

TAB C

**BEFORE THE  
FEDERAL COMMUNICATIONS COMMISSION  
WASHINGTON, D.C. 20554**

In the Matter of

Application by Verizon New England Inc.,	)	
Verizon Delaware Inc., Bell Atlantic	)	WC Docket No. 02-157
Communications, Inc. (d/b/a Verizon Long	)	
Distance), NYNEX Long Distance Company	)	
(d/b/a Verizon Enterprise Solutions), Verizon	)	
Global Networks, Inc., and Verizon Select	)	
Services Inc., for Authorization To Provide	)	
In-Region, InterLATA Services in New	)	
Hampshire and Delaware	)	

**JOINT DECLARATION OF  
CATHERINE E. PITTS AND MICHAEL R. BARANOWSKI**

**I. QUALIFICATIONS**

1. **Catherine E. Pitts.** My name is Catherine E. Pitts (formerly Petzinger). I am a consultant to AT&T on switch cost modeling issues. My business address is 810 Long Drive Road, Summerville, South Carolina.

2. I have an MBA from Rutgers University, New Jersey, and eighteen years of experience in the telecommunications industry. Before becoming an independent consultant earlier this year, I was employed for five years by AT&T Corporation as a District Manager in Regulatory and Legislative Affairs. Prior to joining AT&T, I was employed by Bellcore (now Telcordia Technologies) for 13 years. While at Telcordia, I was one of three individuals who designed and implemented new incremental costing methodology into the Switching Cost Information System/Intelligent Network (SCIS/IN) model. The SCIS/IN model is used to identify the costs associated with switching

“features” (e.g., call waiting, call forward, and caller ID) and belongs to the family of SCIS models used to determine the costs associated with switching in general. I was Telcordia’s lead subject matter expert on feature costing, as well as a subject matter expert on the 1ESS, 1A ESS and 5ESS switches. When I was promoted to lead the SCIS group of approximately 20 people, I was responsible for the technical development, production, documentation, and customer care for the Switching Cost Information System/Model Office (SCIS/MO) and SCIS/IN models.

3. My experience also includes extensive consultation in the use of cost models in various cost studies in the United States and abroad. I have presented expert testimony regarding switching investments and costs in numerous unbundled network element (“UNE”) and Universal Service Fund (“USF”) proceedings. Most significant for purposes of this proceeding, I have participated in Verizon cost proceedings in New York, Virginia, Maryland, Massachusetts, Pennsylvania, New Hampshire and Rhode Island.

4. **Michael R. Baranowski.** My name is Michael R. Baranowski. I am a Managing Director of the Financial Consulting Division of FTI Consulting, Inc. My business address is 1201 Eye Street, NW, Suite 400, Washington, DC, 20005. In that position, I conduct economic and cost analysis for a variety of clients. Since 1996, I have been directly and continuously involved in interconnection agreement arbitrations and other network element rate proceedings before state public utility commissions. In that regard, I am intimately familiar with the cost models submitted by Verizon – Delaware and other incumbent local exchange carriers. I am submitting this declaration at the request of AT&T Corp. (“AT&T”).

5. The purpose of this declaration is to demonstrate that Verizon's Delaware and New Hampshire switch unbundled network element rates are substantially inflated by myriad clear TELRIC errors.

## **II. VERIZON-DELAWARE SWITCH UNE RATES RESULT IN A MASSIVE COST OVERRECOVERY**

6. Verizon's switch usage rate contains TELRIC violations that result in a substantial over-recovery of forward-looking switching investment. Verizon's switch usage rate is comprised of a switch usage cost per minute of use plus vertical features costs that have been converted from a cost per activation or cost per line, to a cost per minute of use. Inconsistencies between the development of forward-looking switch investments in the SCIS Model and the assumptions used to compute the minute of use usage costs and vertical feature cost skew the UNE switch rates. These serious TELRIC errors allow Verizon to over-recover its initial switch investment by *126 percent*.

7. Using the SCIS cost model provided by Verizon, it is possible to determine the amount of switching usage investment (excluding return on investment, overhead, and other additional items) that Verizon will actually recover given its current Delaware switching usage rates. That number can then be compared to Verizon's actual switch investment to determine whether Verizon's Delaware switching usage rates recover the same amount as Verizon's actual initial switching usage investment.

8. Verizon's total forward-looking switching investment is  
\*\*\*  
\*\*\*. Reducing that amount by the portion of the switching investment  
that is attributable to non-usage port investment \*\*\* shows that

Verizon's total investment in switching usage is \*\*\*. \*\*\*<sup>1</sup> To recover that investment, Verizon charges an average terminating/originating switching usage rate of \$0.0025283 (before joint and common costs). However, that per minute rate also recovers operating expenses, return on investment and other items. To determine the portion of Verizon's switching usage rate that recovers only initial switching usage investment, it is necessary to multiply the switching usage rate by the proportion of the Verizon annual cost factor representing depreciation, *i.e.*, return of initial investment. Depreciation represents \*\*\* percent of the Verizon switching annual cost factor.<sup>2</sup> Verizon's switching usage rate, therefore, includes \*\*\* to recover Verizon's initial switching usage investment. Verizon's cost model shows that Verizon will recover this rate over \*\*\* minutes per year,<sup>3</sup> *i.e.*, Verizon will recover \*\*\* per year over 16 years. Thus, Verizon will recover \*\*\* in switching investment costs over the amortized life of the switch. But that is 126 percent *higher* than Verizon's initial switching usage investment of \*\*\*. This analysis is summarized in Table 1 below.

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<sup>1</sup> This base initial investment does not reflect investment in vertical features hardware. However, that investment typically accounts for no more than 2 percent of base switch investment and, therefore, the omission of vertical feature hardware investment has no material affect on this analysis.

<sup>2</sup> Verizon's switching annual cost factor is \*\*\*. The depreciation portion of that factor, based on a 16 year switch life, is \*\*\*.

<sup>3</sup> This figures represents the annual minutes input by Verizon to the SCIS Model, less the percentage of non-conversation time reflected by Verizon in its development of switch usage rates. This assumption assumes that the number of minutes will not grow over time. In reality, minutes are likely to grow from year to year, which would allow Verizon to spread its costs over additional minutes, thereby decreasing its switching rates. By assuming that rates will not grow over time, this analysis *understates* the amount that

**Table 1. Demonstration of Over-recovery of Usage Related Switching Investment Under Verizon's Proposed Hybrid Rate.**

Description	Amount
Total SCIS Switching Investment	*** **
Portion Assigned to Port	*** **
Usage Related Switch Investment	*** **
Average Verizon O&T Usage Rate (Before Joint & Common Cost and GRL)	*** **
Depreciation Portion of ACF	*** **
Annual Minutes	*** **
Switch Life (Years)	*** **
Usage Based Return of Investment:	*** **
Percent of Recovered Amount to Investment	226.3%
Percent of Over-Recovery	126.3%

9. Given Verizon's approach to switching cost estimation in Delaware – an approach that Verizon has not used in New Hampshire – it is not surprising that Verizon's switching rates are massively inflated. Verizon-Delaware used Telcordia's SCIS/MO model as the foundation for its switch UNE rates. Verizon-Delaware relies on the unit cost outputs of SCIS/MO to build up the cost of a minute of use (bottom-up approach), whereas Verizon-New Hampshire used the total traffic sensitive investment and divided by total minutes to derive the top-down minute of use cost. Theoretically the two approaches should given the same result, allowing for differences in costs and traffic levels; however, that is not always the case because the bottom-up approach requires three separate sets of inputs that are spread among multiple models to be consistent. If these inputs are not consistent, then incorrect results will be produced. The inputs do not take the same form so it is not a simple case of comparing the inputs across the models. The SCIS/MO model requires users to enter percent utilization of processing capacity at

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Verizon is over-recovering its switching usage rates.

the time of switch placement, five years after switch placement and at time of switch replacement. These are critical inputs because they determine the denominator of the equation that distributes the significant getting started cost of the switch over utilized processor milliseconds. If utilization is underestimated compared to actual historical and realized future traffic demand, the cost for a processor millisecond will be overstated. The cost per processor millisecond is used in formulas to build up the cost of a minute of use, thus resulting in an inflated minute of use rate.

10. Another set of inputs to SCIS/MO require the user to enter busy hour traffic on a per line basis (e.g., busy hour calls per line). These traffic inputs should be correlated to the processor utilization inputs described above, but there is no consistency check in the model. Indeed, if it were a simple number comparison, the model could perform this input edit check, but it is extremely difficult to reconcile the inputs asking for percent processor utilization at different time periods with the average traffic on a per line basis. Note that the processor utilization inputs are entered for each switch in the network and the traffic per line is entered for each type of line and trunk (i.e., analog lines, IDLC lines, trunks, etc.) These inputs are used to calculate traffic sensitive investments that ultimately are incorporated into the minute of use rate element. If the traffic level inputs do not match realized demand, the inaccurate cost results produced by SCIS/MO, when multiplied against the realized demand, will result in cost under or over recovery.

11. The third set of usage inputs are used in the sister model of SCIS/MO called SCIS/IN. SCIS/IN uses outputs from SCIS/MO, such as the cost per processor

millisecond, and determines the cost of individual features.<sup>4</sup> Each feature requires busy hour usage data; for example, the number of call waiting calls in the busy hour per line. Again, there is no easy reconciliation between the traffic inputs and processor utilization inputs in the SCIS/MO model and the usage inputs in the feature model. It is entirely possible the processor utilization inputs have no correlation at all to the total traffic being entered into SCIS/MO as per line inputs and as usage inputs in the SCIS/IN feature model. If the processor utilization is under-estimated, leading to an inflated getting started cost per millisecond, this inflated getting started cost per millisecond is multiplied against the usage in the features to cause overstated feature costs. Of course, if the feature usage itself is overstated, the inflation is doubled. Critically, Verizon adds the feature costs to the minute of use rate element, causing potentially massive usage rate element overstatements that lead to severe cost overrecovery as can be seen in the cost recovery analysis above. Underestimates of processor utilization and/or overestimates of feature usage is a typical reason why the total switch investment overrecovery, explained previously, occurs.

**A. Verizon's Switching Rates Are Inflated Because They Reflect Outdated Switch Discounts.**

12. The switch investment costs underlying the Delaware UNE rates are further overstated because they are based on stale switch discount and switch investment data. The Verizon Phase I cost studies were initially developed late in 1996. The switch

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<sup>4</sup> Note that in some calculations in the SCIS/MO model, it will produce a 0 Getting Started Cost per millisecond and report it as a single fixed cost if user inputs indicate that the switch will be replaced before full processor utilization is achieved. Verizon did not use this form of calculation in its cost study; rather it used the calculation form that always averages the getting started cost over the processor milliseconds.

discounts used by Verizon in its cost studies reflect the discounts on replacement and growth switching equipment that Verizon was able to achieve during the early to mid-1990's. Since that time, switch vendors have offered more aggressive – indeed steeper – discounts on new switching equipment. In addition to offering steeper discounts on replacement switch equipment, vendors have increased the level of discounts available on growth or add-on equipment to the point where these discounts are almost to the level of the traditionally higher new switch discounts. By failing to update the switch rates to reflect the steeper discounts now available for both new and add-on switching equipment, the forward-looking switch investments, and thus the switch rates, are overstated.

13. Furthermore, switch components have been evolving, allowing greater capacities, thus reducing unit costs.<sup>5</sup> And Verizon's merger with Bell Atlantic that doubled the number of switches of the merged entity, and the subsequent merger with GTE vastly increased the purchase power of Verizon. This increased purchasing power allows Verizon to negotiate lower switch prices than it could obtain prior to the mergers. Verizon's use of old, higher prices at the time of the hearing resulted in switch UNE rates that were not cost based.

**B. Verizon's Switching Rates Are Inflated Because They Reflect A  
Missallocation Of Costs.**

14. Verizon-Delaware misallocates fixed costs to the minute of use rate element and features. The "getting started" cost of a switch is often called the "first cost"

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<sup>5</sup> Examples include trunk peripheral equipment (SONET-based), GR303 integrated digital loop carrier (IDLC), and ISDN packet handling equipment.

or “start-up cost” and is \*\*\* percent of the total switch investment in Delaware.<sup>6</sup>

A small percentage of this cost is associated with the central processor, and the remainder reflects the costs associated with maintenance, administrative, test, and spare equipment, memory, and other common equipment in the switch. The getting started cost of a switch should be assigned to the port UNE elements. Verizon has improperly allocated the “getting started” switch costs produced by the SCIS/MO model to the minute-of-use (traffic sensitive) and feature rate elements.<sup>7</sup> These “getting started” switch costs do not vary with respect to the number of lines and trunks on the switch or switch usage. The line and usage inputs to SCIS can be changed, but the total “getting started” cost will not vary.<sup>8</sup> The average current processor utilization for Verizon switches in Delaware is \*\*\*. At these low levels of processor utilization, the amount of traffic could \*\*\* without exhausting the processors; therefore, using the processor does not have an economic cost because adding calls or features causes no additional switch processing costs.<sup>9</sup> Likewise, removing calls or features from the switch will not result in a decline in processing costs. Just as it is imperative that non-recurring costs be recovered via non-recurring rate elements, it is critical that non-traffic sensitive

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<sup>6</sup> This can be calculated from Verizon’s SCIS Total Investment output report by dividing the total getting started cost by the total switch investment.

<sup>7</sup> One report in SCIS/MO spreads the total getting started cost over processor milliseconds. Verizon recovers the getting started cost from the minute of use and feature rates based on the number of processor milliseconds used by calls and features.

<sup>8</sup> This can be seen in the office-by-office results in Verizon’s SCIS database. The “getting started” cost of a switch does not change, except when remote switches are added to a host switch and the remote’s “getting started” costs are added to the host’s “getting started” cost.

<sup>9</sup> Verizon acknowledged this in Massachusetts when it determined to exclude getting started costs from the reciprocal compensation rate because additional traffic did not cause any incremental getting started cost.

switch costs be recovered via non-traffic sensitive switch rate elements. Otherwise, as minutes of use increase, over-recovery of the getting started cost will occur because the getting started costs do not change as minutes increase. The mis-assignment of \*\*\* of the total switch investment to the minute of use rate element will result in severe cost overrecovery as minutes grow and Verizon collects increased revenues, but its fixed costs remain static.

### **III. VERIZON'S NEW HAMPSHIRE SWITCHING RATES ARE INFLATED BY NUMEROUS CLEAR TELRIC ERRORS.**

#### **A. The Unusual Process By Which Switch Rates Were Set In New Hampshire Led To Switch Rates That Are Not Based On Costs.**

15. The rates approved by the New Hampshire PUC are the result of a stipulation agreement between Verizon and Staff and are not based on costs. Staff requested Verizon to run its cost model assuming a meld of 80% new switch discount and 20% growth discount. Verizon and Staff agreed to use a fully installed switch price of \$325 price per line for switching with no reference to a cost basis. Verizon modified some switch cost study inputs to achieve the \$325 per line target and acknowledged that the justification came after the \$325 target was agreed upon. In cross examination, Mr. Baker admitted "[H]ere we have a number that falls out of the stipulation, and here we've got the set of data samples that's fallen at our feet that we're trying to use to verify." The data samples that were then relied upon in the order to justify the switch investment, however, were not valid. The switches had been purchased prior to 1992 under contracts that had higher prices than Verizon's contracts that were available at that time. Another set of data samples involved primarily remote switches, all of which were smaller than the normal remote switch in New Hampshire, thus producing a higher cost per line as

admitted by Verizon in the hearings. The New Hampshire PUC subsequently reduced the \$325 to \$294.61 to reflect a reduction in engineering and installation, but did not modify the underlying switch material investment. Nor did the PUC address the important issue of mis-allocating fixed costs to the minute of use rate element.<sup>10</sup> Verizon's arbitrary reduction of selected switch UNE rates on June 14, 2002, were not shown to remedy the inflated switch material investments that relied upon flawed sample data for justification.

**B. Verizon's Rates For Unbundled Switching Were Developed Using Contract Prices That Were Outdated At The Time Of The 1998 Proceeding.**

16. Correct switch investments are essential in the calculation of TELRIC-based rates for unbundled switching. Verizon used a 1995 version of the SCIS/MO model to develop the switch investments that underlie the rates for unbundled switching. Telcordia typically releases at least one update per year, making the model version three-years old in 1998. In addition, the switch contract prices used to determine the discount input for SCIS/MO model were vintage 1994, even though more recent contracts were available.<sup>11</sup> As described earlier, the cost justification for the arbitrary \$325 total installed switch investment relied upon switch purchase prices from 1992 and earlier.

17. For several reasons, using more recent information would dramatically reduce the per-line investment cost of switching. First, it is well known that switch prices are declining for both the purchase of new switch equipment and for add-on equipment to

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<sup>10</sup> Note that some TELRIC cost issues were raised verbally in the hearing, and not in written testimony, because the stipulation agreement was made after pre-filed testimony was submitted.

<sup>11</sup> This specific issue was raised at the New Hampshire PUC hearings on September 3.

existing switches (“growth”). Second, switch components have been evolving, allowing greater capacities, thus reducing unit costs.<sup>12</sup> Third, Verizon’s merger with Bell Atlantic that doubled the number of switches of the merged entity, and the subsequent merger with GTE vastly increased the purchasing power of Verizon. This increased purchasing power allows Verizon to negotiate lower switch prices than it could obtain before the mergers. Verizon’s use of old, higher prices at the time of the hearing resulted in switch UNE rates that were not cost based.

**C. Verizon’s Rates Are Based On Outmoded Technology Assumed In A 1995 Version Of SCIS.**

18. The SCIS/MO model periodically purges old technology from the model and replaces it with new components as they are made available from switch manufacturers. The old version of SCIS/MO that was used in New Hampshire therefore reflected older technology. In addition, Verizon’s inputs contributed to the use of old technology when it assumed all digital loop carrier lines were served via the old TR008 SLC-96 technology instead of the forward-looking GR303. In particular, TR008 has very little dedicated port cost, but a high usage-sensitive cost as modeled in SCIS/MO, resulting a low port rate, but contributing to an excessive MOU rate. The cost and engineering efficiency of GR-303 (formerly called TR-303) is well known and widely accepted in the industry. Indeed, another incumbent LEC, BellSouth, recently filed expert testimony acknowledging that

Generic Requirement 303 (“GR-303”) (authored by Bellcore) provides a set of generic requirements that describe more flexible [than TR008]

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<sup>12</sup> Examples include trunk peripheral equipment (SONET-based), GR303 integrated digital loop carrier (IDLC), and ISDN packet handling equipment.

NGDLC system types and a more flexible interface at a local digital switch. . . . The concentration allowed over these interfaces is variable and can be matched to the services being made available from the remote NGDLC site to allow the most economic concentration ratio consistent with the service being provided. While there are many variables that impact the decision of which switch termination type to use for the interface between a remote NGDLC site and the local digital switch, generally the most economic configurations are provided by using GR-303 sites with more than 150 lines in the three to five year planning period.

Direct Testimony of W. Keith Milner on behalf of BellSouth Telecommunications, Inc.

October 1, 2001, Georgia Docket No. 14361-U.

19. Based on the SCIS/MO data inputs Verizon made available in its August 1998 cost study, *none* of the lines in Verizon's New Hampshire study were modeled as forward-looking GR-303 IDLC lines. Instead, Verizon assumed all of the IDLC lines would employ older technology based on TR-008 standards (specifically Verizon used TR-008 Mode I). Verizon's cost study assumption that approximately 90 percent of the lines in New Hampshire are on less-efficient IDLC produces switch UNE rates that exceed TELRIC.

**D. Verizon Mis-Allocated Fixed Costs To The Volatile Minute Of Use Rate Element Resulting In A Mis-Match Between Cost-Causation And Cost Recovery.**

20. As in Delaware, Verizon-New Hampshire has inappropriately included the fixed "getting started" cost in the minute of use rate element. In New Hampshire, the getting started cost is 25 percent of the total switch investment.<sup>13</sup> The average current processor utilization for Verizon switches in New Hampshire is \*\*\*<sup>14</sup> \*\*\* At

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<sup>13</sup> This can be calculated from Verizon's SCIS Total Investment output report by dividing the total getting started cost by the total switch investment.

<sup>14</sup> BellSouth's workpapers GA5ESS99.xls and GADMS99.xls show the current processor

these low levels of processor utilization, the amount of traffic could \*\*\* \*\* without exhausting the processors; therefore, using the processor does not have an economic cost because adding calls or features causes no additional switch processing costs.<sup>15</sup> The mis-assignment of 25% of the total switch investment to the minute of use rate element will result in severe cost overrecovery as minutes grow and Verizon collects increased revenues, but its fixed costs remain static.

21. In New Hampshire, Verizon has mis-assigned the Lucent Equivalent POTS Half Calls. This is extremely important in New Hampshire because Verizon models its network with one hundred percent Lucent switches. The error leads to a substantial overstatement of the minute of use cost and understatement of the ports' costs.

**E. Verizon Inflates The Minute Of Use Element Rate When Converting From A Busy Hour Cost To Rate Period Prices That Result In Verizon Overrecovering Its Costs.**

22. Another highly significant error in Verizon-New Hampshire's cost methodology relates to its MOU rate element. To calculate a minute of use rate element for unbundled switching, Verizon initially calculated the cost for a "busy hour," *i.e.*, the peak usage. Those busy-hour minute of use costs are then converted to a cost for "any hour of the day" by multiplying a 11 percent busy hour to total business day (BHTD)

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utilizations for each switch.

<sup>15</sup> Verizon acknowledged this in Massachusetts when it determined to exclude getting started costs from the reciprocal compensation rate because additional traffic did not cause any incremental getting started cost.

ratio and then dividing by 252 business days per year.<sup>16</sup> This calculation ensures that Verizon will recover 100 percent of the costs from traffic that occurs on business days.

23. This calculation may be acceptable for business-related service cost studies, such as Centrex, but it is entirely inappropriate for a wholesale rate element that will be used by residential and business customers. The revenue received from the minute of use rate element in the remaining 113 days of the year would be pure profit to Verizon because it has calculated that rate element to ensure that it fully recovers its costs from the traffic occurring on business days. Instead of Verizon's method, the proper approach is plainly to divide the peak period costs over all 365 days per year, because the switch will in fact be used all of the days of the year.<sup>17</sup>

#### **IV. CONCLUSION**

24. For the foregoing reasons, Verizon's Delaware and New Hampshire switching rates are substantially inflated by myriad clear TELRIC errors.

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<sup>16</sup> As shown in VZ's Workpaper Part B-7.2, page 1, VZ performs this calculation in a slightly different, but mathematically identical, way by dividing the busy hour cost per minute of use by 2,290.91 before further allocating the cost to the different rate periods.

<sup>17</sup> Note that in Delaware, Verizon assumed \*\*\* per year to allow for the fact that traffic is slightly reduced on weekends. In New York and Massachusetts, the state commissions ordered Verizon to use 308 days per year. Massachusetts also found that the peak to busy hour ratio was based on old data and recognized that internet usage and other changes in the way subscriber's use the landline network have flattened the peakedness and ordered a 7 percent busy hour to total day ratio to be used.

**VERIFICATION PAGE**

I declare under penalty of perjury that the foregoing Declaration is true and correct.

/s/ Catherine E. Pitts

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Catherine E. Pitts

Executed on: July 17, 2002

**VERIFICATION PAGE**

I declare under penalty of perjury that the foregoing Declaration is true and correct.

/s/ Michael R. Baranowski

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Michael R. Baranowski

Executed on: July 17, 2002

**TAB D**



matters associated with the dial for dial (electromechanical to electronic and digital) switch conversions. I was also instrumental in helping New England Telephone develop alternative plans for converting manual plant records to mechanized systems by defining system requirements and analyzing vendor software systems.

3. In 1984, I interned at Bellcore (Bell Communications Research) to develop system and training requirements for its Facility Assignment and Control System ("FACS") product line, later taking an assignment as a Staff Manager supporting its FACS conversion activities where I was responsible for systems training, methods and procedures development, and the staffing of a company-wide FACS system hotline.

4. From 1986 to 1993 at NYNEX, I managed the day-to-day operations of the Rhode Island Mechanized Loop Assignment Center (MLAC) which included service order provisioning, field assistance, engineering work order preparation and support, as well as FACS database maintenance. I also worked as an Outside Plant Engineer designing and preparing work prints for toll, exchange feeder, and distribution cable jobs, estimating work order cost analysis, assuring work order quality and managing construction activities.

5. In 1993, I worked with Bellcore in its Software Assurance Division. At Bellcore, I provided systems integration release testing support for the FACS product line. In 1995, I transferred to the Professional Services Division as Lead/Senior Consultant in the Telecommunications Business Process Consulting group. During this time, I provided consulting to major telecommunications firms in areas concerning Telecommunication Reform, Local Number Portability, Telecommunications Network

Management (TMN) Systems Architecture, and Non-Recurring Costs. In 1997, I retired from Bellcore to start my own telecommunications consulting company.

6. I attended classes at Roger Williams College with an emphasis in Business Management, and in Economics. I have completed numerous technical and management training seminars and curricula during my employment with New England Telephone, NYNEX and Bellcore.

7. The purpose of my testimony is to demonstrate that Verizon's Delaware non-recurring charges violate TELRIC in numerous respects and, as a result, are substantially overstated. Excessive NRCs are a significant barrier to entry into local markets because they are, by definition, charges that competitors pay but that incumbents like Verizon do not. Verizon's NRCs are so high that ubiquitous, effective competition is simply not possible in Delaware.

8. I first demonstrate that all of Verizon's NRC, recently approved by the Delaware Public Service Commission in Docket No. 96-324, PHASE II, are based on cost studies that are not remotely TELRIC compliant. That PSC proceeding followed a remand of the previously approved rates by the United States District Court, which expressly prohibited the PSC from relying on Verizon's current processes as a basis for determining NRCs. *See McMahon*, 80 F. Supp. 2d at 251 (“[t]he mechanism of [Verizon's] current internal service order processes is *irrelevant* to the legal standard for determining network element costs”) (citing 47 C.F.R. § 51.505(b)(1)). However, the Verizon methodology on which the new Delaware NRCs are based – the Non-Recurring Cost Model (VZ-DE NRCM) – continues to use Verizon's current internal service order processes as the basis for estimating non-recurring costs.

9. Second, I demonstrate that Verizon's last-minute "disconnect" NRCs, which find no support even in Verizon's own cost study, are grossly overstated and reflect clear TELRIC violations.

10. Third, I demonstrate that Verizon's massive "feature change" NRC, which is 322 times greater than the cost to install a new UNE-P with *all* features, has no cost basis and reflects clear TELRIC violations.

11. Fourth, I show that Verizon's Delaware "Field Installation" NRCs double recover costs that Verizon already recovers in its recurring UNE charges and that can, consistent with TELRIC, *only* properly be recovered through recurring charges.

12. Fifth, I show that that Verizon's UNE-L "hot cut" NRCs are based upon a non-TELRIC methodology and are excessive, discriminatory and not cost-based, and that those charges create enormous barriers to facilities-based competition.

**I. Verizon's Non-Recurring Cost Model, Which Became The Basis For NRCs In Delaware, Does Not Conform To TELRIC.**

13. The recent cost case before the Delaware Public Service Commission, PSC Docket No. 96-324 PHASE II, established NRCs for CLECs wishing to purchase UNEs from Verizon. The PSC first reviewed Verizon's recurring and non-recurring UNE rates when Bell Atlantic-Delaware (now Verizon-Delaware) first proposed UNE rates in the 1997 "Phase I" proceeding. In that proceeding, the PSC largely followed Verizon's approach of looking to its existing processes and systems, rather than efficient processes and systems, in estimating non-recurring costs to provision UNEs.

14. On September 8, 1997, Verizon filed an action for Declaratory and Injunctive Relief with the District Court requesting, *inter alia*, that this Court overturn the

rates set by the PSC for the use of Verizon's network, and claiming that those rates violated the 1996 Act. AT&T filed a Motion to Intervene and Motion for Leave to Amend its Answer and to add Counterclaims, including its claim that the NRCs established by the PSC in Phase I for non-recurring service processing and other charges were not cost-based and were not TELRIC compliant. Specifically, AT&T argued that the NRCs adopted by the PSC in Order No. 4542 did not reflect the rates that an efficient LEC would provide for fully-mechanized electronic interfaces and systems for ordering, provisioning, billing, and related non-recurring operations, but rather, allowed Verizon to collect NRCs based on Verizon's inefficient and more costly antiquated manual processes.

15. In the *McMahon* decision, the District Court specifically rejected the very same arguments that Verizon had advanced before the PSC – that Verizon's NRC methodology was “forward-looking” even though they were based on Verizon's embedded processes for providing UNEs – finding:

[t]he mechanization of Bell's current internal service order processes is irrelevant to the legal standard for determining network element costs. At no point in their analysis did the Hearing Examiner's address Bell's proposed NRC charges in light of “the most efficient telecommunications technology currently available and the lowest cost network configuration.” 47 CFR §51.505(b)(1). There is simply no mention of the “most efficient, currently available” telecommunications technology – even though the Commission since has conceded that Bell's service order processing system does not meet this standard . . . . Where, as here, an agency ignores a controlling legal standard, its rulings are arbitrary and capricious. *See Florida Power Light Co.* 470 US at 743.

*McMahon*, 280 F. Supp. 2d at 251.

16. Recognizing that the PSC would need to develop a factual record to determine the forward looking costs that an efficient carrier would incur to provide the

services, the court “remand[ed] the NRC charge issue for renewed evidentiary hearings consistent with the Local Competition Order and its implementing regulations, specifically, 47 CFR §51.505(b)(1).” *Id.*

17. Verizon did not respond quickly to the Court’s directives. Rather, it waited almost a year and a half after *McMahon* to submit a “Revised UNE Rate Filing” with the PSC on May 24, 2001 (the “Phase II Proceeding”).<sup>1</sup> Verizon sought expedited consideration of Phase II based upon its claim that permission to enter the in-region long distance market under section 271 of the Act, 47 U.S.C. § 271, could not be granted in the absence of TELRIC-compliant UNE rates.

18. In the PSC’s words, a principal objective of the Phase II Proceeding was “to allow the Commission to review the NRC rates and OSS [Operation Support Service] access charges . . . being proposed by Verizon-Delaware in light of the earlier rulings of the Federal District Court and any subsequent rulings by the FCC and other courts.” Order No. 5735 ¶ 6. The Commission subsequently appointed a Hearing Examiner to conduct proceedings and to “develop a full record.” Order No. 5754, Ordering ¶ 2.

19. The Hearing Examiner set an expedited procedural schedule which included the filing of pre-filed testimony, two days of evidentiary hearings and briefing. AT&T, Verizon, Cavalier Telephone Mid-Atlantic, LLC, the PSC Staff, and the Division of the Public Advocate participated.

20. Verizon presented a “new” Non-recurring Cost Model (“NRCM”). The model purported to measure the “forward-looking” costs of the tasks necessary to provide

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<sup>1</sup> The PSC initiated the Phase II proceeding by Order No. 5735, dated June 6, 2001.

UNEs. But as with its prior study, Verizon's "new" study took as its starting point Verizon's existing systems. Generally speaking, the NRCM was based on surveys of the time Verizon's employees took to provision certain UNEs, utilizing *existing* systems and processes. The survey responses were then averaged and adjusted by an unnamed "panel of experts" who made undocumented "forward-looking adjustments."

21. This view was confirmed by the PSC's own Staff, which described the Verizon NRCM as follows:

1. Assume that current systems, processes, work activities, and work times represent the appropriate baseline for a study of forward-looking economic costs calculated pursuant to the TELRIC standard;
2. Conduct surveys of employees performing tasks using existing systems.
3. Compile the results, creating an "average of averages;"
4. Through the operation of a panel of unnamed experts whose operation is completely undocumented, make any changes deemed necessary to ensure the data accurately reflects the panel's assumptions regarding existing tasks and task times;
5. Through the operation of a panel of unnamed experts whose operation is completely undocumented, make any changes deemed necessary to ensure the data accurately reflects the panel's assumptions regarding how Verizon's existing systems and processes will be improved in the future; and, then,
6. Calculate non-recurring costs based on these unsupported assumptions.

Staff's Initial Mem. on Remand, at 9 (Feb. 15, 2002) (footnote omitted).

22. AT&T, supported by my testimony, advocated forward-looking NRCs based upon the processes that would be used by an efficient carrier unconstrained by an outdated legacy system. *See* Prefiled Testimony of Richard Walsh (Sep. 14, 2001). AT&T's proposed NRCs were well below those proposed by Verizon.

23. The Hearing Examiner issued Findings and Recommendations on December 21, 2001 (the "Initial Report"), finding that AT&T's NRC cost model was "forward-looking." Initial Report ¶ 247. He also found "understandable" the uniform criticism of Verizon's study. *Id.* Nevertheless, he recommended that the PSC adopt the Verizon's NRCM. According to the Hearing Examiner, by adjusting its existing processes to reflect future improvements, Verizon made a "good-faith" effort to reflect a forward-looking environment. *Id.*

24. On February 19, 2002, the Commission met to deliberate and consider the Initial Report. At that time, the Commission adopted a number of the recommendations of the Hearing Examiner contained in the Initial Report. However, the Commission was unable to reach a decision on the NRCs, noting that "the record developed by the parties is not, in the Commission's opinion, sufficient to allow the Commission to render an informed decision on the issue of whether Verizon-Delaware's non-recurring cost model complies with the District Court's determinations and TELRIC and whether the rates produced are just and reasonable under the TELRIC's pricing standards." Order No. 5896 at 1.

25. On remand to the Hearing Examiner, PSC Staff, the Public Advocate, Cavalier, and AT&T showed that Verizon's use of existing processes and times (even "adjusted" for future efficiencies), constituted the exact approach rejected by the District Court. The parties criticized extensively the premises, procedures, inputs, and assumptions made in the development of the model and the resulting NRCs and made clear that while Verizon's NRCM was labeled as "forward-looking" it was actually an embedded historical cost study. *See, e.g.*, PSC Staff Reply Mem. on Remand, at 5 (Feb.

21, 2002). In this regard, the parties demonstrated that Verizon's model only assumed changes that Verizon already planned to make to its existing legacy processes, and did not, as required by the TELRIC rules, estimate the costs of the most efficient network and processes that could be used to provide UNEs to competitors. *See, e.g.,* Public Advocate's Comments & Recommendations Concerning Remand Issues, at 4 (Feb. 15, 2002). For example, Verizon assumed that new service orders for UNEs by competitive carriers would require costly manual processing 23% of the time, despite the fact that efficient ordering systems are available that would all but eliminate the need for such manual processing. Supplemental Filing of AT&T, at 10 (Nov. 28, 2001). And it was precisely because of these fundamental flaws that Verizon's "new" NRCs were for the most part *higher* than the "old" NRCs that all acknowledge were improperly based on inefficient processes. April 30, 2002 Meeting Tr. at 2384-85.

26. The parties also showed that Verizon did not even measure its embedded costs properly. Verizon calculated its NRCs by relying on a survey of the times employees said they spent performing the tasks necessary for provisioning UNEs. While Verizon represented that this survey was conducted by Andersen Consulting, that was not the case. *Id.* Rather, Andersen conducted a survey at a later date than the internal Verizon survey that was used and the Andersen survey generally measured *shorter* times than the survey that Verizon used. Order No. 5967 ¶ 88. Finally, the parties demonstrated that Verizon's study was a "black box" with no evidence supporting the adjustments Verizon made to transform existing inefficient processes into efficient, forward-looking processes. *See, e.g.,* AT&T Reply to Verizon's Br. on Remand, at 4-7 (Feb. 21, 2002).

27. On February 28, 2002, the Hearing Examiner issued a ruling that reversed his earlier recommendation on the NRC issue, frankly acknowledging that he had erred in previously determining that the Verizon NRCM produced TELRIC-compliant rates. In his decision, the Hearing Examiner explained:

My [original] Recommendation in favor of the NRCM was based on two underlying conclusions. First, based on PSC Order No. 5735, I concluded that the Commission purposely limited the scope of this proceeding by creating certain presumptions in favor of the Phase I inputs and by establishing an expedited schedule. Second, I concluded that Verizon-Delaware's broad interpretation of TELRIC and the District Court remand was a supportable position and that its NRCM was consistent with such interpretation, notwithstanding the other parties' protests that a TELRIC based model cannot start with embedded technology and processes and that the record support for the inputs to the NRCM was inadequate.

On remand, however, these two conclusions are called into question. First, in its deliberations, and as reflected in the remand itself, the Commission understandably shows a reluctance to set "permanent" UNE rates in a limited proceeding and reveals a preference to err in favor of full development of the record. In addition, the Commission's rationale for expediting this proceeding in the first instance may now be moot. An express purpose for expediting the proceeding was to facilitate Verizon-Delaware's entry into the long distance market in Delaware by providing a full set of permanent UNE rates for inclusion in Verizon-Delaware's imminent 271 filing. Order No. at 5735 at 6. Verizon-Delaware, however, recently filed for its Section 271 review in Delaware and apparently intends to move forward with its FCC application, irrespective of the status of this UNE proceeding.

Second, on remand, Staff points out that Verizon-DE has argued before the U.S. Supreme Court that TELRIC is not the flexible version ("TELRIC Light") it supports in this case. [Staff Initial Brief at 2]. Rather, to support its position that TELRIC results and consistent rates,

Verizon-Delaware has argued that TELRIC requires rates based solely on a network of available, but yet to be deployed, technology and processes. This interpretation is, of course, in line with Staff and AT&T's more rigid version of TELRIC. I agree with Staff that Verizon-Delaware's inconsistency in its interpretation of TELRIC weakens its position in this case.

In addition, Staff notes on remand that Verizon Delaware's main complaint is that without relying on its embedded systems as a starting point, it is "impossible to create rates that have any relation to the cost that will be incurred by Verizon-Delaware." *Id.* at 5, quoting Verizon-DE Opening Brief at 49. Staff argues, however, that: "seeking such a match is not the goal of TELRIC, which instead is designed to divine economic costs (47 C.F.R. §51.505) and which expressly prohibits the use of embedded costs. 47 C.F.R. §51.505(d)(1). As the District Court stated clearly, the mechanization of Bell's current internal service order processes is irrelevant to the legal standard for determining network element costs." *Id.* at 6, quoting District Court Remand at 251.

For these reasons, on remand, I recommend that the Commission adopt Staff's interpretation of TELRIC and its position that Verizon-Delaware's NRCM falls short of the TELRIC standard and the District Court Remand.

Hearing Examiner Remand Findings 18-22 (footnotes omitted).

28. The Hearing Examiner further explained that these conclusions were supported by the testimony of Verizon's own witnesses, who effectively conceded that the Verizon NRCM did not calculate costs based on the most efficient technology currently available, but instead used a "what Verizon-DE will actually achieve' outlook." *Id.* ¶ 24 (citations omitted). Finally, the Hearing Examiner also agreed with the parties' criticism that the methodology used by Verizon for making so-called "forward-looking" adjustments to its existing processes was effectively a "black box" with no record support. *Id.* ¶¶ 25-26. Thus, even if Verizon's approach of beginning

with its existing processes were appropriate, there was no way to judge the reasonableness of the “adjustments” that Verizon purported to make to those existing processes.

29. For these reasons, the Hearing Examiner recommended that the Commission “reject Verizon-Delaware’s proposed non-recurring UNE rates because the NRCM violates the TELRIC pricing standard and the District Court Remand and because Verizon-Delaware has failed to provide adequate support for the work times used as model inputs.” *Id.* ¶ 43.

30. At its meeting on March 5, 2002, the PSC considered the Hearing Examiner Remand Findings but again failed either to resolve the issue of whether Verizon’s NRCM met TELRIC standards and the *McMahon* order or to set a structure for how NRC rates should be set. Rather, the PSC directed Verizon to perform “re-runs” of its cost study. PSC March 5, 2002 Meeting Tr. at 2340, 2354. In particular, as the PSC later described its directive, Verizon was directed to take the survey responses for each task and determine the “average time” which Verizon-Delaware had used in its studies, the “mode time (being the most frequently occurring number in the sample), and the “minimum time” and “maximum time.” Order No. 5967 ¶ 88. Verizon was directed to provide results using both its internal survey and the “recently discovered” Andersen survey data. *Id.* On April 9, 2002, Verizon filed the matrix of alternative rate runs (called the “Re-Run Matrix”) requested by the Commission at its March 5, 2002 meeting. Verizon amended the filing on April 16, 2002 to correct minor errors. On April 18 and April 22, 2002, the Commission Staff, the OPA, AT&T and Cavalier filed Comments regarding the Re-Run Matrix. Verizon filed Reply Comments on April 25.

31. At its public meeting on April 30, 2002, the Commission considered the Re-Run Matrix, the Comments, Verizon's Reply Comments, and the oral argument of the parties. The Commission adopted the Verizon NRCM, adjusted to reflect somewhat lower manual work times than what Verizon had originally proposed. Most of the Commissioners' discussion centered around how much time it should take Verizon employees to perform various tasks using Verizon's *existing* systems and processes—the same existing systems the district court had properly ruled were irrelevant to the determination of TELRIC compliant rates. There was no discussion of whether the rates it was adopting were based on the most efficient technology available. Rather, the discussion centered on whether Verizon was using its existing systems in the most efficient way. *See* April 30, 2002 Meeting Tr. at 2414-32. Near the conclusion of the meeting, almost as an afterthought, one Commissioner noted that the rates the PSC was adopting needed to be deemed "TELRIC," as if affixing a TELRIC label to the rates the PSC was approving could somehow paper over its reliance of Verizon's existing systems and processes to set rates. The Commission voted in favor of a motion to apply the TELRIC label. *See id.* at 2435-36.

32. In its Order No. 5967 memorializing that meeting, the PSC agreed with the criticisms leveled by Staff and AT&T that Verizon's NRCM was flawed. Order No. 5967 ¶ 84. It even acknowledged that "alter[ing]" inputs used in the NRCM, was not the "best way of calculating non-recurring rates," but nevertheless reiterated its finding that the results would be "TELRIC-compliant rates." *Id.* ¶ 85.

33. On other key issues, Order No. 5967 made no findings. The PSC did not explain: 1) why it was not using AT&T's forward-looking cost model; 2) why the

methodological shortcomings in the Verizon NRCM identified by the Hearing Examiner and the parties were not real; and 3) why, even apart from Verizon's failure to look at the most efficient processes available rather than its existing processes, Verizon's NRCM could be relied upon in light of the Hearing Examiner's express finding that Verizon had not properly supported its purported "forward-looking" adjustments to its existing processes.

34. On this record, it should be clear that there can be no finding of TELRIC compliance with respect to *any* of the NRCs based upon the non-compliant Verizon model.

## **II. VERIZON'S SERVICE ORDERING NRCS CLEARLY VIOLATE TELRIC PRINCIPLES.**

35. The last minute Verizon compliance filing in Delaware includes a 2 Wire UNE-Loop Service Ordering NRC of \$2.99 that is applied when a CLEC customer discontinues service. That NRC plainly violates TELRIC principles.<sup>2</sup> In fact, Verizon's own cost studies contain no disconnect activities that could (or do) result in costs associated with a Service Order. *See* Table 1 (below).

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<sup>2</sup> These new NRCs were filed at the eleventh hour by Verizon, and CLECs were never given the opportunity to challenge those rates.

**Table 1: Verizon's Non-recurring Cost Model, Originally submitted with Verizon's Direct Testimony.**

**1 Two Wire New Initial**

Line	ACTIVITY DESCRIPTION	Leveliz'd Labor Rate per Minute	Connect Forward Looking Cost	Disconn. Forward Looking Cost	Disconn. Forward Looking Present Worth	Connect + Disconn. Forward Looking Cost
A	B	K	L=F*K	M=J*K	N=M*pwf	O=L+N
<b>SUB-TOTALS:</b>						
1	Service Order		\$8.48	\$0.00	\$0.00	\$8.48
2	C.O. Wiring		\$19.64	\$10.80	\$8.46	\$28.10
3	Provisioning		\$16.84	\$5.97	\$4.68	\$21.52
4	Field Installation		\$109.17	\$0.00	\$0.00	\$109.17

36. Table 1 shows the Subtotals section for the "Two Wire Loop Initial" in VZ-DE NRCM that was originally filed with Verizon's direct testimony. This subsection demonstrates how Verizon develops its forward-looking Connect + Disconnect NRC cost (column O). After forward-looking work times are calculated, the total amounts are carried forward to the "Connect Forward-looking" costs (column L), and "Disconnect Forward-looking" costs (column M). To determine the "Disconnect" forward-looking present value, the "Disconnect Forward-looking" costs (column M) is multiplied by the "present worth factor" (column N). The value in column L is added to the value in column N to derive "Connect + Disconnect Forward looking Cost." It is clear from this table that Verizon reflects no Service Ordering disconnect cost (row 1, column M and N).

37. My experience as an FACS Staff Manager confirms that there should be very little or no Service Order NRC associated with a disconnect. Disconnects are handled electronically by Verizon's Operations Support Systems ("OSS"). Verizon incurs disconnect costs only where disconnect orders fail to flow through Verizon's OSS. During my tenure managing personnel responsible for service order fallout (*i.e.*,

managing personnel responsible for the manual process that are necessary to address orders that do not flow through the OSS), I observed few (if any) disconnect orders that did not fully flow through the OSS.<sup>3</sup>

38. But even if *some* Service Order NRC for disconnects was appropriate (and none was supported in Delaware), Verizon's Delaware Service Order NRC for disconnects would nonetheless plainly be overstated. Verizon's Service Order NRC disconnect is exactly the same as Verizon's Service Order NRC for new connections. That is plainly wrong. Verizon's new connection charge, for example, reflects facilities check costs, which are not incurred in a disconnect.

39. It is my understanding that Verizon has burden of proof to demonstrate that non-recurring costs are just and reasonable. Verizon has not provided any credible evidence to support its new last minute disconnect Service Ordering NRCs. For the above reasons, the NRC Service Ordering rates in Delaware reflect clear TELRIC violations.

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<sup>3</sup> Aside from manual handling of disconnect orders that "fall out" of the OSS system, Verizon has stated that Service Order costs result from manual processing that is necessary to ensure that CLEC orders do not exceed a certain number of facilities. But those cost would only be incurred where Verizon has failed to implement forward-looking OSS systems that are not capable of automatically identifying such orders. Thus, those costs are not TELRIC-compliant.

**III. VERIZON'S SERVICE ORDER FEATURE CHANGE VIOLATES TELRIC AND IS UNJUST, UNREASONABLE AND DISCRIMINATORY.**

40. Verizon's Delaware UNE rates include service order NRCs of \$9.01 for feature changes on subsequent service orders. This charge is unsupported by the rate calculation in Verizon's workpapers. Moreover, Verizon imposes only an \$0.28 charge to process an entire UNE-P initial service order, including whatever features the customer has ordered. *See id.*, line 36. Thus, whereas Verizon claims to incur a *de minimis* NRC for setting up features when a CLEC initially orders features for its customer, Verizon claims that it incurs costs of \$9.01 or more every time that the CLEC customer changes a feature. In the Delaware state UNE proceeding, I submitted a comprehensive non-recurring cost study showing that a forward-looking feature service order change NRC should be no higher than \$0.27.

41. In the past, Verizon has attempted to defend the massive service change order NRCs on the grounds that there are many types of CLEC errors that can cause an order to fall out of Verizon's mechanized systems, requiring manual handling in the National Market Center (formerly 'TISOC'). As examples of errors in CLEC feature change orders, Verizon has asserted that CLECs sometimes ask Verizon to remove a feature that is not actually in place on a given account, or to install a feature on an account where that feature already exists. According to these witnesses, these tasks require manual labor in the forward-looking environment.

42. These assertions are expressly contradicted by Verizon's own cost studies in Delaware. Verizon's non-recurring cost model ("NRCM") workpapers show that Verizon's forward-looking OSS would not require any manual processing of CLEC orders that contain errors. As Table 2 (below) shows, Verizon determined that its

existing embedded systems experience typical fallout rates (orders that must be manually processed due to errors or other problems) of 27%.<sup>4</sup> However, Verizon's subject matter experts in the state UNE rate proceeding determined that Verizon's *forward-looking* systems would experience a 0% drop-out rate for CLEC change orders,<sup>5</sup> and that Verizon would be required to expend zero hours of labor to address CLEC change orders.<sup>6</sup> Thus, Verizon's own cost study shows that a forward-looking cost model should not reflect those costs.

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<sup>4</sup> See Table 2, Line 2, Column D, "Connect Typical Occurrence" (representing Verizon's Subject Matter Expert's opinion on the frequency that this condition typically occurs).

<sup>5</sup> See Table 2, Line 2, Column E, "Connect Forward-Looking Adjustment" (representing Verizon's Subject Matter Expert's opinion on the frequency that this condition typically occurs in a forward-looking environment).

<sup>6</sup> See Table 2, Line 2, Column F, "Connect Forward-Looking Time."

**Table 2. Verizon's Workpaper Showing No Costs Associated With Fallout Of CLEC Change Order Requests.**

28 Features-w/Subsq Order		CONNECT			
Line	ACTIVITY DESCRIPTION	Connect Time (minutes)	Connect Typical Occur'nce	Connect Forward Looking Adjustmt	Connect Forward Looking Time (minutes)
A	B	C	D	E	F (C*D*E)
<b>TISOC</b>					
1	Receive Local Service Request (LSR) from the CLEC and print, review, type and confirm the order request for new installation and/or account.	50.00	38%	61%	11.59
2	Receive Local Service Request from the CLEC and print, review, type and confirm the order request for changes in existing account.	25.00	27%	0%	0.00
3	Respond and/or change CLEC's pending Local Service Request.	20.00	22%	20%	0.88
4	<b>TOTAL</b>	<b>95.00</b>			<b>12.47</b>

43. The reason that Verizon's cost studies reflect 0% fallout for CLEC change orders is probably that Verizon's forward-looking OSS systems can detect such errors and automatically return the improper order to the CLEC without manual intervention required by Verizon employees. If Verizon's OSS are able to identify the types of errors in CLEC orders, then Verizon's OSS should be able to return, without manual intervention, a rejection notice to the CLEC noting the problem with the order. Verizon's forward-looking costs of addressing such errors, therefore, are *de minimis*.

44. Verizon's workpapers, as reproduced in Table 2, raise another serious question: Why do the workpapers, which purport to reflect activities associated with feature service order changes (*i.e.*, activities associated with changes to *existing* lines), reflect no such activities, but do reflect activities associated with new installations? The answer appears to be that Verizon did not actually perform a legitimate cost study to

determine the activities associated with its service order changes. Rather, Verizon appears simply to have imported the activities associated with new UNE-L (also called a “two-wire initial”) service orders into its feature change service order workpapers. As shown in Table 3 (below), the activities originally identified by Verizon for UNE-L orders are identical to those reflected in Verizon’s workpapers relating to feature service orders (Table 2). This fact helps to explain why Verizon’s feature service order change workpapers reflect no activities associated with feature service order changes; there are no features associated with a UNE-Loop order because those orders do not involve a switch port (the electronics that provide features).

**Table 3. Verizon's Original Workpapers Showing Activity Descriptions For Two Wire New Initial Orders.**

<b>1 Two Wire New Initial</b>		<b>CONNECT</b>			
<b>Line</b>	<b>ACTIVITY DESCRIPTION</b>	<b>Connect Time (minutes)</b>	<b>Connect Typical Occurrence</b>	<b>Connect Forward Looking Adjustmt</b>	<b>Connect Forward Looking Time (minutes)</b>
<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F=C*D*E</b>
	<b>TISOC</b>				
1	Receive Local Service Request (LSR) from the CLEC and print, review, type and confirm the order request for new installation and/or account.	50.00	38%	61%	11.59
2	Receive Local Service Request from the CLEC and print, review, type and confirm the order request for changes in existing account.	25.00	27%	0%	0.00
3	Respond and/or change CLEC's pending Local Service Request.	20.00	22%	20%	0.88
4	<b>TOTAL</b>	<b>95.00</b>			<b>12.47</b>

45. To the extent that a proxy for computing feature service order change activities should be used at all, a more appropriate proxy for feature order change activities is the set of activities reflected in Verizon's UNE-Platform workpapers. UNE-Platform orders typically include installation of switch features. Furthermore, most feature service order changes arise from CLEC customers served via the UNE-platform. Accordingly, UNE-P activities are a better surrogate for feature service order charge activities than are UNE-L activities. The activities that Verizon has attributed to UNE-P are shown below in Table 3.

**Table 4. Verizon's Workpapers Showing Activity Descriptions For UNE-Platform Orders.**

Two Wire Analog-Dig UNE-P 36 New Initial		CONNECT			
Line	ACTIVITY DESCRIPTION	Connect Time (minutes)	Connect Typical Occur'nce	Connect Forward Looking Adjustmt	Connect Forward Looking Time (minutes)
A	B	C	D	E	F=C*D*E
	<b>TISOC</b>				
1	Receive Local Service Request (LSR) from the CLEC and print, review, type and confirm the order request for new installation and/or account.	6.06	26%	18%	0.28
2	Receive Local Service Request from the CLEC and print, review, type and confirm the order request for changes in existing account.	3.83	18%	13%	0.09
3	Respond and/or change CLEC's pending Local Service Request.	1.86	8%	7%	0.01
4	<b>TOTAL</b>	11.75			0.38

46. As shown in Table 4, there are .09 minutes associated with service order changes on UNE-P orders. Those costs should have been excluded from UNE-P order costs and could be used to compute the cost of feature service order changes. Thus, to the extent that Verizon's feature service order change activities can be estimated using proxy data, Verizon's feature service order charge should be based on activities that take .09 minutes, not 12.47 minutes as Verizon asserts. This method would produce a result that is similar to the feature service order change that I computed in the state UNE pricing proceeding of \$.27.

47. In any event, the minutes of activities associated with feature service order changes should not exceed the total minutes of activities associated with the more

complex UNE-P orders. Verizon's feature order change NRC, therefore, should not exceed \$0.28.

48. Returning to Verizon's improper use of UNE-L activities as a proxy for feature service order change activities, if Verizon is permitted to continue using its UNE-L activities as a proxy for its service order changes, Verizon at least should use the costs of UNE-L activities reflected in its Delaware *compliance* filings – not the UNE-Loop costs that Verizon initially submitted to the PSC. The UNE-L activities reflected in Table 3 above (and that apparently were used by Verizon to compute feature order change costs as shown in Table 2) are those that Verizon initially filed with the PSC in the state UNE rate proceeding.

49. Those compliance filings show that Verizon substantially reduced its UNE-L service order activity estimates. As shown in Table 5 (below), Verizon's compliance filing reduced UNE-L order-related activities from 12.47 minutes to 4.13 minutes. Therefore, to the extent that Verizon is using its UNE-L order related-activities as a proxy for feature order change activities, Verizon also should have reduced the activities associated with feature order changes from 12.47 minutes to 4.13 minutes.

**Table 5. Verizon's Compliance-Filing Workpapers Showing Activity Descriptions For Two Wire New Initial Orders.**

1 Two Wire New Initial		CONNECT			
Line	ACTIVITY DESCRIPTION	Connect Time (minutes)	Connect Typical Occur'nce	Connect Forward Looking Adjustmt	Connect Forward Looking Time (minutes)
A	B	C	D	E	F=C*D*E
	<b>TISOC</b>				
1	Receive Local Service Request (LSR) from the CLEC and print, review, type and confirm the order request for new installation and/or account.	16.88	38%	61%	3.91
2	Receive Local Service Request from the CLEC and print, review, type and confirm the order request for changes in existing account.	7.74	27%	0%	0.00
3	Respond and/or change CLEC's pending Local Service Request.	5.06	22%	20%	0.22
4	<b>TOTAL</b>	<b>29.67</b>			<b>4.13</b>

**IV. VERIZON'S FIELD INSTALLATION NRCs ARE NOT TELRIC COMPLIANT.**

50. Verizon's Field Installation NRCs also violate TELRIC costing principles and discriminate against CLECs. Indeed, Verizon effectively recovers these costs *twice*, once through recurring charges and again through non-recurring charges.

51. The Field Installation activities at issue relate to work that is between the NID and the central office, such as connecting the feeder cables to the distribution cables (e.g., the field cross-connect at the Feeder Distribution Interface). Verizon imposes Field Installation NRCs when facility paths are not established between the NID and the central office MDF. Verizon included these Field Installation activities in its VZ-DE NRCM cost study on the ground that on its existing network such field activities are *sometimes* necessary to fulfill a CLEC's request. Verizon imposes a Field Installation NRCs

whenever it chooses to dispatch a technician to complete the CLEC's request. However, Verizon is wrong for assuming these activities are proper NRC activities for the following reasons.

52. There should be no NRC associated with these field activities. The loop element as typically and appropriately analyzed in UNE recurring cost analysis, represents a complete transmission facility between the NID and the Central Office<sup>7</sup>. As such, it includes all features, functions, capabilities and connections of such a transmission facility. The forward-looking economic recurring cost of the local loop, reflected by the recurring monthly rate for the use of that loop, includes all of the costs associated with the construction and maintenance of the network including the necessary

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<sup>7</sup> FCC Rule 47 C.F.R. § 319(a) defines the unbundling requirement for the "local loop" network element as follows:

(a) **Local Loop and Subloop.** An incumbent LEC shall provide nondiscriminatory access, in accordance with § 51.311 and section 251(c)(3) of the Act, to the local loop and subloop, including inside wiring owned by the incumbent LEC, on an un-bundled basis to any requesting telecommunications carrier for the provision of a telecommunications service.

(1) **Local Loop.** The local loop network element is defined as a transmission facility between a distribution frame (or its equivalent) in an incumbent LEC central office and the loop demarcation point at an end-user customer premises, including inside wire owned by the incumbent LEC. The local loop network element includes all features, functions, and capabilities of such transmission facility. Those features, functions, and capabilities include, but are not limited to, dark fiber, attached electronics (except those electronics used for the provision of advanced services, such as Digital Subscriber Line Access Multiplexers), and line conditioning. The local loop includes, but is not limited to, DS1, DS3, fiber, and other high capacity loops.

(2) **Subloop.** The subloop network element is defined as any portion of the loop that is technically feasible to access at terminals in the incumbent LEC's outside plant, including inside wire. An accessible terminal is any point 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. Such points may include, but are not limited to, the pole or pedestal, the network interface device, the minimum point of entry, the single

cross-connections to complete the transmission path. In other words, the UNE loop recurring cost is the cost associated with building and maintaining the transmission facility and is not the cost of laying feeder cable somewhere near distribution cable (to be connected at some later date). Thus, it must necessarily include the cost of this field cross-connect. Without the cross-connect, the loop will not work. Accordingly, Verizon already recovers through its recurring UNE rates the cross-connect costs that it has improperly included in a separate “field installation” NRC.

53. Verizon claims that cross-connect and other field installation activity costs are nonetheless appropriately recovered (or, more precisely, double recovered) through separate NRCs because those costs are “incurred in response to a specific event initiated by a specific cost-causer and [that] generally involve easily identifiable, concrete costs.” Verizon tags the CLEC’s service order request as the specific event that “causes” the field installation costs to occur. But that is no response at all to the problem of double recovery – Verizon already recovers the same costs in its recurring charges. Moreover, the continual need to increase, rearrange and maintain network facilities in response to demand increases, maintenance problems and customer moves arises regardless whether consumers are served by the ILEC or a CLEC, so the CLEC is *not* in any meaningful sense the cost causer – indeed, it would be flatly discriminatory to impose “field installation” costs on CLECs based on the fortuity that a cross-connect is required to make the particular UNEs they order operational. Indeed, the field installation NRC *facilitates* anticompetitive discrimination. Verizon controls the assignment of facilities

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point of interconnection, the main distribution frame, the remote terminal, and the feeder/distribution interface.

necessary to meet service demands. If multiple facilities are available at particular service address, there is nothing preventing Verizon from assigning facilities that require Field Dispatch, and recovering costs through non-recurring rates, even though connected facilities may already exist. Clearly CLECs are at Verizon's mercy.

54. Verizon has relied upon the FCC's *Local Competition Order* in support of its claim that it is "entitled to recover one-time costs caused by a CLEC order on a non-recurring basis from that CLEC," citing *Local Competition Order* at ¶¶ 742-743 ("We conclude, as a general rule, that incumbent LECs' rates for interconnection and unbundled elements must recover costs in a manner that reflects the way they are incurred. This will conform to the 1996 Act's requirement that rates be cost-based, ensure requesting carriers have the right incentives to construct and use public network facilities efficiently, and prevent incumbent LECs from inefficiently raising costs in order to deter entry"). In fact, *Local Competition Order* ¶ 743 makes clear that field installation activity is properly recovered in recurring charges. Paragraph draws reference to "charges for dedicated facilities be flat-rated, including, but not limited to, charges for unbundled loops, dedicated transport, interconnection, and collocation." "Flat rated charges" classifies the cost as a recurring cost. Field installation activities are necessary to construct new loops between the NID and the central office, maintain the network, (*i.e.*, repairs), and rearrange the network to meet demand needs (*i.e.*, moves). All of these categories of costs are factored into recurring cost estimates and recovered through flat rate monthly (recurring) charges.

55. Moreover, as a normal practice ILECs generally make every effort to leave this field cross-connection in-place when the customer disconnects their service.

Thus, any cross-connect made at the time of a CLEC's UNE request will remain in place well after the customer switches to another carrier, such as Verizon. All carriers benefit from the existence of functional loops and other UNEs, which is another reason they are properly recovered through recurring charges. Under Verizon's approach, in contrast, the first user of the loop facility pays the full cost to add this cross-connect through NRCs (to make it a functional transmission facility), while the next user of that same facility pays nothing. The cost of installing equipment that successive carriers can use should be recovered as part of the recurring UNE rates, and not through a one-time non-recurring charge.

56. This inappropriate condition allowing Verizon to collect Field Installation NRC's arbitrarily, becomes even more exaggerated when existing retail customers who may be provisioned on existing IDLC facilities require a field dispatch to migrate services to a UNE-Loop. The CLEC may not know, nor will the end user customer know at time of service order creation that additional cost will result upon completion of the migration request.

57. In two recent decisions, state regulators have found Verizon's practice to be unlawful. In Massachusetts the DTE found:

A cross-connect at the FDI is installed by Verizon in order to fulfill CLEC orders and may be left in place after a CLEC discontinues service or may be moved if needed to serve another customer (Tr. 3, at 540). Thus, the field installation costs that Verizon incurs to fulfill a CLEC order may benefit a CLEC exclusively or may benefit future customers, including Verizon, if Verizon becomes the carrier serving the retail end user when a CLEC discontinues service. When end users migrate back to Verizon from a CLEC, Verizon benefits directly from tasks associated with making loops functional (Exh. VZ-14, at 14; *see also* Tr. 3, at 540-541).

If, in fulfilling a wholesale order, Verizon must remedy defective outside plant, it proposes to recover the cost of such activities from the CLEC because the CLEC's order is the "triggering" event (Tr. 4, at 679). In the retail environment, Verizon computes service order installation costs based on an estimate of the percentage that would require a field dispatch, and does not impose the cost on the particular customer who happened to "trigger" the need for loop work (*id.* at 680-681). If Verizon must fix defective outside plant in fulfilling a retail order, it recovers such costs through its retail charges (*id.* at 679-681). Verizon's witness stated that, "It's my understanding that the cost of a dispatch, if you will, in general for a retail customer is recovered across all orders, whether a dispatch occurs or not" (*id.* at 680).

Verizon, in some instances, such as when the cross-connection between the feeder cable and the distribution cable remains in place after a CLEC discontinues service, will avoid incurring field installation and loop maintenance work as a direct result of having conducted such work to fulfill a CLEC order in the past (Tr. 3, at 539-541). Should Verizon then directly serve the same end-user through its own retail offering, it will benefit from avoiding these costs. An equitable cost recovery therefore should not shift the field dispatch cost to the CLEC as an NRC. In those instances where the field installation tasks are necessary to fulfill a CLEC order, Verizon's proposed NRCM would *always* impose these field installation costs on the CLECs as NRCs.<sup>8</sup>

58. The DTE therefore concluded:

Verizon's proposal to recover these costs in a nonrecurring manner unfairly penalizes the CLEC, which, by circumstances that it cannot control, happens to be the carrier that requests a UNE where field dispatch occurs. A more equitable way to compute the costs of field dispatch and to minimize the barrier to entry is for Verizon to recover these costs through its ACF.

Verizon also inappropriately includes loop maintenance costs in its NRCM. The FCC stated that, "we determine that maintenance expenses relating to the local loop must be recovered through the recurring loop

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<sup>8</sup> Massachusetts Department of Telecommunications and Energy, DTE 01-20, 7-11-2002, (p. 420-423), Investigation by the Department of Telecommunications and Energy on its own Motion into the Appropriate Pricing, based upon Total Element Long-Run Incremental Costs, for Unbundled Network Elements and Combinations of Unbundled Network Elements, and the Appropriate Avoided-Cost Discount for Verizon New England, Inc. d/b/a Verizon Massachusetts' Resale Services in the Commonwealth of Massachusetts.

charge, rather than through a nonrecurring charge imposed upon the entrant.” *Local Competition Order* at ¶ 745. Accordingly, Verizon should recover loop maintenance costs through its ACF. Verizon contends that there are certain maintenance activities that it would not incur except when necessary to fulfill specific orders. As with field dispatch costs, by increasing the NRC, the inappropriate recovery of loop maintenance costs creates an unnecessary barrier to entry. Furthermore, the recovery of such costs from the CLEC that happens to have ordered UNEs where loop maintenance activity is required unfairly penalizes the CLEC because the CLEC cannot control whether Verizon’s network requires maintenance.

59. Likewise, a Pennsylvania Public Utility Commission ALJ found Verizon’s NRC pricing methodology to be incorrect, and therefore rejected Verizon’s NRCM stating:

AT&T/WCOM also challenge Verizon's proposal to impose a non-recurring charge for the physical cross-connection of a loop's feeder and distribution plant at the feeder distribution interface (“FDI”). They argue that this cost should be recovered in recurring rates because the connection need only be made once; it can be reused for subsequent customers at the same location. They contend that this connection is part of the overall loop, the cost of which already includes construction and maintenance, including placement of the cross-connect at the FDI. (AT&T/WCOM Main Brief at 182-184). Verizon responds that its proposal is consistent with an FCC ruling:

“To the extent that the equipment needed for expanded interconnection service is dedicated to a particular interconnector, . . . requiring the interconnector to pay the full cost of the equipment up front is reasonable . . . regardless of whether the equipment might be reusable.”<sup>9</sup>”

60. Tellingly, Verizon omits from its quotation the very next sentence in the FCC's commentary:

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<sup>9</sup> Second Report and Order, *Local Exchange Carriers’ Rates, Terms and Conditions for Expanded Interconnection through Physical Collocation for Special Access and Switched Transport*, 12 FCC Rcd 18730, 18750 ¶ 33 (June 13, 1997) (emphasis added); see also *Local Competition Order* ¶ 751.

To the extent that the equipment needed to provide expanded interconnection service is reusable, we believe that the pro rata refund requirement that we set forth in Section II.B.6 below properly compensates interconnectors for the assets for which they have already paid fully, but that the LEC can use to provide service to another company after the interconnector disconnects.

*Second Report and Order, Local Exchange Carriers' Rates, Terms and Conditions for Expanded Interconnection through Physical Collocation for Special Access and Switched Transport*, 12 FCC Rcd 18730, 18750 ¶ 33 (June 13, 1997).

61. One might infer that Verizon truncates the quote where it does because Verizon has not proposed any refund mechanism here, as required by the FCC. (AT&T/WCOM Main Brief at 98). I recommend that Verizon be required to either treat these charges as recurring instead of non-recurring, or propose a refund mechanism as required by the FCC.<sup>10</sup>

62. CLEC Customers, requesting UNEs in Delaware will continue to be disadvantaged so long as Verizon is allowed to recover its unlawful Field Installation NRC.

**V. VERIZON'S DELAWARE HOT CUT RATES ARE NOT TELRIC-COMPLIANT.**

63. Verizon's Delaware hot cut NRC is \$35. That hot cut NRC is not based on any cost study. Instead, the Delaware commission simply adopted that rate because that is the rate implemented by Verizon in New York and in New Jersey. But as I demonstrated in my testimony in the New Jersey Section 271 proceeding, \$35 is not a

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<sup>10</sup> *Before The Pennsylvania Public Utility Commission*, Docket No. R-00016683, May 3, 2002, (p. 69-70).

TELRIC-compliant rate in either New Jersey or in New York.<sup>11</sup> And Verizon has made no showing that a \$35 hot cut rate in New Jersey complies with TELRIC. As I have demonstrated in the past (*see id.*), TELRIC compliant hot cut rates should not exceed \$5.00. On this record, Verizon plainly has failed to demonstrate that its Delaware hot cut rates comply with TELRIC principles. Moreover, Verizon's \$35 hot cut rate is only temporary. In less than two years, Verizon's Delaware hot cut rate will increase to well over \$100.

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<sup>11</sup> *See Application of Verizon New Jersey, Inc., BellAtlantic Communications, Inc. (d/b/a Verizon Long Distance), NYNEX Long Distance Company (d/b/a/ Verizon Enterprise Solutions), Verizon Global Networks, Inc., and Verizon Select Services, Inc., for Authorization to Provide In-Region InterLata Services in New Jersey, Supplemental Declaration Of Richard J. Walsh On Behalf Of AT&T Corp., CC Docket No. 01-347 (filed March 13, 2002).*

**VERIFICATION PAGE**

I declare under penalty of perjury that the foregoing Declaration is true  
and correct.

/s/ Richard Walsh  
Richard Walsh

Executed on: July 17, 2002