

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) Part D**

POST HEARING BRIEF OF VERIZON NORTHWEST INC.

I. Introduction

1. In 1996, the Washington Utilities and Transportation Commission (the “Commission”) initiated Docket UT-960369, et al.,¹ to establish permanent costs and prices for the unbundled network elements (“UNEs”) that incumbent local exchange carriers (“ILECs”) are required to provide to competitive local exchange carriers (“CLECs”) seeking to enter the local telecommunications market. The Commission intended the Generic Costing and Pricing Docket to establish a cost methodology and prices for use in pending and future arbitrations, and in the tariffs required in consolidated interconnection and rate case proceedings. *Notice of Prehearing Conference*, Docket UT-003013 (Feb. 23, 2000).

2. The Commission set prices for the UNEs identified by the Federal Communications Commission (“FCC”) as those necessary for CLEC entry into the local telephone market, or without which CLEC entry would be impaired. The prices set by the Commission were established in accordance with the guidelines set forth by the FCC. The Commission also established interim rates for OSS and transition cost recovery and collocation, deferring permanent rates to a new proceeding.

¹ *In the Matter of Pricing Proceeding for Interconnection, Unbundled Elements, Transport and Termination, and Resale*, Docket Nos. UT-960369, 960370, and 960371, (the “Generic Costing and Pricing Docket”).

3. On March 3, 2000, the Commission initiated this proceeding to address costing and pricing issues associated with Verizon's and Qwest's unbundling obligations arising out of the FCC's *UNE Remand Order*² and *Line Sharing Order*.³ Part A of this proceeding was limited to OSS, collocation, and line sharing. First Supplemental Order, ¶15. Part A hearings were held between August 21-31, 2000, and the Commission issued its Thirteenth Supplemental Order establishing rates on January 31, 2001 (the "Part A Order"). In Part B of this proceeding, the Commission addressed digital subscriber line provisioning, including line splitting and line sharing over fiber-fed loops, updated OSS cost recovery, loop conditioning, reciprocal compensation, and rates for UNEs not addressed in the Generic Costing and Pricing Docket. Part B hearings were held between March 26 – April 20, 2001, and the Commission issued its Thirty-Second Supplemental Order establishing rates on June 21, 2002 (the "Part B Order"). Petitions for reconsideration of the Part B Order are pending. Part C of this proceeding, addressing microwave collocation, was resolved by stipulation of the parties.

4. Part D of this proceeding was established to set rates for any wholesale products the Commission had not yet addressed in the Generic Costing and Pricing Docket or the earlier phases of this proceeding. For Verizon, these elements consist of multiplexing non-recurring

² *In the Matter of Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, Third Report and Order and Fourth Further Notice of Proposed Rulemaking, CC Docket No. 96-98 (rel. Nov. 5, 1999).

³ *In the Matters of Deployment of Wireline Services Offering Advanced Telecommunications Capability and Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, Third Report and Order in CC-Docket No. 98-147 and Fourth Report and Order in CC Docket No. 96-98 (rel. Nov. 1999).

rates and collocation rates resulting from the FCC's *Collocation Remand Order*.⁴ The Commission Staff is the only party that contested any of Verizon's rates in Part D, and Staff's objections were limited to certain virtual collocation costs and rates. As explained in detail below, Verizon modified its virtual collocation rates to address Staff's concerns about when an outside plant engineer will be involved in processing a virtual collocation request. Staff's remaining concern with Verizon's use of cable lengths for physical collocation in the virtual collocation cost study is unfounded. Accordingly, the Commission should adopt the costs and prices that Verizon has submitted and for which the Company has provided ample evidentiary support. Exhibit 2009 (TRD-3) outlines Verizon's proposed rates.

II. Legal and Policy Standards

5. Verizon's cost studies and proposed rates submitted in this proceeding comport with the total element long run incremental cost ("TELRIC") approach reflected in the FCC's pricing rules. Although Verizon opposed the FCC's TELRIC standard, it was obliged to use that standard in its studies filed in this proceeding pending U.S. Supreme Court review of the FCC's pricing formula. *See* Exhibit T-2005:3 (Steele/Richter). On May 13, 2002, the Supreme Court sustained the FCC's pricing formula.⁵

III. Qwest

6. Verizon does not take a position on the costs and prices proposed by Qwest.

⁴ *In the Matter of Deployment of Wireline Services Offering Advanced Telecommunications Capability*, Fourth Report and Order, CC Docket No. 98-147 (rel. Aug. 8, 2001).

⁵ *Verizon Communications Inc. v. FCC*, 122 S.Ct. 1646 (2002).

IV. Verizon

7. In Part B of this docket, Verizon proposed monthly recurring rates for multiplexing (i.e., DS-1 to voice grade and DS-3 to DS-1). However, Verizon did not submit non-recurring service connection rates for multiplexing. In Part D, Verizon submitted multiplexing non-recurring service connection rates. See Exhibit T-2005:4 (Steele/Richter); Exhibit 2009:1 (TRD-2). No party contested these rates, and the Commission should adopt them as proposed.

8. In Part A of this proceeding, the Commission reviewed Verizon's Expanded Interconnection Service ("EIS") Cost Study. The EIS Cost Study was developed using a "bottoms-up" approach of analyzing all of the elements involved in Verizon's provisioning of collocation. A team of costing personnel, Subject Matter Experts ("SME's"), field management employees, and technicians assisted in the data gathering. For activities provided by contractors, input was received directly from the contractors. Exhibit T-2001:5 (Richter). The Commission established permanent collocation rates in Part A based on this cost methodology.

9. As a result of the FCC's *Collocation Remand Order*, Verizon developed costs and rates incurred in response to CLEC request for fiber optic patchcord, virtual collocation, and Dedicated Transit Service ("DTS"). Verizon filed these costs as Exhibit 2003/C2003 (LR-3C). They were developed using the same methodology used in the EIS Cost Study that was approved in establishing rates in Part A of this proceeding. Certain of these approved collocation costs also apply to Verizon's virtual collocation offering. For example, the costs previously approved for facility pull, facility terminations, and DC power are incurred to provide virtual collocation arrangements. In Phase D of this proceeding, Verizon only presented costs and rate elements for those additional costs not addressed in Part A that are incurred to provide CLECs with fiber optic

patchcords, virtual collocation, and DTS. Exhibit T2001:5-6 (Richter). In the remainder of this brief, Verizon outlines its Part D proposed rates and supporting costs, and addresses specific criticisms thereof.

A. Multiplexing Service Connection

10. Multiplexing is the combining of two or more channels into a single channel for transmission over the telecommunications network. Multiplexing also refers to the division of a transmission facility into two or more channels. For transmission of data signals, the more channels or the higher the bandwidth of a signal, the more data that can be transmitted over the medium. Special telecommunications equipment is necessary to combine or divide channels at the various levels. Exhibit T-2001:4 (Richter).

11. In Part B of this docket, Verizon proposed monthly recurring rates for DS1 to DS0 (voice grade) and DS3 to DS1 mutliplexing. In Part D, Verizon submitted non-recurring service connection rates for DS3 to DS1 multiplexing based on the cost of central office activity to respond to a CLEC order. Verizon did not identify separate service connection costs for DS1 to DS0 multiplexing, and thus did not propose separate non-recurring service connection rates for this item.⁶ Exhibit T-2005:4 (Steele/Richter).

12. Verizon's proposed multiplexing non-recurring rates are contained in Exhibit 2009 (TDR-2). These service connection rates apply when a CLEC places a wholesale loop and transport UNE order with a specific request for DS3 to DS1 multiplexing. Separate rates are identified for installation orders and disconnection orders, consistent with the Commission's

⁶ All of the material and labor costs for provisioning DS1 to DS0 multiplexing were included in Verizon's monthly recurring rate proposed in Part B of this proceeding. Exhibit T-2005:6 (Steele/Richter).

ruling that disconnection costs should be recovered in separate disconnect rates.⁷ The proposed multiplexing non-recurring rates do not include the recovery of common costs, as the Company does not mark-up its non-recurring costs. *Id.* at 6.

13. The costs supporting Verizon's proposed multiplexing non-recurring rates are contained in Exhibit 2002/C-2002 (LR-2C), and explained in Exhibit T-2001 (Richter). Specifically, Exhibit 2002/C-2002 outlines the costs associated with the labor of a central office technician to install jumpers on a cross connect panel. The central office jumper connection costs were developed by multiplying the average time to run a jumper by the loaded labor rate for a central office technician. The average time to run these multiplexing jumpers is based on a jumper wiring time and motion study. Exhibit T-2001:4-5 (Richter).

14. No party contested Verizon's proposed multiplexing service connection costs or rates. The Commission should adopt these rates as proposed in Exhibit 2009 (TDR-2).

B. Fiber Optic Patchcord Collocation Rates

15. Verizon proposes rates to provide an optical connection between a collocator's equipment and Verizon's fiber distribution panel. The fiber optic patchcord is an optical fiber jumper with fiber connections on each end that provides this connection. Verizon proposed both non-recurring rates and monthly recurring rates for the following fiber optic patchcord elements:

- Fiber Optic Patchcord Pull
- Fiber Optic Patchcord Termination
- Fiber Optic Patchcord – 24 Fiber Connectorized
- Facility Termination – Fiber Optic Patchcord
- Cable Duct Space – Fiber Optic Patchcord⁸

⁷ See Seventeenth Supplemental Order, UT-960369, et al. (Aug. 30, 1999) at ¶ 47.

Verizon's proposed fiber optic patchcord rates apply to caged, cageless, and virtual collocation arrangements. Exhibit T-2005:7 (Steele/Richter). No party contested Verizon NW's fiber optic patchcord rates, and they should be adopted by the Commission as proposed.

16. The monthly recurring rates for all collocation elements include an equal percentage mark-up above their TELRIC for recovery of the Company's forward-looking common costs (i.e., a fixed-allocation pricing approach). Verizon NW applied the fixed allocator of 24.75% approved by the Commission in the Seventeenth Supplemental Order in the Generic Costing and Pricing Docket.⁹ Verizon NW did not mark-up the costs supporting its proposed non-recurring rates to recover common costs. Exhibit T-2005:8-9 (Steele/Richter).

1. Fiber Optic Patchcord Pull

17. The fiber optic patchcord pull is the placement of the fiber optic patchcord from the CLEC's equipment to Verizon's fiber distribution panel. Exhibit T:2001:8 (Richter). Verizon's Fiber Optic Patchcord Pull rate is applied per cable run, and recovers the labor costs of pulling the fiber optic patchcord cables. Exhibit 2010:2 (TRD-3).

18. Verizon calculated the fiber optic patchcord pull costs based on the central office equipment installer's hours per unit to place the fiber patchcord in a fiber duct system multiplied by the loaded labor rate. This is consistent with the methodology used to develop the other facility pull costs contained in Verizon's EIS Cost Study approved in the Commission's Part A Order. The hours per unit used in the study were developed by central office staff personnel,

⁸ The Fiber Optic Patchcord Pull, Fiber Optic Patchcord termination, and Fiber Optic Patchcord-24 Fiber Connectorized rates are non-recurring. The Facility Termination-Fiber Optic Patchcord and Cable Duct Space-Fiber Optic Patchcord rates are recurring.

⁹ See Seventeenth Supplemental Order, *supra*, at ¶ 471.

field managers, and central office equipment installers whose job responsibilities are to perform equipment installation activities within Verizon central offices. These same hours per unit are also used by Verizon central office engineers to estimate installation times for Verizon's own equipment. Exhibit T-2001:8 (Richter). *See* also Exhibit 2003/C-2203 (LR-3C) at 23.

2. Fiber Optic Patchcord Termination

19. The fiber optic patchcord termination is the connection of the fiber optic patchcord to the fiber distribution panel. Exhibit T-2001:8-9 (Richter). Verizon's Fiber Optic Patchcord Termination rate applies on a per termination basis. Exhibit 2010:2 (TRD-3). The costs for this element are based on the central office equipment installer's hours per unit to connect the patchcord to the assigned connecting points at the fiber distribution panel multiplied by the loaded labor rate. Exhibit T-2001:9 (Richter); Exhibit LR-3C at 24.

3. Fiber Optic Patchcord –24 Fiber (Connectorized)

20. At a CLEC's request, Verizon will provide the 24-fiber optic patchcord. The Fiber Optic Patchcord-24 fiber rate is based on Verizon's cost per foot of the 24-fiber optic patchcord and the appropriate material loadings. Verizon calculated its costs based on an average length of 185 feet for a fiber optic patchcord, which is the average length of patchcords purchased by Verizon NW during a two-year period. Exhibit T-2001:9 (Richter); Exhibit 2003/C-2003 (LR-3C) at 27-28.

4. Facility Termination – Fiber Optic Patchcord

21. The facility termination fiber optic patchcord rate applies per optical connector terminated to recover the labor, equipment, and floor space costs associated with a fiber optic termination at the fiber distribution panel. Exhibit 2010:4 (TRD-3); Exhibit T2001:10 (Richter). The labor costs represent the engineering and installation labor of the equipment, relay racks, and

the optical distribution panel equipment. The equipment costs represent the relay racks and optical distribution panel equipment. Floor space costs are based on the space occupied by a relay rack, depth of the equipment, and half of the aisle space in front and back of the relay rack. Verizon calculated the labor, equipment, and floor space costs on a per connector basis by dividing the total costs by the number of connections that can be made on an optical distribution panel. An annual cost factor was applied to this result and divided by twelve to develop a monthly cost per connector. The floor space cost per square foot is the same as approved in the Part A Order. Exhibit T-2001:10 (Richter); Exhibit 2003/C-2003 (LR-3C) at 66.

5. Cable Duct Space - Fiber Optic Patchcord

22. Verizon's Cable Duct Space – Fiber Optic Patchcord rate recovers the costs of tray material, engineering, and installation for the fiber guide duct system material used to protect, support, and route the fiber optic patchcord between a collocator's equipment and the Verizon designated collocator's fiber distribution panel. Exhibit 2010:4 (TRD-3). The cost of this element is based on the cost for the material, material loadings, and labor to engineer and install a 102 foot fiber duct system within a Verizon central office. The labor hours to engineer and install the duct system were provided by SMEs who are responsible for the engineering and installation of this equipment. The material and labor costs were divided by 102 feet to produce a cost per foot. The total cable duct cost was divided by the number of fiber optic patchcords that can be placed in the duct system. The resulting duct cost was expressed as a cost per foot per fiber optic patchcord connection. An annual cost factor was applied to the cost per foot of duct system and divided by twelve to develop a monthly cost. Exhibit T-2001:10 (Richter); Exhibit 2003/C-2003 (LR-3C) at 70.

C. Virtual Collocation

23. Virtual collocation is an arrangement between a CLEC and Verizon to place equipment provided by the CLEC in Verizon's central office. Under this arrangement, Verizon installs and maintains CLEC-provided equipment that is dedicated to the exclusive use of the CLEC in a collocation arrangement. The equipment is installed on a relay rack in the Verizon central office. Like caged or cageless collocation, the CLEC provides the fiber optic facilities that connect Verizon's entrance manhole to the CLEC's virtually collocated equipment. Exhibit T-2005:10 (Steele/Richter).

24. Certain collocation costs and rates established by the Commission in Part A of this proceeding apply to virtual collocation. Specifically, the costs approved in Part A for facility pull, facility terminations, and DC power are incurred by Verizon to provide virtual collocation, and are incorporated into Verizon's proposed virtual collocation rates in Part D. Exhibit T-2001:5-6 (Richter); Exhibit T-2005:5 (Steele/Richter).

25. Commission Staff criticized Verizon's reliance on collocation costs established in Part A for its virtual collocation rates. Exhibit T2380:5-6 (Griffith). Staff's criticism appears to be based on a belief that cable distances for virtual collocation should be shorter than cable lengths for caged or cageless collocation. *Id.* at 6. As explained by Verizon witness Larry Richter, however, this is not the case. Verizon places equipment throughout its central offices based on available vacant space, with similar types of equipment placed together in a specific part of the central office. Exhibit T2004:4 (Richter). On an office to office basis, the average of cable lengths for virtual and physical collocation are similar. Tr. 4113 (Richter). This is because while a virtual collocation arrangement may be closer to the main distribution frame than a physical collocation cage, the virtual arrangement would be farther from the transport area than a

physical collocation cage. The average cable lengths for each arrangement, however, would be the same. *Id.* Thus, it is appropriate to use the costs adopted in Part A for facility pull, facility terminations, and DC power in establishing Verizon's virtual collocation rates.

26. Verizon's cost study in Part D addresses only those costs incurred by Verizon to provide virtual collocation that were not addressed in Part A. Verizon's cost elements for virtual collocation are grouped into the following non-recurring and recurring rate elements:

- Engineering / Major Augment Fee – Virtual
- Virtual Equipment Installation
- Virtual Software Upgrades
- Virtual Card Installation
- Virtual Equipment Maintenance¹⁰

Exhibit T-2005:10-11(Steele/Richter).

27. Verizon's proposed non-recurring rates recover the labor cost to engineer, install, and make changes (e.g., software upgrades) to the CLEC-provided equipment in a Verizon central office. The recurring rate recovers the on-going costs to maintain the virtual collocated equipment and recover the floor space costs for the relay rack that houses the equipment. The recurring rate also recover the costs of the relay rack that houses the virtual collocation equipment. *Id.* at 11.

28. As is the case for all collocation rate elements, the monthly recurring rate includes an equal percentage mark-up above its TELRIC for recovery of the Company's forward-looking common costs (i.e., a fixed-allocation pricing approach). Verizon applied the fixed allocator of 24.75% approved by the Commission's Seventeenth Supplemental Order in the Generic Costing

¹⁰ The Virtual Equipment Maintenance rate is recurring. All other proposed virtual collocation rates are non-recurring.

and Pricing Docket. The Company is not proposing to mark-up the costs that support its proposed non-recurring rates to recover common costs. *Id.* at 12.

1. Virtual Engineering/Major Augment

29. Verizon's Engineering/Major Augment Fees apply to each virtual collocation arrangement that is designated as a major augmentation. Major augments are those requests that add telecommunications equipment that require additional AC or DC power systems; heating, ventilation and air conditioning system modifications; or a change in the size of the collocation arrangement. Exhibit T-2005:12. (Steele/Richter).

30. The Engineering/Major Augment Fees recover the costs incurred by Verizon to plan and engineer a CLEC's request for virtual collocation space within its central office. Verizon personnel, including the Central Office Equipment Engineer, Land & Buildings Engineer, and the Outside Plant Engineer, meet at the central office to identify arrangements required to provide collocation as requested by a CLEC. As a part of this process, the future use of space within the central office is evaluated to determine the best location for the equipment provided by the CLEC. Once the planning phase is completed, the engineers work on the actual provisioning of space to accommodate the CLEC's collocation request. Status meetings are held throughout the engineering process to discuss the progress of the CLEC virtual collocation request. Exhibit T-2001:13 (Richter); Exhibit 2003/C-2003 (LR-3C) at 22.

31. When a CLEC requests virtual collocation service for the first time in a specific central office, there will be a need for the CLEC to establish a method of transport in and out of the central office. There are various options for the CLEC including: 1) requesting installation of its own fiber cable, 2) using its existing entrance fiber cable in the central office from another form of collocation or 3) purchasing transport from another provider. Verizon's virtual

collocation cost study originally assumed the first scenario noted above, which requires a Verizon outside plant engineer to engineer the placement and termination of the CLEC's entrance fiber cable. The other two scenarios noted above, however, would not require any Verizon outside plant engineering activity. Since outside plant engineering costs are not incurred in all instances, Verizon developed two different Engineering/Major Augment rates to address concerns of Staff witness David Griffith that CLECs should not pay for outside plan engineering activities in all circumstances. The \$557.81 "Engineering/Major Augment – Virtual with Entrance Facilities" rate applies in situations when a CLEC requests an entrance fiber cable to be placed. The \$378.90 "Engineering/Major Augment – Virtual Without Entrance Facilities" rates applies when a CLEC does not request that an entrance fiber cable be placed. Exhibit T-2004:2-3 (Richter). Since this modification directly addresses the only criticism of Verizon's originally proposed rate, the Commission should adopt the Virtual Engineering/Major Augment rates as modified.

2. Facility Cable-Category 5 Connectorized

32. Verizon's Facility Cable-Category 5 Connectorized rate applies on a per linear foot basis when a CLEC requests that Verizon provide Category 5 cable to transmit data between equipment, panels, or the main distribution frame in a virtual, caged, or cageless collocation arrangement.¹¹ Exhibit T-2001:13-14 (Richter). The cost is based on Verizon's cost of the cable plus the appropriate material loadings. To determine the Category 5 cable cost, the average cost of the cable was determined by averaging the cost of 100-foot, 150-foot, and 200-foot cables.

¹¹ Category 5 cable costs were not included in Verizon's EIS Cost Study presented in Part A of this proceeding. Exhibit T-2001:13 (Richter).

This average cable cost was divided by the average length of the three cables, resulting in a cost per linear foot of Category 5 cable. Exhibit T2001:13-14 (Richter); Exhibit 2003/C-2003 (LR-3C) at 27-28.

3. Virtual Equipment Installation

33. Verizon's Virtual Equipment Installation rate applies on a per quarter rack (or quarter bay) basis to recover the costs incurred by Verizon for engineering and installation of virtual collocation equipment. Exhibit 2010:1 (TRD-3). This rate applies to the installation of powered equipment including, but not limited to, ATM, DSLAM, frame relay, routers, OC3, OC12, OC24, OC48, and NGDLC. *Id.* at 2. The rate recovers the costs of an engineer creating the work order that describes the location for the equipment, how it is to be installed, and the power and connecting cables for access to the network. The rate also recovers the costs of central office equipment installation based on the work order provided by the engineer. Exhibit T-2005:12 (Steele/Richter).

34. The engineering and installation costs are based on time estimates provided by Verizon's Network Planning Group for the types of equipment that have been "virtually" installed in central offices. These activity times are applied to Verizon's loaded labor rate for a central office equipment engineer and a central office equipment installer. Verizon developed a weighted cost for circuit equipment based on the frequency that each type of equipment is virtually collocated in Verizon's central offices. Exhibit T-2001:13-14 (Richter); Exhibit 2003/C-2003 (LR-3C) at 29-31. Verizon used this weighting method for two reasons. First, in the past, CLECs have expressed to Verizon a strong desire to have a simplified rate structure that results from weighting costs. Second, the simplified rate structure that results from weighting

costs is less administratively burdensome than implementing an individual rate for each type of equipment collocated. Exhibit T-2004:3 (Richter).

4. Virtual Software Upgrades

35. Verizon's Software Upgrade rate is applied per base unit when Verizon, upon a CLEC request, installs software to upgrade equipment for an existing virtual collocation arrangement. Exhibit 2010:2 (TDR-3). The costs associated with software upgrades reflect the labor time required to upgrade the software for each type of equipment being requested by CLECs for installation. The labor hours are provided by the National Operations Center ("NOC") managers, and are multiplied by the loaded labor rate for the central office equipment installer. These costs are weighted based on the frequency of the equipment being installed, similar to the development of the engineering and installation costs. Exhibit T-2001:14 (Richter); Exhibit 2003/C-2003 (LR-3C) at 32-34.

5. Virtual Card Installation

36. Verizon's Card Installation rate is applied per card when a CLEC requests that Verizon install additional cards for an existing virtual collocation arrangement. Exhibit 2010:2 (TDR-3). The cost supporting this rate includes the time the central office equipment engineer spends engineering the installation, and the time incurred by central office equipment installers to install the card. Engineering time includes such tasks as determining the location of the base unit into which the card is to be installed; determining the appropriate cables; determining the appropriate lengths and connections; and ordering materials. Verizon calculated a weighted average cost per card installed based on the frequency each type of equipment is collocated in Verizon's central offices. Exhibit T-2001:15-16 (Richter); Exhibit 2003/C-2003 (LR-3C).

6. Virtual Equipment Maintenance

37. Verizon's Virtual Equipment Maintenance rate is applied on a per quarter rack (or quarter bay) basis to recover the costs incurred for maintenance of the virtual collocation equipment and the frame floor space it occupies. This rate applies to the maintenance of equipment including but not limited to ATM, DSLAM, frame relay, routers, OC3, OC12, OC24, OC48, and NGDLC. Exhibit 2010:3-4 (TDR-3). The cost elements included in virtual equipment maintenance are the frame space and both routine and trouble maintenance activities. The frame space cost consists of two components – the relay rack (frame cost) and the floor space the relay rack occupies. The frame cost was derived by developing the total cost for an eight-foot standard relay rack, including the relay rack material, engineering, and installation labor of the relay rack, and travel time for the central office equipment installer. The total cost was divided by four to produce a cost per quarter rack. Material loadings were added to the material, and an annual cost factor was used to develop an annual cost per quarter rack. This annual cost was divided by twelve to provide a monthly cost for a quarter rack. Exhibit T-2001:16 (Richter).

38. The floor space costs presented in Part D are based on the same methodology used for determining the floor space costs that the Commission approved in the Part A Order. The floor space costs are those costs to provide environmentally conditioned floor space, based on an average cost per square foot. Floor space costs were determined by examining the building investment amounts, square footage, and monthly maintenance/utility expenses of a selected sample of central offices of varying switching technology and size utilized by Verizon across the State of Washington. Information from these selected central offices was used to calculate the average cost per square foot in the EIS Cost Study. The square footage for the

frame space takes into account the size of the relay rack, equipment in the rack, and one-half of the aisle in front and in back of the equipment. These costs were divided by four to produce a cost per quarter rack. The monthly frame cost was added to the monthly floor space costs to provide a total monthly cost. *Id.*

39. Verizon developed equipment maintenance costs for both routine and trouble maintenance activities. The activities and time estimates were provided by NOC managers and central office technicians responsible for performing maintenance on the types of equipment provided by CLECs. The annual time estimates were multiplied by the loaded labor rate of the central office technician and divided by twelve to produce a monthly cost. These costs were based on a per equipment base unit. The next step was to determine the number of base units for each type of equipment that can be placed in an eight-foot relay rack. This quantity was multiplied by the equipment maintenance cost to produce a cost per rack. The equipment frequency was applied to the rack cost to provide a weighted cost per rack. The weighted cost per rack was divided by four to provide the cost per quarter rack. *Id.* at 17; Exhibit 2003/C-2003 (LR-3C) at 73-76.

D. Dedicated Transit Service

40. Verizon proposed rates for DTS in this proceeding in order to comply with the FCC's *Collocation Remand Order*. DTS allows interconnection between CLECs, providing a dedicated path between collocation arrangements (caged, cageless, and virtual) of the same or of two different CLECs within the same Verizon premises. DTS is available for DS0, DS1, DS3, and dark fiber connections. In addition, Verizon will provide other technically feasible cross-connection arrangements, including lit fiber, on an Individual Case Basis ("ICB") as requested by a CLEC. DTS is only available when both collocation arrangements (caged, cageless, or

virtual) being connected are within the same Verizon NW premises, provided that the collocated equipment is used for interconnection with Verizon and/or for access to Verizon's unbundled network elements. Exhibit T-2005:14 (Steele). Verizon's DTS rates were uncontested, and should be adopted.

41. Verizon proposed non-recurring rates for the following service order and service connection elements for DS0 (or voice grade levels), DS1/DS3 and optical (dark fiber) levels:

- Service Order – Semi-Mechanized
- Service Order – Manual
- Service Connection – CO Wiring
- Service Connection – Provisioning

These non-recurring rates are intended to recover Verizon's costs for orders received and service connections performed on behalf of the CLECs. Ordering charges are based on the costs for processing CLEC requests by Verizon's customer service representatives. Rates for CLEC orders are also identified for the OSS Transition NRC at \$3.27 and the OSS Transaction NRC at \$3.76, per order, consistent with the Commission's Part A Order. The service connection charges are based on the cost of facility assignment and other activity necessary to get the CLEC's request properly into service. *Id.* at 15-16.

42. Verizon proposed separate non-recurring rates or charges for manual (e.g., facsimile request) and semi-mechanized orders. In addition, Verizon proposed separate service connection rates for CO Wiring and for Provisioning. The Company filed separate rates for installation and disconnection of DTS consistent with the Commission's Seventeenth Supplemental Order in the Generic Costing and Pricing Docket. Verizon does not propose to mark-up the costs that support its proposed non-recurring rates to recover common costs. *Id.* at 16.

43. The ordering charge applies per DTS order, with the manual charge applied when the semi-mechanized ordering interface is not used. The service connection charge for CO Wiring applies for each circuit (i.e., for each DS0, DS1, DS3, or fiber strand), while the charge for Provisioning applies to each DTS order. *Id.* at 17.

44. Verizon anticipates that DTS requests for DS0, DS1, and DS3 will be processed in the same manner as dedicated non-switched transport requests, and DTS requests for dark fiber will be processed in the same manner as dark fiber dedicated transport requests. Thus, Verizon's proposed costs for dedicated non-switched transport and dark fiber submitted in Part B of this proceeding provide relevant DTS costs.¹² The costs used are the ordering, service connection, and disconnect costs for a "new" dark fiber order and the "change" order costs for metallic non-switched dedicated transport for DS0, DS1, and DS3. Exhibit T-2001:18 (Richter).

45. To process CLEC requests for DTS, Verizon will incur costs for ordering, provisioning, CO wiring (central office and jumper material), and disconnect activities. There are three additional costs that will apply to a DTS order: 1) record order costs, 2) OSS transition costs, and 3) OSS transaction costs. The record order costs are those associated with an administrative change to an existing CLEC account, such as a name change. Verizon proposed to use the record order costs of \$3.70 for a manual order and \$2.09 for a semi-mechanized order that were presented in Part B of this proceeding. The OSS Transition costs of \$3.27 and the OSS

¹² Verizon utilized the ordering and provisioning costs for a DS0 and DS1 and higher "change" order for dedicated transport located in Exhibit C-1160 (LC-2C) from Part B, pages 7-WA 26 and 7-WA 27. For dark fiber, Verizon utilized the ordering and provisioning costs for dedicated transport located on page 7-WA 18 of the same exhibit. Exhibit T-2001:18 (Richter).

Transaction costs of \$3.76 previously adopted by the Commission in the Part A Order would also apply to DTS orders. *Id.* at 19.

46. **Ordering.** A CLEC will place its order for DTS via the Access Service Request (“ASR”) process, which will be handled by Verizon’s National Access Contact Center (“NACC”) located in Durham, North Carolina. The NACC service consultants that will handle CLEC requests for DTS are also responsible for processing the Inter-Exchange Carrier (“IXC”) ASRs. The NACC has been in existence for approximately 20 years and has a great deal of experience in processing IXC requests for both switched and special access services. The NACC’s processes and systems for IXCs are closely aligned with the ones that will be required for processing DTS requests. *Id.*

47. The CLEC has an option to send the ASR to the NACC electronically or manually. Once the NACC receives the ASR, it is checked for completeness and accuracy. The NACC then releases the order into Verizon’s access order processing system, which routes it to the appropriate provisioning and central office installation work groups involved in completing Washington orders. *Id.* at 20.

48. To develop the costs for ASR ordering activities for DTS, Verizon conducted time and motion studies of the activities performed by the Service Consultants in the NACC to establish the work time associated with the various types of orders handled there. DTS orders are expected to be processed in the same manner as dedicated non-switched transport orders. To derive the costs associated with DS0, DS1, and DS3 DTS ordering, the work times for a non-switched dedicated transport “change” order were multiplied by the loaded labor rate of the NACC Service Consultants. To derive the costs associated with dark fiber ordering, the work

times for dark fiber “new” order were multiplied by the loaded labor rate of the NACC Service Consultants. *Id.* at 20; Exhibit 2003/C-2003 (LR-3C) at 90-93, 179.

49. **Provisioning.** DTS ASRs for Washington are provisioned through Verizon’s Business Response Provisioning Centers (“BRPCs”) located in Newbury Park and Upland, California. The BRPC (1) receives the order from the NACC, (2) verifies that the order is correct and is entered into the facility administration system, called Telecom Business Solutions (“TBS”); (3) checks for accuracy and completeness; and (4) enters a distribution code into TBS to route the order to the required work groups. The BRPC must access facility records in its inventory database, change the records to identify the configuration requested by the CLEC, and create updated circuit and design layout reports. The costs for DS0, DS1, and DS3 DTS provisioning are the same costs as the dedicated transport “change” order costs that were filed in Part B. The costs for dark fiber provisioning are the same as the dark fiber “additional line” costs that were filed in Part B. Verizon uses the “additional line” costs rather than the “initial line” costs because not all of the provisioning activities associated with the “initial line” would be necessary to provision DTS fiber service. Exhibit T-2001:21 (Richter).

50. To develop the costs for provisioning activities completed by the BRPC, Verizon cost personnel used data from the TBS database to determine the number and type of orders or lines worked by each group in the BRPC. The BRPC productive hours were used to develop the time per ASR. The work time was multiplied by the loaded labor rate for the BRPC. *Id.*; Exhibit 2003/C-2003 (LR-3C) at 129, 168.

51. **CO Wiring.** CO wiring consists of two cost components – the central office labor to install the jumper and the jumper material costs. For the central office activities, the central office technician receives the provisioning information from the BRPC. The technician

interprets the information and installs jumpers to connect the two CLECs' facilities. For DS0 services, the jumper will be a one pair metallic jumper. For the DS1 and DS3 services, two metallic jumpers – one for transmit and one for receive – will be placed to connect these types of facilities. For dark fiber requests, a fiber optic patchcord will be installed to connect the CLEC facilities. Exhibit T-2001:22 (Richter).

52. To develop CO wiring costs for DTS, “jumper running” studies were conducted for central office work to develop the time required to install or remove one jumper. The time per jumper was multiplied by the central office technician loaded labor rate to develop the cost per jumper. *Id.* at 22-23.

53. The cost of the jumper material was based on Verizon's cost of the jumper material and material loadings. The length of the jumper material was based on average lengths of jumpers to span cross connect panels used for connecting facilities. The jumper length used in the study was generally 25 feet. Since the jumper length for DS3 and fiber come in set lengths, the set length nearest to 25 feet was used for DS3 and fiber. *Id.* at 23; Exhibit 2003/C-2003 (LR-3C) at 63-65, 183.

54. **Disconnect.** Disconnect activities associated with DTS requests are similar to the ordering, provisioning, and central office activities for an installation request. An order to disconnect the service will be prepared by the CLEC and transmitted to the NACC via an electronic or manual method. The NACC will check the order for completeness and accuracy and send it to the appropriate work groups to disconnect the service. The BRPC will remove the information from the facility database and send a disconnect order to the central office. The central office technician will then remove the jumpers from the appropriate equipment. A completion notice is then sent to confirm disconnection. Exhibit T-2001:24 (Richter).

55. The disconnect costs for DTS are the same as those for non-switched dedicated transport and dark fiber that were filed in Part B of this proceeding. The development of these costs can be found in Exhibit 2003/C-2003 (LR-3C) at 90-91, 166-167.

V. Conclusion

56. The Commission has made significant progress since the inception of the Generic Costing and Pricing Docket toward addressing local market competition in Washington. Many of the costing and pricing issues arising out of the FCC's unbundling orders have been resolved. With respect to Verizon, the Commission and the parties are now dealing with more discreet rates resulting from recent FCC Orders. There was no disagreement with most of Verizon's proposed rates. Where the Commission Staff did disagree, Verizon altered its position where appropriate or demonstrated why the Staff's disagreement lacked merit. Accordingly, Verizon requests that the Commission adopt its proposed rates in this proceeding as outlined in Exhibit T-2009 (TRD-3).

Respectfully submitted,

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