BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

In the Matter of Review of Unbundled Loop and Switching Rates and Review of the Deaveraged Zone Rate Structure.	DOCKET NO. UT-023003

COMMISSION STAFF'S INITIAL BRIEF

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I. INTRODUCTION AND EXPLANATION OF TELRIC PRINCIPLES

1 On February 12, 2002, the Commission issued an order initiating an adjudicative proceeding "to revisit UNE loop and switching rates for Qwest Corporation and Verizon Northwest, Inc., in addition to reexamination of the current deaveraged zone rate structure."[1] This docket is a continuation of the Commission's prior generic costing and pricing dockets, Docket Nos. UT-960369 *et al.* and UT-003013.[2] The Commission has undertaken in this docket to set the prices for unbundled network elements (UNEs) pursuant to the Telecommunications Act of 1996 (federal Act).

2 The federal Act requires incumbent local exchange companies (ILECs), like Verizon Northwest, Inc. (Verizon), to provide requesting carriers with access to (i.e., lease) UNEs at rates that are just, reasonable, and nondiscriminatory. *47 U.S.C. § 251(c)(3)*. As a matter of federal law, UNE rates must be cost-based and nondiscriminatory. *Id. § 252(d)(1)(A)*. The FCC has established a national pricing methodology, called the "total element long-run incremental cost" (TELRIC)

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[1] *In the Matter of the Review of Unbundled Loop and Switching Rates and Review of the Deaveraged Zone Rate Structure*, Docket No. UT-023003, Notice of Prehearing Conference, ¶ 1 (Feb. 12, 2002).

[2] The Commission had ordered that nonrecurring costs and other issues should be included in this docket. However, scheduling the nonrecurring cost issues for hearing proved difficult, and eventually, the Commission bifurcated the nonrecurring cost issues and opened a separate docket to consider them, Docket No. UT-033034.

The Commission granted a joint motion to remove Qwest cost issues from the docket. The Commission accepted a settlement disposing of the Qwest deaveraging issues. These actions left Verizon as the only ILEC whose costs the Commission must determine in this docket.

methodology, to ensure that UNE rates comply with the federal Act. *See First Report and Order*, ¶¶ *618-707;*[3] *47 C.F.R. §§ 51.501-505*.

3 In adopting the TELRIC methodology, the FCC intended to set UNE prices that best replicate the conditions of a competitive market. *First Report and Order*, ¶ *679*. Therefore, prices are based on forward-looking costs. Under TELRIC, the cost of a UNE is based on "the use of the most efficient telecommunications technology currently available and the lowest cost network configuration, given the existing location of the incumbent LEC's wirecenters." *47 C.F.R. § 51.505(b)(1)*. The TELRIC of an element does not include embedded costs. *First Report and Order*, ¶¶ *704-711*. TELRIC-based prices allow ILECs to recover the full forward-looking cost of the UNEs leased to requesting carriers. The TELRIC of an element consists of three components—the operating expenses, the depreciation cost, and the appropriate risk-adjusted cost of capital. *First Report and Order*, ¶ *703*.

A. Prior WUTC Orders Regarding UNE Pricing

4 Under the federal Act, state commissions are authorized to set UNE rates that are consistent with the Act and FCC rules. *See 47 U.S.C. §§ 252(c), (d)*. In addition to arbitrating numerous interconnection agreements, this Commission has undertaken to establish UNE rates through "generic" dockets, beginning in 1996

[3] *In the Matter of Implementation of the Local Competition Provisions in the Telecommunications Act of 1996 et al.*, CC Docket Nos. 96-98 *et al.*, First Report and Order, 11 FCC Rcd. 15,499, FCC 96-325 (1996) (*First Report and Order*).

with Docket Nos. UT-960369 *et al.* In applying the TELRIC methodology in prior dockets, the Commission has explained that TELRIC: (1) assumes the use of best available technology within the limits of the existing network; (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. *Eighth Supplemental Order*, *¶ 10.*[4]

5 This Commission also has had many opportunities to evaluate various cost models in the generic dockets, as well as in other dockets. These decisions provide valuable guidance to the Commission's evaluation of the cost models at issue in this docket. The Commission should begin its analysis of the cost models in this docket with its long-standing expectation for cost studies:

> [T]he Commission will require a transparent, rational, stable, consistent, and understandable approach, that will continue to be viable and applicable in determining costs for services in the foreseeable future. . . . [P]arties to proceedings involving cost issues [should] have the ability to understand assumptions used, to review and analyze the effects of inputs and outputs, and to modify and model different inputs and assumptions.[5]

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[4] *In the Matter of the Pricing Proceeding for Interconnection, Unbundled Elements, Transport and Termination, and Resale, et al.*, Docket Nos. UT-960369 *et al.*, Eighth Supplemental Order; Interim Order Establishing Costs for Determining Prices in Phase II (April 16, 1998) (*Eighth Supplemental Order*).

[5] *Washington Utils. & Transp. Comm'n v. US West Communications, Inc.*, Docket No. UT-950200, Ninth Supplemental Order Granting Respondent's Oral Motion for Continuance, at 2 (Oct. 19, 1995).

6 Nearly a decade ago the Commission admonished that companies failing to produce open cost models do so at their peril: "The company should recognize that its protracted inability to produce respectable, auditable, 'checkable' cost studies is detrimental to its own self interest. It must do better in this regard if it expects to fare better in persuading the Commission of the rightness of its positions." *Interconnection Order*, *at 91*.[6]

B. The *Virginia Arbitration* Order

7 Pursuant to delegated authority from the FCC, the FCC's Wireline Competition Bureau (WCB) released a decision on August 29, 2003, regarding the rates Verizon Virginia Inc. could charge AT&T Communications of Virginia and WorldCom Inc. for access to UNEs.[7] The decision was the result of an arbitration, in which the WCB took the place of the Virginia Corporation Commission as arbitrator.[8] While this decision may be helpful to the Commission, particularly with

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[6] *Washington Utils. & Transp. Comm'n v. US West Communications, Inc. et al.*, Docket Nos. UT-941464, Fourth Supplemental Order Rejecting Tariff Filings and Ordering Refiling; Granting Complaints, In Part (Oct. 31, 1995) (*Interconnection Order*).

[7] *In the Matter of Petition of WorldCom Inc. Pursuant to Section 252(e)(5) of the Communications Act for Preemption of the Jurisdiction of the Virginia State Corporation Commission Regarding Interconnection Disputes with Verizon Virginia Inc., and for Expedited Arbitration, et al.*, CC Docket Nos. 00-218 *et al.*, Memorandum Opinion and Order, 18 FCC Rcd. 17722, DA 03-2738 (2003) (*Virginia Arbitration Order*).

[8] If a state commission will not arbitrate a dispute pursuant to Section 252(b), the FCC will arbitrate the dispute. *47 U.S.C. § 252(e)(5)*.

respect to how the WCB applied the FCC's pricing rules to the evidence in that case,[9] the WCB's determinations regarding cost of capital, cost model inputs, and UNE rates are not binding on this Commission. The Commission must determine the issues based on the record in this docket, rather than adopt the WCB's determinations.

II. COST OF CAPITAL

8 The Commission Staff did not conduct a cost of capital analysis for Verizon in this docket. However, Staff has taken a position on several of the issues related to cost of capital. As argued below, the Commission Staff recommends that the Commission use Verizon's actual capital structure for setting TELRIC-based rates. The Commission should reject Verizon's proposed cost of equity because it is based on a proxy group that is not engaged in the relevant industry. The Commission should reject Verizon's proposed risk adjustment to the cost of equity. In arriving at a reasonable upper-bound, risk-adjusted cost of capital, Staff testified that the Commission should substitute Verizon's cost of debt and cost of equity recommendations into Verizon's current capital structure, which results in a cost of capital of 11.1 percent (as argued below, a more reasonable cost of capital of 10.6 percent would be the result if the Commission used AT&T's recommended cost of debt). *Exhibit 1062T (Spinks), at 14, ll.12-17.* However, because Verizon used an

[9] The FCC uses a variation of "final offer" arbitration in which the arbitrator chooses one party's final offer (or elements thereof) to arrive at a decision. *47 C.F.R. § 51.807(d).*

inappropriate sample group of companies to arrive at its cost of equity, this should be the maximum risk-adjusted cost of capital allowed by the Commission

A. The *Triennial Review Order* and Other Federal Authority

9 The cost of capital is one component of TELRIC-based prices, which allows ILECs to earn a normal profit on their provision of UNEs:

> The concept of normal profit is embodied in forward-looking cost because the forward-looking cost of capital, *i.e.*, the cost of obtaining debt and equity financing, is one of the forward-looking costs of providing the network elements. This forward-looking cost of capital is equal to a normal profit. We conclude that allowing greater than normal profits would not be 'reasonable' under sections 251(c) and 252(d)(1). Thus, contrary to the arguments put forth by several incumbent LECs, we find that adding an additional measure of profit to the risk-adjusted cost of capital in setting the prices for interconnection and access to unbundled elements would violate the requirements of sections 251(c) and 252(d)(1) of the 1996 Act.

First Report and Order, ¶ *700 (citations omitted)*. The FCC also had determined that an ILEC's "currently authorized rate of return at the federal or state level is a reasonable starting point for TELRIC calculations, and incumbent LECs bear the burden of demonstrating with specificity that the business risks that they face in providing unbundled network elements and interconnection services would justify a different risk-adjusted cost of capital or depreciation rate." *Id.* ¶ *702*.

10 This Commission previously adopted the currently authorized rate of return for use in setting TELRIC-based UNE rates. *Eighth Supplemental Order*, ¶ *210*. Both

the FCC and this Commission have recognized that the cost of capital must be reviewed on a periodic basis. *First Report and Order*, ¶ 702; *Eighth Supplemental Order*, ¶ *210*. The FCC said, "We recognize that incumbent LECs are likely to face increased risks given the overall increases in competition in this industry, which generally might warrant an increased cost of capital . . . ." *First Report and Order,* ¶ *702*. While also agreeing that the cost of capital may require periodic review, this Commission, nevertheless has cautioned against turning every cost case into a cost of money case. *Eighth Supplemental Order*, ¶ *211;*[10] *see also Interconnection Order*, *at 90*.

11 In its *Triennial Review Order*,[11] the FCC refined the calculation of cost of capital for TELRIC proceedings in two ways. First, the FCC stated that a TELRIC-based cost of capital should reflect the risk of a competitive market. *Triennial Review* Order, ¶ *680*. Second, the FCC said that the TELRIC-based cost of capital should reflect any unique risks associated with new services that might be provided over certain facilities. *Id.* ¶ *683*.

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[10] Citing *Washington Utils. & Transp. Comm'n v. US West Communications, Inc.*, Docket No. UT-950200, Fifteenth Supplemental Order, Commission Decision and Order Rejecting Tariff Revisions; Requiring Refiling, at 88 (April 11, 1996).

[11] *In the Matter for Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers, et al.*, CC Docket Nos. 01-338 *et al.*, Further Report and Order and Order on Remand and Further Notice of Proposed Rulemaking, 18 FCC Rcd. 16,978, FCC 03-36 (2003) (*Triennial Review Order* or *TRO*).

B. Capital Structure

1. The Commission Should Not Use a Market-Based Capital Structure

12 The Commission should reject Verizon's proposed capital structure of 75 percent equity and 25 percent debt. Despite Verizon's obligation to provide UNEs to requesting carriers at TELRIC-based rates, Staff testified that, "Verizon remains a regulated public utility and therefore has a duty to maintain a sound capital structure that includes a prudent mix of debt and equity." *Exhibit 1065T (Spinks), at 5, ll.16-18*. Verizon's proposed capital structure is not prudent for a regulated utility and the Commission should reject it for the following reasons.

13 Verizon's proposed capital structure is unreasonable because it ignores the need to balance economy with financial flexibility. *Exhibit 1062T (Spinks), at 15, l. 4* . Verizon bases its proposed capital structure on "capital structure evidence for companies that operate in competitive markets." *Exhibit 106TC (Vander Wide), at 76, ll. 18-19*. Verizon contends that this evidence is consistent with the *Triennial Review Order*. *Id.* As argued below, Verizon's proxy companies are not a proper point of comparison for Verizon's business. Given that Verizon's proposed capital structure is not reasonable, the Commission should use Verizon's current capital structure of 63 percent equity and 37 percent debt[12] for purposes of determining the company's cost of capital.

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[12] *Tr. at 1092 (Spinks), ll. 14-18*.

14 The Commission should adopt Verizon's current capital structure for setting TELRIC-based rates. Verizon's current capital structure is reasonable because it is forward-looking (*i.e.* TELRIC-compliant), the company manages it on a daily basis, and it is adjusted to keep it safe and efficient. *Tr. at 1092, ll. 14-18 (Spinks)*. Using Verizon's current capital structure balances economy and flexibility.

C. Cost of Debt

15 The Commission Staff recommends that the Commission adopt the cost of debt of 4.98 percent advocated by Lee L. Selwyn, Ph.D., on behalf of AT&T. *Exhibits 651T (Selwyn), at 10 l.18-11 l. 4; 653*. The Staff agrees with this recommendation because it is based on the average yield to maturity of Verizon bonds, and includes Verizon subsidiaries. *See id.* Verizon's recommended cost of debt is based on the average yield to maturity of industrial bonds for companies that are not in the relevant industry. *Exhibit 101T(Vander Wide), at 45, ll. 15-20.*

D. Cost of Equity

1. <u>Determining the Appropriate Sample of Companies to Develop Verizon's Cost of Equity.</u>

16 The Commission should reject Verizon's sample of comparable companies because those companies do not operate in the telecommunications industry and are not of similar size or similar revenue bases. *Exhibit 1062T(Spinks), at 12, ll. 4-11*. None of the companies Verizon used in its proxy group for its discounted cash flow (DCF) analysis is a telecommunications company—more specifically, not one of

Verizon's proxy companies is a Regional Bell Operating Company (RBOC). *See Exhibit 102*. It is therefore unreasonable for Verizon to base its cost of equity recommendation on its proxy group.

2. Which Methodology is Appropriate.

17 As stated above, the Commission Staff has not analyzed Verizon's cost of capital in this docket so Staff does not have a recommendation regarding the either the DCF or capital asset pricing model (CAPM) methodology in this docket.

3. Recommended Cost of Equity

18 Because the Commission Staff is not analyzing the cost of capital in this docket, Staff does recommend a specific cost of equity. However, Staff disagrees with Verizon's proposed cost of capital for setting TELRIC-based UNE rates. Verizon contends that the Commission should determine Verizon's weighted average cost of capital at 12.03 percent, to which the Commission should add a risk premium of 3.95%, to arrive at a cost of capital for TELRIC-based prices at 15.98 percent. *Exhibit 101T, at 9, l. 5 50, ll. 2-14, 62, ll. 6-15*.

19 Although the Commission Staff did not calculate the cost of equity, Staff disagrees with Verizon's cost of equity of 13.95 because, as argued above, it is based on a proxy group that does not reflect the relevant industry. *Exhibit 1062T(Spinks), at 12, ll. 4-11.*

20 Staff also disagrees with Verizon's risk premium adjustment of 3.95%. *Id.* Staff is unaware of another state commission that has adopted this risk premium, and other state commissions, Pennsylvania and New Hampshire, have rejected it. *Id., ll. 13-16.*

21 The Commission Staff believes a proper risk-adjusted cost of capital for Verizon would be no more than 10.6 percent, if the Commission uses the more accurate cost of debt recommended by Dr. Selwyn. This calculation is adjusted for risk by adopting Verizon's recommended cost of equity (which is on the high side), AT&T's cost of debt, and Verizon's current, forward-looking capital structure of 37 percent debt and 63 percent equity.[13] If the Commission rejects Dr. Selwyn's cost of debt, substituting Verizon's recommended cost of debt would result in a risk-adjusted cost of capital of 11.1 percent.[14]

III. DEPRECIATION

22 In setting Verizon's TELRIC-based UNE rates, the Commission should use currently prescribed depreciation rates. Verizon's authorized deprecation rates are economic depreciation rates. *Exhibit 1065T (Spinks), at 3, ll. 1-15*. The current depreciation rates are consistent with FCC rules, which require the use of economic depreciation. 47 C.F.R. § 51.505(b)(3).

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[13] (13.95x63%) + (4.98x37%) = 10.6%.

[14] (13.95x63%) + (6.26x37%) = 11.1%.

23 Verizon contends that the Commission should use financial lives in establishing depreciation for TELRIC-based rates, because these lives are more forward-looking than regulatory lives. *Exhibit 151T (Flesch), at 7, l.3-8, l. 8*. The FCC declined to adopt this argument in its *Triennial Review Order* because Verizon and the other ILECs did not provide any empirical evidence that financial lives will be more consistent with TELRIC than regulatory lives. *Triennial Review Order, ¶ 688*.

24 Nor has Verizon presented evidence in this docket that would justify the use of shorter lives. The Commission Staff asked Verizon to provide any studies to support the company's contention that its current lives are no longer applicable. Verizon did not provide any studies or other evidence, except to state that there is evidence of competitive entry in Washington. *Exhibit 1062T (Spinks), at 10, ll. 8-11*. Staff witness Mr. Spinks testified that Verizon faces no effective competition in its service area. *Id. at 11, ll. 2-10*.

25 Staff recommends that the Commission use Verizon's currently authorized depreciation rates. If a change is necessary, Staff further recommends that the Commission should await the outcome of Verizon's pending depreciation docket, Docket No. UT-040520. *Id. at 10*.

V. COST MODEL OVERVIEW—CHOICE OF A MODEL

26 As this Commission has stated, cost models are important analytical tools for setting rates. *Eighth Supplemental Order, ¶ 38*. For the following reasons, the

Commission Staff recommends that the Commission choose a model—specifically the HM 5.3 model—for setting Verizon's TELRIC-based rates in this docket.

A. The Commission Should Choose a Model

27 In the prior generic cost docket, the Commission concluded that none of the loop models should be adopted for future proceedings because the models were undergoing continuing refinement. *Eighth Supplemental Order, ¶ 35*. As a consequence, the Commission did not choose a model, but rather used the models to establish a reasonable range of costs. This Commission has been engaged in the process of setting UNE rates since it opened the first generic costing and pricing docket, UT-960369, on November 21, 1996. It is reasonable to assume that the Commission will continue to reevaluate the prices for UNEs and interconnection in the years to come. Therefore, the time has come for the Commission to choose a model for parties to use in future proceedings. *See Tr. at 1065, l. 13-66, l.2 (Spinks)*.

28 More importantly, the question of whether the Commission should choose a model in this docket is informed by the choices available to it. As argued below, Verizon's cost model, VzCost, is not open, is overly complex and difficult to use, and improperly models the network. Therefore, it is important for the Commission to choose the model in this proceeding that best complies with the Commission's requirements that cost models be open and transparent, understandable, and consistent with the forward-looking cost principles of the federal Act.

B. Openness and Flexibility of a Cost Model

29 This Commission repeatedly has held that cost models should be open and transparent. *See discussion supra*, ¶¶ *6-7*. The Commission has held that open models are in the public interest because all parties—and the public—would then have the opportunity to explore the advantages and limitations of the model. *Eighth Supplemental Order*, ¶ *24*. In the earlier cost docket, this Commission found the Hatfield Model to more closely comply with the openness requirement. *Id.* ¶ *26* (the HM 5.3 is a later version of the Hatfield Model presented in Docket No. UT-960369). The FCC also expects open models. *See Virginia Arbitration Order*, ¶ *172*.

30 In choosing a cost model, the Commission should consider how easy the model is to use. The selected model should not be overly complex. Parties and the public should be able to use the selected model for their own analyses.

31 The Commission should choose the model that best comports with TELRIC principles. TELRIC requires that rates be based on the most efficient, lowest cost network configuration, assuming existing wirecenter locations. *47 C.F.R. § 51.505(b)(1)*. The Commission Staff applies these principles to the following discussion of the models.

32 That said, however, Staff cautions the Commission against putting too great an emphasis on cost models. As stated above, cost models are valuable analytical

tools for estimating costs, but they cannot, standing alone, determine the proper prices for UNEs.

C. Metrics For Evaluating the Reasonableness of a Cost Model

1. Route Miles
2. Average Loop Length

33 Both route miles and average loop length help indicate the degree to which a cost model provides sufficient cable to serve existing demand. While both factors provide a measure of how closely the modeled lengths compare to existing facilities, a model should not "live or die" depending on such a comparison. What is important is that a cost model provide a means to adjust the related distance-sensitive investments on a wirecenter basis. In addition, a forward-looking network, which requires less plant than what exists in the network today, could be modeled. During the hearing, Mr. Spinks testified that modeled average loop lengths could be some five to ten percent shorter than existing loop lengths. *Tr. at 1048, ll. 14-18 (Spinks).* Therefore, even if a cost model produced cable lengths similar or equal to existing lengths, the model does not necessarily produce the most efficient forward-looking cost estimates.

3. Adhering to Current Locations of Pedestals, Cabinets, Etc.

34 A cost model that adheres to the current locations of pedestals, cabinets, and other plant is less reasonable than a model that assumes efficient placement of plant, given the location of existing wirecenters. *See Exhibit 1062T (Spinks), at 6, l. 4-*

7, 2. Incumbents, like Verizon, chose existing equipment locations incrementally over a long period of time, and these locations do not represent the equipment locations that necessarily would be used if the network were rebuilt today to serve existing total demand. *Id.* The use of existing locations constrains the model to producing inefficient cost estimates because it does not allow for the possibility that more efficient network designs exist. This is the reason Staff believes the VzCost model is fatally flawed. *Id.*

4. Number of Lines In a Service Area

35 A more reasonable forward-looking model will place a more efficient number of lines in a service area. The HM 5.3 model designs distribution areas to serve up to 5,000 access lines in a single distribution area. The VzCost model uses the traditional distribution area design, which serves 200-600 access lines in a single distribution area. Staff believes that the more efficient design is more reasonable because it is consistent with long-run incremental cost principles.

6. Investment Levels

36 Verizon proposes to use current investment levels as a measure of reasonableness. *See Exhibit 501T (Tardiff), at 47, l. 12-50, l. 18.* Staff disagrees. Current investment levels are not good indicators of the reasonableness of a model because current investment represents the embedded costs of the network. Therefore, current investment would include investment in excess plant and

equipment that are not forward-looking. *Exhibit 1065T (Spinks), at 8, l.17-9, l. 6; Tr. at 1053, l. 12-54, l.4 (Spinks).*

VI. VERIZON'S COST MODEL

A. Overview

37 Verizon's cost model in this docket is VzCost. VzCost is an Internet-based model, which purports to estimate TELRIC-based rates for UNEs. *See Exhibit 201TC (Verizon Panel), at 14, ll. 7-9*. The Commission Staff has several concerns with VzCost.

38 First, Verizon's Internet-based design introduces considerable uncertainty into an evaluation of the model. A user of VzCost does not have physical control over the model during his or her analysis of the model. Staff witness Mr. Spinks explained why this is a problem:

> If the analyst does not have physical possession and control of the model, the analyst must make a very important assumption at the beginning of any evaluation. That is, the analyst must assume that what is sent and received through the remote access is not in any way different from what would occur if the analysis were conducted at the analyst's own computer. If the analyst cannot maintain physical control over the model, the analyst cannot know whether the data received resulted entirely from changes made by the analyst, or whether the data received were also changed because of changes in model programming, or data errors in the transmission and reception of information.

Exhibit 1062T (Spinks), at 3-4.

39 In addition, the Internet-based aspect of the model also means that Verizon retains control over the model, which makes it difficult for users to analyze the model. For example, Verizon changed the model at least twice during the course of this docket, which made it difficult for users to produce consistent results. *Id. at 4, 4-11*; *see also Exhibit 751TC (Turner), at 19, l.5-20, l.4 (explaining problems AT&T's analysts confronted because of Verizon's changes to VzCost)*. The Internet-based nature of the model also means that users may encounter difficulties in downloading and uploading files necessary to conduct an analysis of the model. *Exhibit 751TC (Turner), at 20, l.5-21, l. 2*.

40 Adding to the problems associated with the Internet-based nature of VzCost is the complexity of the model. For example, Staff endeavored to recalculate the VzCost's loop cost results without the forward-looking calibration adjustment. The company provided Staff with lengthy instructions on how to accomplish this seemingly simple task. Staff was able to recalculate loop costs without the adjustment after expending eight hours on the Internet-based model. *Exhibit 1062T(Spinks), at 5, ll*. 3-13. A cost model should not be that difficult, or that time-consuming, to run. AT&T analyst Mr. Turner also testified that VzCost is difficult and time-consuming to use. *Exhibit 751T (Turner), at 16 l. 10-17, l. 40*.

41 VzCost does not satisfy this Commission's requirement that cost models be open and transparent. The underlying programming is not accessible to users. *Exhibit 1062T (Spinks), at 4, ll. 12-13; see also Exhibit 751T(Turner),* at 11, l. 16-15, l. 18.

B. Outside Plant Network Design

42 VzCost models the network by using the actual locations of distribution terminals, existing serving area interfaces, existing digital loop carrier locations, and existing cable routes to model the investment necessary for determining loop cost. *Exhibit 201TC (Verizon Panel), at 35-39.* This approach does not comply with TELRIC.

43 By assuming existing outside plant network design, VzCost does not model the most efficient, lowest cost network configuration. Rather, VzCost replicates the existing network and creates a backward-looking network that contains the inefficiencies that could be avoided in a forward-looking network designed to serve the existing demand. *Exhibit 1062T (Spinks), at 6 l. 4-7, l. 2; Tr. at 1057, ll. 1-9 (Spinks).* Finally, Verizon's embedded network configuration overstates costs. *Exhibit 751TC (Turner), at 35, ll. 5-6.*

VII. HM 5.3

A. Model Overview

44 AT&T has sponsored HM 5.3 to estimate Verizon's costs in this docket. The salient difference (as presented in this docket) between HM 5.3 and VzCost is that

HM 5.3 begins with the location and demand of the customers, and builds the network necessary to serve those customers. In contrast, VzCost begins with the existing locations of outside plant and models the network around that equipment.

45 Unlike VzCost, HM 5.3 is a stand-alone model. Users of the model can change input values to reflect local conditions and circumstances, and can conduct sensitivity analyses. *Exhibit 851T(Mercer), at 30, l. 9-12.* To a great extent, the model uses publicly available data. *Exhibit 855, at 79.* HM 5.3 operates quickly. *Id., at 95.* HM 5.3 "best meets the Commission's criteria that cost models be transparent, rational, stable, consistent and have an understandable approach." *Exhibit 1056T (Spinks), at 5, ll. 2-19 (citations omitted).*

B. Outside Plant Network Design

46 HM 5.3 approaches outside plant network design by assessing the customer demand for facilities in a given area, structure sharing opportunities, interoffice facility requirements, wire center locations, and central office boundaries. *Exhibit 951T (Fassett), at 6, ll. 5-14.* Once these factors are assessed, a forward-looking network can be designed that will meet customer demand and achieve the economies of scale and scope. *Id.*

VIII. MODEL INPUTS

47 The Commission Staff reviewed the input values from the Commission's prior orders and used those inputs in its cost model calculation, with a few

exceptions that Mr. Spinks explains in his direct testimony. *See Exhibit 1056T (Spinks), at 8, l. 4-12, l.7.* The Commission Staff here addresses only those inputs in the outline on which Staff offered testimony.

A. Loops

1. Plant Mix

48 For plant mix, the Commission Staff used the values from the Commission's *Universal Service Cost Order*, Docket No. UT-980311, [15] in determining its cost recommendations. These were Verizon's actual plant values.

2. Structure Sharing

a. *Should the Commission Base Structure Sharing Values on Current or Hypothetical Values?*

49 The Commission Staff recommends that the Commission base structure sharing values on an amount of sharing that reasonably could be expected to occur in the modeled forward-looking network, rather than on either actual or purely hypothetical values. *See Tr. at 1043, ll.5-11 (Spinks).* The structure sharing values that reasonably could be expected in a forward-looking network are those that the Commission adopted in the *Eighth Supplemental Order* in Docket UT-960369. *Eighth Supplemental Order, ¶ 76 (adopting Staff's recommended structure sharing assumptions).* In a competitive market, facilities-based competitors would require the use of

[15] *In the Matter of Determining Costs for Universal Service*, Docket No. UT-980311(a), Tenth Supplemental Order, Order Establishing Costs, ¶¶ 1-107 (Nov. 20, 1998) (*Universal Service Cost Order).*

common structure (*i.e.* conduits, poles, trenches) for their facilities, which Staff did not fully contemplate in its testimony in Docket UT-960369. Therefore, Staff's recommended sharing levels in this are conservative.

b. *If the Structure Sharing Values Are Based on What Could Occur in a Competitive Market, Should Line Counts Be Adjusted?*

50 If the Commission makes changes to the structure sharing levels based on the presumption that more sharing could be expected in a fully competitive market, then some adjustment to line counts may be warranted. The Commission made such an adjustment in the original generic cost proceeding, Docket No. UT-960369. Staff does not have a proposal to determine the degree to which line counts should be changed but believes such an adjustment should be negligible because the losses would be to intermodal-type competitors and Verizon has to date experienced minimal line losses overall. *See Exhibit 1062T (Spinks), at 11, 4-11.*

7. Other Inputs

e. *Length of Drop Wires*

51 In its model runs, Staff used the drop wire lengths the Commission had used in its *Eighth Supplemental Order.* In that order, the Commission strongly encouraged companies to conduct drop length studies. *Eighth Supplemental Order, ¶¶ 133-34.* Verizon has not done so. Given the lack of an accurate drop length study, the Commission should use its drop wire lengths from the *Eighth Supplemental Order.*

8. Geographic Deaveraging

52 The Commission should adopt the five-zone deaveraged loop prices the Staff has recommended in this docket. Staff deaveraged loop prices into five zones because that reflects a balance between price accuracy and administrative convenience. *Exhibit 1101T (Blackmon), at 3, l. 15-4, l. 8; see also 24th Supplemental Order, Docket No. UT-960369*.[16]

53 The accuracy of the zone prices is best measured by the weighted sum of squared errors across all zones. Staff witness Glenn Blackmon, Ph.D. explained this measure:

> This measure takes the difference between the wire center loop cost and the zone price, squares it, and then weights it by the number of loops in that wire center. The sum of squared errors method produces an unbiased allocation of wire centers, i.e., it does not give more weight to the accuracy of the low-cost wire centers than to the accuracy of the high-cost wire centers or vice versa.

Exhibit 1101T (Blackmon), at 4, ll. 12-17. This method will not result in an even distribution of loops across the zones. However, it will produce accuracy in the prices because it allocates fewer loops in the higher-cost zones and more loops in the lower-cost zones. As a result, prices will be higher in the high-cost areas. *Id. at 5, ll. 2-9*.

[16] *In the Matter of the Pricing Proceeding for Interconnection, Unbundled Elements, Transport and Termination, and Resale, et al.*, Docket Nos. UT-960369 *et al.*, 24th Supplemental Order; Order Rejecting Tariffs; Authorizing Refiling, ¶ 71(May 4, 2000).

54 The optimization method recommended by Commission Staff produces prices that are more accurate than the method advocated by AT&T in this docket. While AT&T assigned wire centers to zones in an unbiased manner (by minimizing weighted errors), it introduced a bias into its method by dividing the error by the average cost within the zone. This gives more accuracy to the rates in Zone 1 relative to Zone 5. This results in the assignment of more wire centers to the high-cost zones, and fewer to the low-cost zones, which skews prices downward across all zones, without affecting the weighted average loop price. *Id. at 5, l. 11-6, l.10*.

55 Staff's recommended zone groupings and rates for Verizon are set forth in Exhibit 1104. While the prices for Zone 5 are high, the Commission Staff recommends that the Commission address any concerns it may have about those prices through Universal Service policy, not by including additional, lower cost wirecenters into Zone 5. *Id. at 7, ll. 10-18*.

B. Switching

1. Appropriate Rate Structure

56 The Commission Staff advocates that the Commission adopt a port charge that includes a flat-rated usage charge. This position is consistent with the Commission's earlier generic cost decision. In the *Seventeenth Supplemental Order* in

Docket No. UT-960369, the Commission stated that, "a flat-rate capacity charge would better reflect the cost structure of the telecommunications network."[17]

E. Proposed Rates

57 The Commission Staff proposes the following rates for Verizon in this docket. These rates reflect the change made to HM 5.3 (called HM 5.3 Revised) during the hearing. Staff's workpapers for these rates are set forth in the documents filed on June 29, 2004.

58 *Two-wire analog loop rates:*

Zone 1 ($8.55)
Zone 2 ($14.63)
Zone 3 ($28.55)
Zone 4 ($48.99)
Zone 5 ($82.83)

59 *Statewide average two-wire loop rate:* $12.11

60 *Four-wire analog loop rates:*

Zone 1 ($12.83)
Zone 2 ($21.95)
Zone 3 ($42.83)
Zone 4 ($73.49)
Zone 5 ($124.24)

[17] *In the Matter of the Pricing Proceeding for Interconnection, Unbundled Elements, Transport and Termination, and Resale, et al.*, Docket Nos. UT-960369 *et al.*, 17th Supplemental Order: Interim Order Determining Prices; Notice of Prehearing Conference, ¶ 421(Aug. 30, 1999).

61 *Feeder and Distribution Ratios:*

	Feeder	Distribution
Zone 1	(.306)	(.694)
Zone 2	(.286)	(.714)
Zone 3	(.302)	(.698)
Zone 4	(.334)	(.666)
Zone 5	(.387)	(.613)

62 *Port rates including flat-rated local switching:*

Zone 1 ($2.87)
Zone 2 ($3.44)
Zone 3 ($5.76)
Zone 4 ($9.06)
Zone 5 ($9.38)

63 *Network Interface Device (NID) Monthly Rate:* $0.43.

IX. TAKINGS

64 The Commission Staff does not believe that the record in this case has raised a takings issue. Staff will respond to the takings arguments raised by other parties in its reply brief.

65 Any takings argument must reflect the proper analysis of an "unconstitutional" taking in the rate-setting context. Under the takings clause, the relevant inquiry is whether a utility's rates are "so unjust as to be confiscatory."[18]

[18] *Duquesne Light Co. v. Barash*, 488 U.S. 299, 307, 109 S. Ct. 609, 102 L. Ed. 2d 646 (1989) (citations omitted). Rates are confiscatory if they are "'so unjust as to destroy the value of [the] property for all the purposes for which it was acquired,' and in so doing 'practically deprive[s] the owner of property without due process of law'[.]" *Id.* at 307-08 (quoting *Covington & Lexington Turnpike Road Co. v. Sandford*, 164 U.S. 578, 597, 17 S. Ct. 198, 41 L. Ed. 560 (1896)).

The takings clause does not guarantee Verizon a profit,[19] nor is Verizon constitutionally protected against a loss.[20] Verizon cannot prove that the UNE prices the Commission may ultimately establish are unconstitutional unless the "end result" causes confiscation.[21]

X. CONCLUSION

66 The Commission should adopt the HM 5.3 cost model for setting Verizon's UNE rates in this docket. The Commission should adopt its prior inputs, except where Staff or another party has demonstrated that a change is warranted. The Commission should adopt the Commission Staff's deaveraged rate zones and prices.

Dated: July 15, 2004.

Respectfully submitted,

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[19] *Federal Power Comm'n v. Hope Nat. Gas Co.*, 320 U.S. 591, 603, 64 S. Ct. 281, 88 L. Ed. 333 (1944) (citations omitted).

[20] *See Market Street R. Co. v. Railroad Comm'n*, 324 U.S. 548, 565-67, 65 S. Ct. 770, 89 L. Ed. 1171 (1944) (a rate is not necessarily confiscatory even if it compels a regulated utility to operate at a loss).

[21] *Duquesne Light Co.* 488 U.S. at 310.