters Brief at ¶ 140, when Mr. Knowles specifically stated at the hearing that the issue of collocation cost sharing became moot with the adoption of reasonable collocation rates by the Commission in Phase A of this proceeding. Tr. 3085 (Knowles). Accordingly, the Commission should reject the proposal made in the Joint Submitters' opening brief relating to cost sharing for collocation facilities, because it was withdrawn by their witness at the hearing of this matter.

146. In general, the level of cost sharing for interconnection facilities will be determined according to the relative local traffic flow over that facility. *See* FCC Rule 51.709(b). The *ISP Remand Order* conclusively establishes that Internet traffic is not local traffic, *i.e.* it is not subject to reciprocal compensation. Accordingly, Internet traffic must not be considered in determining the relative local traffic flows, and thus the level of cost sharing, for interconnection facilities.

V. DSL Issues

A. Line Splitting

1. The Commission Should Not Require Verizon NW Or Its Data Affiliate To Continue Providing DSL Service When A CLEC Provides Voice

147. As anticipated in Verizon NW's opening brief, the Joint Submitters ask the Commission to require Verizon NW or Verizon Advanced Data Inc. ("VADI") to continue to provide DSL service where an end user switches its voice service to a CLEC. Joint Submitters Brief at ¶¶ 143-147. The Joint Submitters imply that Verizon NW or VADI have refused to continue providing DSL services under such circumstances without providing any legitimate business reason for its refusal. *Id*. at ¶¶ 144-45. Nothing in the record supports this claim.

148. Verizon NW cannot "continue" to provide a service that it does not currently provide. Currently, Verizon NW does not--and is not authorized to--provide DSL services to any end users in Washington. Tr. 2534-35 (Lee).[21] Even if Verizon NW did provide advanced services itself, there is no evidence in the record that it would refuse to provide DSL services to ***any*** end users, let alone those purchasing voice services from CLECs. Nor is there any evidence in the record that VADI has or would refuse to provide DSL services to a CLEC's voice customers.

149. The Joint Submitters contend that the Commission has the authority to require ILECs to continue to provide DSL services to end users who switch voice providers. Joint Submitters Brief at ¶¶ 146-47. However, the Joint Submitters fail to address whether the

[21] See also In re Application of GTE Corporation, Transferor, and Bell Atlantic Corporation, Transferee, 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, Memorandum Opinion and Order, 15 F.C.C.R. 14032 (2000) at 260.

Commission has the authority to impose such a requirement on VADI. For the reasons already stated by Verizon NW, Qwest, and Staff, the Commission does not have the authority to grant the Joint Submitters' request, and even if it did, it should reject it. Verizon NW Opening Brief at ¶ ¶ 129-35; Qwest Brief at 52-53; Staff Brief at 44-45.

2. Line Splitting Costs

150. The CLECs do not address Verizon NW's proposed interim rates for line splitting. *See* Joint Submitters Brief at ¶ 148. Staff only recommends that the Commission require Verizon NW to use the OSS charges adopted by the Commission in its Part A Thirteenth Supplemental Order on an interim basis until a complete OSS cost can be developed for line splitting. Staff Brief at 42. It is unclear whether Staff believes that OSS costs specific to line splitting only should be replaced by, or imposed in addition to, the Phase A OSS rates, which apply to ***all*** LSRs received by Verizon NW. Because the adopted Phase A OSS rates apply to all LSRs, regardless of the element or service ordered, these rates should continue to apply to line splitting orders until all the costs identified in Phase A have been recovered.

3. Line Splitting Implementation

151. Staff and the Joint Submitters recommend that the Commission require Verizon NW to provide a line splitting product by a date certain. Staff Brief at 41, 43; Joint Submitters Brief at ¶ 149. As stated in Phase A and Verizon NW's opening brief, one form of line splitting is already available today to CLECs in Washington. See Verizon NW Phase A Opening Brief at ¶ 66, Verizon NW Phase B Opening Brief at ¶ 124. Additionally, Verizon NW has already committed to providing a line splitting product in Washington consistent with the timeframe adopted by the New York Commission. *See* Verizon NW Opening Brief at ¶¶ 124-126; Tr.

1140:2 (Lee). The FCC has found Verizon's proposed services descriptions compliant with its rules. *See Verizon Massachusetts 271 Approval Order*[22] at ¶¶ 176-80 and n.556.

152. Should the Commission find insufficient evidence in the record to require a date certain for line splitting implementation, Staff suggests that it require the parties to begin a collaborative. Staff Brief at 44. The Joint Submitters also ask the Commission to establish a collaborative proceeding. Joint Submitters Brief at ¶ 149. As explained in Verizon NW's opening brief, a Washington-specific line splitting collaborative is unnecessary for Verizon NW. *See* Verizon NW Opening Brief at ¶ 127. Verizon NW and a majority of the CLECs and DLECs operating in Washington have already participated in a collaborative proceeding supervised by the New York Commission to address operational and technical issues associated with line sharing and line splitting. That collaborative has resulted in line splitting service descriptions that Verizon NW intends to implement in Washington to which no party objected except with respect to the provision of an ILEC-owned splitter. *Id*. at ¶ 125. A collaborative involving Verizon NW will not produce any different result in Washington, and thus would be a waste of time and resources.

4. ILEC-Owned Splitter

153. The Joint Submitters briefly contend that "deployment of line splitters in ILEC central offices by the ILEC" will "assist" in implementing line splitting with a minimum of disruption to end users or their data service. Joint Submitters Brief at ¶ 143. Verizon NW notes that it will install a ***CLEC- or DLEC-owned*** splitter in its central offices in a "virtual-like" line

[22] In the Matter of Application of Verizon New England Inc., Bell Atlantic Communications, Inc. (d/b/a Verizon Long distance), NYNEX Long Distance Company (d/b/a Verizon Enterprise Solutions) and Verizon Global Networks Inc., For Authorization to Provide In-Region, InterLATA Services in Massachusetts, CC Docket No. 01-9, Memorandum and Order, FCC 01-130 (rel. April 16, 2001).

sharing or line splitting configuration that should satisfy this concern. However, for the reasons outlined in each of Verizon NW's briefs in this proceeding, Verizon NW will not--and cannot be required to--purchase splitters for CLECs or DLECs. *See* Verizon NW Opening Brief at ¶ 128.

154. Staff agrees that Verizon NW should not be required to purchase splitters. Staff Brief at 42-43. Staff suggests, however that where an ILEC is the owner of a splitter in a line sharing environment that it should continue to provide the splitter for line splitting if it is technically feasible to do so. It appears that Staff recommends negotiation between the ILEC and the CLEC in such a conversion. *Id*. at 43. Where a DLEC wishes to convert a currently used Verizon-owned splitter line sharing scenario to a line splitting scenario, Verizon does not object to selling the installed splitter to either the voice LEC or DLEC.

B. Line Sharing Over Fiber-Fed Loops

155. Covad generally discusses FCC requirements that ILECs provide access to the high frequency portion of a loop served by fiber-fed digital loop carrier ("DLC"), but fails to address the myriad of technical and operational issues pending before the FCC in its further notice of proposed rulemaking ("FNPRM") resulting from the *Line Sharing Reconsideration Order*.[23] Covad would have this Commission not only prophesy the results of the FCC's investigation without the benefit of the evidence before that body, but create findings of fact out of the vacuum of a record in this case. Yet, as even Covad itself admits, "at best, there are substantial issues to be addressed with respect to line sharing of DLC." Covad Brief at 19.

[23] In re Deployment of Wireline Services Offering Advanced Telecommunications Capability, CC Docket No. 98-147, and In re Implementation of the Local Competition Provisions of the Telecommunications Act of 1996, CC Docket No. 97-98, Third Report and Order On Reconsideration In CC Docket No. 98-147, Fourth Report and Order On Reconsideration In CC Docket No. 96-98, Third Further Notice of Proposed Rulemaking in CC Docket No. 98-147, and Sixth Further Notice of Rulemaking in CC Docket No. 96-98, FCC 01-26 (rel. Jan. 19, 2001).

156. As a preliminary matter, Verizon NW notes that it currently has an offering in place that enables the CLECs or DLECs to subloop line share at remote terminals in order to provide DSL services to end users served by fiber-fed DLC. Tr. 2504 (Lee); Exhibit 1137. This is the most efficient—and indeed the only—means of providing that functionality to DLECs at this time given the realities of Verizon NW's current network. Tr. at 2502, 2504 (Lee).

157. In an effort to seek "parity" with the ILECs, Covad requests that the Commission order Qwest—and presumably Verizon NW should Verizon NW chose a remote DSLAM architecture—to provide "plug and play."[24] *Id.* at 20. Covad defines plug and play as virtual collocation of a CLEC owned-line card in an ILEC's remote terminal.[25] *Id*. However, contrary to Covad's assertions, the record does not establish that plug and play is a technically feasible method of providing access to the high frequency potion of a loop served by fiber-fed DLC.

158. Plug and play is not collocation. Specifically, a line card is not "equipment" that qualifies for collocation. The Act requires ILECs to provide collocation only of "equipment" that is necessary for interconnection or access to UNEs. 47 U.S.C. § 251(c)(6). It does not require an ILEC to include CLEC-supplied components in the ILEC's own equipment. Line cards have no stand-alone function—they are useless without the associated hardware and software into which they are integrated. Therefore, line cards cannot be considered "equipment."[26] In addition, line cards inserted into equipment at the remote terminal would not

[24] Verizon NW notes that currently, there is parity between Verizon NW, its data affiliate, and its competitors since Verizon NW's network does not have the technology available to allow **any** carrier to provide DSL services to customers served by fiber-fed DLC. Once the technology is in place, DLECs will have the same opportunity on equal footing as VADI to use that technology. Tr. 2502-03 (Lee).

[25] While Covad uses the term "remote DSLAM," Verizon NW assumes it means remote terminal.

[26] A line card associated with a collocator's equipment may be considered integral to its own equipment, but there is no statutory authority allowing a collocator to integrate a line card into an incumbent's equipment.

be used to access the subloop unbundled network element, because the DLC backplane is not an accessible terminal for obtaining access to the subloop UNE.

159. Moreover, the "collocation" of line cards alone would not accomplish anything. As a technical matter, merely placing line cards at the remote terminal would not make DSL at the remote terminal available. First, the remote terminal must be made DSL-capable. This requires additional hardware and software for the Verizon NW NGDLC electronics, as well as additional power, environmental conditioning, etc.

160. In addition, line card manufacturers have made very clear that they have no ability to independently produce line cards meeting various carriers' requirements for insertion into equipment at incumbents' remote terminals. As part of the FCC's forum concerning remote terminal collocation, Alcatel referred to the concept of a "universal backplane"[27] which would accommodate multiple types of line cards as "laughable."[28] Likewise, Lucent commented that development of a universal backplane would not only be extremely time consuming, it would also require a redesign of "the whole system management and integration."[29] Copper Mountain concurred, calling the required modifications "ludicrous."[30]

161. Lastly, allowing the "collocation" of line cards is a bad idea. Allowing multiple carriers to install their DSL line cards would make highly inefficient use of Verizon NW

[27] The "backplane" corresponds to the fourth function identified in the Commission's definition of a DSLAM, *i.e.* "the ability to combine data units from multiple loops onto one or more trunks that connect to a packet switch or packet switches." To mandate a "universal backplane" would have the paradoxical result of telling manufacturers how to design their equipment regarding this important function when, purportedly, the purpose of the order is to encourage diversity in engineering design and solutions.

[28] Public Forum: Competitive Access to Next-Generation Remote Terminals (May 10, 2000). See http://www.fcc.gov/ccb/nsd/documents/NEXTGEN.HTML, Transcript at 108.

[29] *Id.* at 110.

[30] *Id.* at 111.

equipment and increase costs for both the competitors and Verizon NW's own customers. This is because each individual line card in a remote terminal gives access to multiple circuits for both voice and data functions.[31] If each carrier supplied its own cards, dedicated to its use, multiple voice and data circuits in each remote terminal would need to be dedicated to that carrier and would be unavailable for any other customer. It can be expected that many, if not most, carriers would have no use for all of those circuits in every remote terminal to which they connect. The resulting unused capacity would significantly reduce efficient use of the network, thereby increasing costs, and at worst strain the available network capacity.

162. There are a multitude of regulatory, funding, technical, and operational issues that must be resolved – beyond ownership of a line card – before any integrated card solution can be implemented for access to the high frequency portion of a loop served by fiber-fed DLC. Technical issues include obtaining hardware and software from DLC suppliers that meet performance and standardization testing, and data aggregation and de-aggregation configuration development. Additionally, many process and administrative issues have yet to be addressed, much less resolved, including the development of ordering and provisioning processes, and the necessary back-office function development and testing. Exhibit T-1136:17 (Lee).

163. Undoubtedly recognizing that it must await the FCC's FNPRM to determine whether ILECs have an obligation to provide plug and play, Covad argues that the Commission has independent authority to order additional unbundling. However, the Commission must follow the rigid necessary and impair standard outlined in the *UNE Remand Order* before doing so. Covad has not even attempted to a satisfy this burden.

[31] For example, future Alcatel Litespan line cards will be capable of supporting four voice and four data channels.

164. Covad alleges that the forward looking technology to accomplish line sharing is Next Generation Digital Loop carrier ("NGDLC"). Covad does not define what it means by the term "Next Generation Digital Loop Carrier," which has been "used pretty loosely" by vendors since the 1980s to describe various improvements in DLC technology. *See* Tr. 2336 (Hubbard). Without knowing to what technology Covad specifically refers with the term NGDLC, it is unclear precisely whether this technology is in fact forward-looking. Often times, NGDLC turned out to be little more then "vendor hype" that became outdated rather quickly. Tr. 2077 (Buckley); Tr. 2336 (Hubbard). Thus, there is no way to verify whether NGDLC is indeed the forward looking technology to accomplish line sharing.

165. Covad also requests that the Commission order Verizon NW to "put into effect" TELRIC-based UNE rates for line sharing over DLC loops. Covad Brief at 21. Covad would have the Commission put the cart before the horse by ordering prices before determining the conditions under which access to the high frequency portion of a fiber-fed loop will be offered. Even the Joint Submitters agree that it is inappropriate to establish charges without first determining the conditions under which a product will be offered. *See* Joint Submitters Brief at ¶ 85.

166. On an interim basis, Covad suggests that the Commission require Verizon NW to permit CLECs to line share over DLC loops at the rates established for line sharing over all-copper loops in Phase A. Covad Brief at 21. It appears, however, that Covad would have ILECs charge only $4. *Id*. at 22. Covad provides no evidence that line sharing rates over all copper loops provide a reasonable proxy for line sharing over fiber loops—or that the costs to provide the latter "should be low." *See id*. They do not.

167. The costs developed in Phase A for line sharing did not include any equipment or facilities outside of the central office. *See generally* Exhibits 211 (Verizon's proposed line sharing amendment); 213-215 (Verizon's line sharing service descriptions); T-230, T-233, and T-235 (Berhle); 231/C-231 and C-234 (Verizon's recurring line sharing cost schedules); T-250, T-253, and T-255 (Casey); C-252 and C-254 (Verizon's non-recurring line sharing cost studies); T-230, T-325, and T-327 (Tanimura); and 323/C-323, C-324, and 326 (Verizon's proposed pricing summaries); Thirteenth Supplemental Order, in Docket UT-003013. However, any line sharing in the presence of a DLC system requires—at a minimum—placement of a DSLAM and splitter at the point where copper and fiber meet. Exhibit T-1301:2 (Cabe adopted by Klick); Tr. 3830-31, 3841 (Klick). Provisioning of DSL service to a customer served by fiber-fed DLC would also require equipment to transport signals from a remote terminal to the central office. Tr. 3837 (Klick). Consequently, Covad's proposal would fail to compensate ILECs for costs incurred to provide access to the high frequency portion of a fiber-fed loop in violation of the Act.

168. On a permanent basis, Covad requests that the Commission require the ILECs to provide cost studies for line sharing over fiber-fed loops. Covad Brief at 22. Again, Covad tries to put the cart before the horse to require Verizon to cost and price a product that it neither provides nor has the technology available to provide.

VI. OSS Costs

169. The Joint Submitters repeat their already-rejected argument that ILECs should not be permitted to recover the costs of OSS modifications, and seek a Commission directive that its Phase A OSS findings place a cap on total OSS costs for which Verizon NW and Qwest may seek recovery. Joint Submitters Brief at ¶ 152. As this Commission has already determined, the

Act entitles ILECs to recover their OSS costs from CLECs. Seventeenth Supplemental Order at ¶¶ 98-108. The Joint Submitters provide no justification for denying ILECs an opportunity to recover OSS costs beyond those quantified in the Phase A studies.

VII. Conclusion

170. Verizon NW's opening brief explains in detail why the Commission should adopt the costs and prices Verizon NW proposes. This reply brief addresses why the proposals from the competitors and, in some instances, the Staff do not change this conclusion. Verizon NW believes it has provided substantial, credible evidence in support of its proposals, and urges the Commission to accept them.

Respectfully submitted,

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