

Function:		
OD-3 DA Database Update Accuracy		
Definition:		
Directory Assistance. For Directory Assistance updates completed during the reporting period, the update order that the CLEC sent to VZ is compared to the Directory Assistance database following completion of the update by VZ. An update is "completed without error" if the Directory Assistance database accurately reflects the new listing, listing deletion or listing modification, submitted by the CLEC.		
Methodology:		
This measurement will be performed using statistically valid samples.		
Exclusions:		
None.		
Formula:		
$\left[\frac{\text{Number of updates completed without error}}{\text{Number of updates completed}} \right] \times 100$		
Performance Standard:		
Metric OD-3-01: Parity with VZ Retail.		
Report Dimensions:		
Company:	Geography:	
<ul style="list-style-type: none"> • VZ Retail • CLEC Aggregate • CLEC Specific • VZ Affiliate Aggregate • VZ Affiliate Specific 	<ul style="list-style-type: none"> • State 	
Sub-Metrics		
OD-3-01	% Directory Assistance Update Accuracy	
Calculation	Numerator	Denominator
	Number of updates completed without error.	Total number of updates completed.

General (GE)

Function:		
GE-1 Directory Listing Verification Reports		
Definition:		
<p>This metric measures the percentage of directory listing verification reports transmitted on or before the due date. For the purposes of this metric, the due date for a directory listing verification report will be deemed to be the date 30 business days prior to the close out date for the directory. The process for obtaining listing verification reports is documented in VZ's CLEC and Reseller Handbooks.</p>		
Exclusions:		
<ul style="list-style-type: none"> • Reports that the CLEC has requested be transmitted less than 30 business days prior to the close out date for the directory. 		
Performance Standard:		
95% of directory listing verification reports transmitted on or before the due date.		
Report Dimensions		
Company:	Geography:	
<ul style="list-style-type: none"> • CLEC Aggregate • CLEC Specific • VZ Affiliate Aggregate • VZ Affiliate Specific 	<ul style="list-style-type: none"> • State 	
Sub-Metrics		
GE-1-01	% of Directory Listing Verification Reports Furnished On-Time	
Calculation	Numerator	Denominator
	Number of directory listing verification reports due in the reporting period that are transmitted on or before the due date.	Total number of directory listing verification reports due in the reporting period.

Function:		
GE-2 Poles, Ducts, Conduit and Rights of Way		
Definition:		
This metric measures the percentage of requests for access to VZ poles, ducts, conduit and rights of way, for which a response stating whether access will be granted is transmitted on or before the due date. For the purposes of this metric, the due date for a response to a request for access will be deemed to be the date 45 days after VZ's receipt of the request.		
Exclusions:		
<ul style="list-style-type: none"> • Requests for access where the requesting party has agreed to receive a response to the request more than 45 days after VZ's receipt of the request. 		
Performance Standard:		
Parity with VZ Retail.		
Report Dimensions		
Company:	Geography:	
<ul style="list-style-type: none"> • VZ Retail • CLEC Aggregate • CLEC Specific • VZ Affiliate Aggregate • VZ Affiliate Specific 	<ul style="list-style-type: none"> • State 	
Sub-Metrics		
GE-2-01	% of Access Request Responses Transmitted On-Time	
Calculation	Numerator	Denominator
	Number of access request responses due in the reporting period that are transmitted on or before the due date.	Total number of access request responses due in the reporting period.

Function:		
GE-3 Bona Fide Request Responses		
Definition:		
This metric measures the percentage of bona fide requests ("BFRs") for access to UNEs, for which a response stating whether the requested access will be offered is transmitted on or before the due date. For the purposes of this metric, the due date for a response to a request for access will be deemed to be the due date specified in the CLEC's interconnection agreement with VZ or such later date as may have been agreed to by the CLEC and VZ.		
Exclusions:		
<ul style="list-style-type: none"> • None. 		
Performance Standard:		
No standard. Not included in Performance Assurance Plan Payments.		
Report Dimensions		
Company:	Geography:	
<ul style="list-style-type: none"> • CLEC Aggregate • CLEC Specific • VZ Affiliate Aggregate • VZ Affiliate Specific 	<ul style="list-style-type: none"> • State 	
Sub-Metrics		
GE-3-01	% of BFR Responses Furnished On-Time	
Calculation	Numerator	Denominator
	Number of BFR access request responses due in the reporting period that are transmitted on or before the due date.	Total number of BFR access request responses due in the reporting period.

Glossary

VZ Administrative Orders	Orders completed by VZ for administrative purposes and NOT at the request of a CLEC or end user. These also include administrative orders for VZ official lines. [SWO<>"NC", "NF"] [CLS<>TOV, or CLS_2<>TOV]
VZ Affiliate	"VZ Affiliate" means a person that (directly or indirectly) controls, is controlled by, or is under common control with, VZ, and that orders services, UNE or interconnection from VZ.
<u>Basic Front-End Edits</u>	Front-end edits performed by EDI/Web GUI prior to order submission. Basic Edits performed against EDI/Web GUI provided source data include: State Code must equal DE, DC, MD, NJ, PA, VA, WV; CLEC Id cannot be blank; All Dates and Times must be numeric; Order Type must be '1','2','3','4'; Svc Order Type must be '0', '1' '2'; Flowthru Candidate Ind and Flowthru Indicator must be 'Y' or 'N'; Lines Number must be numeric; Service Order Classification must be '0' or '1'; Confirmation Method must be 'E', 'M' 'W'; Each submission must have a unique key (PON + Ver + CLEC Id + State); Confirmation, Reject and Completion Transactions must have matching Submission record. Any changes to basic edits will be provided via VZ Change Control procedures.
Business Day	Monday through Friday, excluding Holidays.
CLEC Trunks	As used in Metrics PR-4, PR-5, PR-6, PR-8, MR-2, MR-4 and MR-5, "CLEC Trunks" includes: (1) CLEC to VZ Trunks provided by VZ to CLECs; and, (2) VZ network facilities connecting VZ to CLEC Trunks to the VZ network.
Collocation Milestones	VZ and the CLEC shall work cooperatively to jointly plan the implementation milestones. An implementation schedule will be developed outlining milestones. VZ and the CLEC shall work cooperatively in meeting milestones as determined during the joint planning process. The interval clock will stop, and the final due date will be adjusted accordingly, for each milestone the CLEC misses (day for day).
Completion Date	Except for Metric PR-2, the date noted on the service order as the date that all physical work is completed as ordered.
Complex Services	For Retail and Resale, ISDN BRI. For Retail ADSL service. For UNE, 2 Wire Digital Services (2 wire digital loops and ISDN BRI switch ports), and 2 Wire xDSL Services (2 wire xDSL loops and 2 wire xDSL Line Sharing).
Coordinated Cut over	A coordinated cut-over is the live manual transfer of a VZ end user to a CLEC completed with manual coordination by VZ and CLEC technicians to minimize disruptions for the end user customer. Also known as a "hot cut". These all have fixed minimum intervals.
CPE	Customer Premises Equipment
Dispatched Orders:	An order requiring the dispatch of a Verizon Field technician outside of a Verizon Central Office. Intervals differ by line size.
Disposition Codes	The code assigned by the field technician upon closure of trouble. This code identifies the plant type/location in the network where the trouble was found.
Flow-Through Orders	Orders received through the electronic ordering interface (EDI, Web GUI) and processed directly to the legacy service order processor ("SOP") without manual intervention. These service orders require no action by a VZ service representative to type an order into the service order processor.
Loop Qualification	Loop qualification is the manual step whereby it is determined if the loop facility meets or can be made to meet specifications necessary for ISDN or xDSL services.
LSR	Local Service Request
LSRC	Local Service Request Confirmation
No-Dispatch Orders	Orders completed without a dispatch outside a Verizon Central Office. Includes orders with translation changes and dispatches inside a Verizon Central Office.
OSS	Operations Support Systems

Parity with VZ Retail (CLEC to VZ Trunks, and CLEC Trunks)	For CLEC to VZ Trunks provided by VZ to CLECs, and CLEC Trunks, "Parity with VZ Retail" is determined by comparing VZ's performance with regard to such trunks and facilities to VZ's performance with regard to IXC Feature Group D trunks provided by VZ to IXCs.
Performance Assurance Plan Payments	Credits, billing adjustments, remedies, damages, liquidated damages, penalties, financial incentives, and any other payments, that VZ is obligated to provide or pay under the Commission's order in <u>Joint Petition of Nextlink Pennsylvania, Inc., et al., Docket No. P-00991643 (December 31, 1999)</u> , (including, but not limited to, under Tiers I through III of the "Incentive Plan" discussed at Pages 158 through 161 of the order), under the Commission's orders in Joint Petition of Nextlink Pennsylvania, Inc., et al., Docket Nos. P-00991648, P-00991649 and P-00991643, or under other orders of the Commission.
POTS Services	<u>Plain Old Telephone Services</u> include all non-designed lines/circuits that originate at a customer's premise and terminate on an OE (switch Office Equipment). POTS includes Centrex and PBX trunks. POTS does not include Complex Services.
PON	<u>Purchase Order Number</u> : Unique purchase order provided by CLEC to VZ placed on Local Service Request ("LSR") or Access Service Request ("ASR") as an identifier of a unique order.
POTS Platform	The Analog POTS Platform as defined in VZ Tariff Pa. P.U.C.-No. 216.
Projects	Projects are designated by CLECs. For Trunks, any request for a new trunk group, augment for more than 384 trunks, complex (E911 or DA), or request out of the ordinary requiring special coordination, such as rearrangements, is considered a project.
Reject	An order is rejected when there are omissions of or errors in required information. Rejects also include queries where notification is provided to a CLEC for clarification on submitted orders. The order is considered rejected and order processing is suspended while a request is returned or queried.
Segment	Segments are parts of whole orders. [NVL SEGMENT, 0=<1] A segment is used to apportion a longer order to meet limitations of record lengths. Similar to a separate page or section on the same order.
SOP	Service Order Processor
Special Services	Any service or element involving circuit design. Any service or element with four wires. Any DS0, DS1 and DS3, non-access service. Excludes trunks (CLEC to VZ Trunks, CLEC Trunks, VZ to CLEC Trunks). IOF and EEL are separately reported for provisioning.
Stop Clock	A measure of duration time where some time is excluded. The clock is stopped when testing is occurring, VZ is awaiting carrier acceptance, or VZ is denied access.
Suspend for non-payment and associated restore orders.	Includes: (a) orders to suspend VZ Retail customer service for non-payment and to restore service suspended for non-payment; and, (b) for Resale service, CLEC orders to suspend CLEC customer service for non-payment and to restore service suspended for non-payment, provided such orders are submitted to VZ as orders to suspend for non-payment and restore service suspended for non-payment, pursuant to VZ's CLEC suspend for non-payment service.
Test Orders	Orders processed for "fictional" CLECs for VZ to test new services, attestation of services etc. Includes the following CLEC AECN's: 'DPC', 'DPCL', 'NYNX', 'ZKPM', 'ZPSC', 'ZTKP', 'ZTPS', 'ZJIM'.

2 Wire Digital Loop	2 wire unbundled digital loop that is compatible with ISDN Basic Rate service. It is capable of supporting simultaneous transmission of 2 B channels and One D channel. It must be provided on non-loaded facilities with less than 1300 OHMs of resistance and not more than 6 kft of bridge tap. This service provides a digital 2-wire enhanced channel. It is equivalent to a 2-wire loop with less than 18,000 feet from the NID at the end user's premises to the main distributing frame (which is connected to the CLEC's collocation arrangement), in Verizon's central office where the end user is served. The 2-wire digital – ISDN BRI loop currently offered by Verizon is designed to support the Integrated Services Digital Network (ISDN) Basic Rate Service which operates digital signals at 160 kilobytes per second (kbps).
2 Wire Digital Services	For Retail and Resale, ISDN BRI service. For UNE, 2 wire digital loops and ISDN BRI switch ports.
2 Wire xDSL Services	For Retail, ADSL service. For UNE, 2 wire xDSL loops and 2 Wire xDSL Line Sharing.

ATTACHMENT B

July 18, 2001

James J. McNulty, Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street
Harrisburg, Pa. 17120

Re: Performance Standards and Remedies - Docket No. P-00991643

Dear Secretary McNulty:

As you are aware, on June 6, 2001 the Pennsylvania Public Utility Commission ("Commission") issued its letter concerning the consultative report on Verizon Pennsylvania Inc.'s ("Verizon PA") Application to Provide In-Region InterLATA Services (Docket No. M-00001435) ("June 6 Letter"). In this letter, the Commission set forth certain conditions that Verizon PA must accept in order for the Commission to issue a favorable consultative report. Verizon PA has previously agreed to accept these conditions. The purpose of this letter is to memorialize Verizon PA's compliance with the Commission's conditions regarding those conditions that pertain to electronic billing and the Performance Assurance Plan ("PAP").

The Commission has set forth the following requirements for electronic billing (*see* June 6 Letter at 4):

- 1. update, in consultation with staff, the Pennsylvania billing metrics applicable to the paper bill so as to make them applicable to electronic billing effective for performance beginning July, 1, 2001;*
- 2. increase billing remedies payments as follows: for violations up to 30 days, \$50,000 per metric per affected CLEC; for violations up to 60 days, \$75,000 per metric per affected CLEC; and for violations up to 90 days and each month thereafter, \$100,000 per metric per affected CLEC; and*
- 3. increased billing remedies will remain in effect until conclusion of the further proceeding called for in ordering paragraph 16 of the Commission's final order in Docket No. M-00001353, or for performance through December 31, 2001, whichever comes first.*

Verizon PA has satisfied these requirements. As to the first requirement, Verizon PA and Commission Staff have jointly agreed that billing metrics BI-2 and BI-3 will be modified and made applicable to electronic billing (BOS format). I have attached new Carrier-to-Carrier guidelines for BI-2 and BI-3 that incorporate the changes to which Verizon PA and the

Commission Staff have agreed. Verizon PA will report results for these modified measurements starting with the July performance results (report to be delivered on August 27, 2001).

Verizon PA and Commission Staff have also jointly agreed that starting with the July 2001 performance results, Verizon PA will begin paying remedies for billing metrics BI-2-02 and BI-3-03 at the increased levels set out in the second requirement set out above, and that these increased billing remedies will remain in effect during the time frame set out in requirement three above.

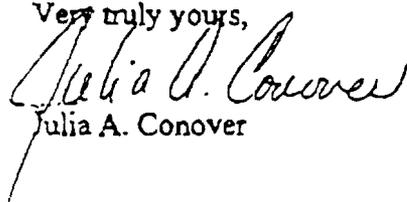
These new self-executing remedy levels will be detailed on the summary remedy report provided to the Commission. This report is normally available approximately 10 business days after Verizon PA files its monthly Carrier-to-Carrier reports. Verizon PA will also provide a CLEC-specific copy of this report directly to all CLECs who are paid remedies.

Verizon PA has previously informed CLECs through the Change Control Process that if a CLEC decides to make the electronic bill its bill of record, the CLEC should contact its Verizon Account Manager.

As you are also aware, one of the conditions of the Commission's decision in Docket No. M-00001353 that Verizon PA was required to accept is that beginning with July 1, 2001 performance, Tier II remedies payments for metrics that are missed beyond ninety (90) days shall be set at the amount of \$25,000 and shall be self-executing and applicable to all metrics. Verizon PA has agreed to this requirement. Starting with the July performance results, Verizon PA will abide by these increased remedies payments for all metrics currently contained in the PAP that are subject to Tier II remedies, with the exception of BI-2-02 and BI-3-03, which will be administered consistent with the requirements of the June 6 Letter.

Please contact me if you have any questions regarding this matter.

Very truly yours,



Julia A. Conover

Attachment

cc: Ms. Fink-Smith
Mr. Wagner
Judge Schnierle
Attached Certificate of Service

Function:		
BI-2 Timeliness of Carrier Bill		
Definition:		
The percentage of carrier bills sent to the carrier within 10 business days of the bill date. The bill date is the end of the billing period for recurring, non-recurring and usage charges. Performance will be reported by CLEC based upon bill of record.		
Electronic – BOS is an industry billing format standard, commonly referred to as BOS BDT.		
Exclusions:		
<ul style="list-style-type: none"> • A bill whose transmission is delayed at the request of the billed carrier. 		
Formula:		
$\left[\frac{\text{Number of bills sent within 10 business days}}{\text{Number of bills sent}} \right] \times 100$		
Performance Standard:		
98% in 10 Business Days		
Report Dimensions		
Company:	Geography:	
<ul style="list-style-type: none"> • CLEC Aggregate • CLEC Specific • VZ Affiliate Aggregate • VZ Affiliate Specific 	<ul style="list-style-type: none"> • State 	
Sub-Metrics		
BI-2-01	Timeliness of Carrier Bill – Paper Bills	
Products	CRIS paper carrier bills and CABS paper carrier bills (combined data)	
Calculation	Numerator	Denominator
	Count of paper carrier bills sent to CLEC within 10 business days of bill date.	Count of paper Carrier Bills distributed
BI-2-02	Timeliness of Carrier Bill – Electronic Bills – BOS format	
Products	Electronic Carrier Bills	
Calculation	Numerator	Denominator
	Count of electronic carrier bills (BOS format) sent to CLEC within 10 business days of bill date.	Count of electronic Carrier Bills distributed (BOS format)

Function:**BI – 3 Billing Accuracy****Definition:**

The percentage of carrier bill VZ charges adjusted due to billing errors. Performance will be reported by CLEC based upon bill of record.

Electronic – BOS is an industry billing format standard, commonly referred to as BOS BDT.

Exclusions:

- Adjustments that are not billing errors such as: charges for directories, incentive regulation credits, Performance Assurance Plan Payments, out of service credits, special promotional credits.

Performance Standard:

Metric BI-3-01 and BI-3-03: Parity with VZ Retail (excluding charges adjusted due to billing errors resulting from order activity post completion discrepancies).

Metric BI-3-02: No standard. Not included in Performance Assurance Plan Payments.

Report Dimensions

Company:

- VZ Retail
- CLEC Aggregate
- CLEC Specific
- VZ Affiliate Aggregate
- VZ Affiliate Specific

Geography:

- State

Sub-Metrics

BI-3-01 % Billing Adjustments – Paper Bills (CRIS & CABS combined)

Calculation	Numerator	Denominator
	Count of dollars adjusted for billing errors on Paper Bill	Total Dollars Billed on Paper Bill

BI-3-02 % Billing Adjustments – Number of Adjustments

Calculation	Numerator	Denominator
	Count of adjustments for billing errors	Total Bills

BI-3-03 % Billing Adjustments – Electronic Bills – BOS Format

Calculation	Numerator	Denominator
	Count of dollars adjusted for billing errors on Electronic Bill (BOS format)	Total Dollars Billed on Electronic Bill (BOS format)

ATTACHMENT C

**PENNSYLVANIA PUBLIC UTILITY COMMISSION
PERFORMANCE ASSURANCE PLAN FOR
VERIZON-PENNSYLVANIA, INC.
May 21, 2001**

Introduction.

The purpose of performance measurements, standards, refunds, and "liquidated damages" is to ensure that Verizon Pennsylvania, Inc. ("Verizon PA") continues to provide high quality services to Competitive Local Exchange Carriers ("CLECs") after Verizon PA gains entry into the long distance market in Pennsylvania pursuant to Section 271 of the Telecommunications Act of 1996 ("1996 Act"). The performance measurements, standards, refunds, and "liquidated damages" in this filing are known collectively as the Pennsylvania Public Utility Commission ("Commission") Performance Assurance Plan for Verizon Pennsylvania.

This document describes how Verizon PA will implement the Commission's Performance Assurance Plan. It has three sections. Section I describes the performance measurements and standards Verizon PA will implement and Verizon PA's estimated schedule for implementation. Section II describes the methodologies, including the statistical methodologies, Verizon PA will use each month to determine whether its performance for a CLEC, or for all CLECs in aggregate, met the appropriate performance standard. Section III explains the Tier I refund payments Verizon PA will provide CLECs pursuant to the Commission's Performance Assurance Plan for services the CLEC (or its customer) paid for but did not receive. Section III also describes the Tier II "liquidated damages" payments from Verizon PA to CLECs and to the Commission as set forth in the December 31, 1999 and April 11, 2001 Orders of the Pennsylvania Public Utility Commission.¹

I. Performance Measurements and Standards.

A. Performance Measurements.

Verizon PA will implement the performance measurements and standards described in the Carrier-To-Carrier Guidelines ("Guidelines"), which are appended as Attachment A.² These performance measurements will give the Commission, the CLECs, and ultimately the Federal Communications Commission ("FCC"), the ability to monitor and evaluate Verizon PA's compliance with the performance standards in the Guidelines. These performance measurements cover every aspect of the 14-point checklist in Section 271 of the 1996 Act and more.

¹ This filing does not waive Verizon PA's claim that the Commission lacks statutory authority to order Verizon PA to pay damages or "liquidated damages" to CLECs.

² The Guidelines and their appendices are provided in both standard text and "red-line" format. The "red line" format shows how Verizon PA modified the documents it filed on January 31, 2000 to make them consistent with the Commission's orders of July 21, 2000 and September 1, 2000.

The Guidelines contain eight categories of performance measurements: Pre-Ordering; Ordering; Provisioning; Maintenance & Repair; Network Performance; Billing; Operator Services and Database; and General. These categories of performance measurement are listed on Page 2 of the Guidelines.

Each measurement category in the Guidelines contains a number of metrics, for a total of 44 metrics. For example, the Pre-Ordering category ("PO"), contains five metrics: PO-1, Response Time OSS Pre-Ordering Interface; PO-2, OSS Interface Availability; PO-3, Contact Center Availability; PO-4, Change Management Notice; and PO-5, Average Notification of Interface Outage. The metrics are identified on Page 2 of the Guidelines and are described throughout the document.

The Guidelines contain 156 submetrics. Each of the 44 metrics (described above) contains one or more submetrics. For example, the metric PO-1 (one of five metrics in the PO measurement category), contains seven submetrics: PO-1-01, average response time for customer service record; PO-1-02, average response for due date availability; PO-1-03, average response time for address validation; PO-1-04, average response time for product and service availability; PO-1-05, average response time for telephone number availability and reservation; PO-1-06, average response time for facility availability (ADSL loop qualification); and PO-1-07, average response time for rejected query. As explained below, Verizon PA will make performance assurance payments to CLECs at the submetric level.

Finally, the Guidelines contain close to 2,000 disaggregated submetrics, which are the 156 submetrics (described above) further broken out by geographic region, mode of entry, product category, and various combinations thereof. For example, for the submetric OR-1-05, which measures the average order confirmation response time, Verizon PA measures and reports its performance separately for 8 Unbundled Network Element ("UNE") product categories and for 7 resale product categories. In some cases, Verizon PA measures and reports its performance to CLECs at the disaggregated submetric level, while in others, reporting occurs at the submetric level.

The performance reports Verizon PA will provide to the Commission and CLECs, and the circumstances in which Verizon PA will provide those reports, are described in the "Introduction" to the Guidelines on page 4.

If new performance measurements are ordered by the Commission, it will take Verizon PA a number of months to implement and test them. It will also take Verizon PA time to modify its systems and work processes to meet the new performance standards adopted by the Commission.

B. Performance Standards.

Not all measurements have performance standards; some measurements are for diagnostic and informational purposes only. For performance measurements that have

standards, Verizon PA will evaluate its performance for each CLEC, or CLECs in aggregate, under one of two standards. First, for measures for which there is a reasonably analogous Verizon PA retail service, Verizon PA will apply a "parity" standard, which compares the service quality Verizon PA provided its own retail customers in Pennsylvania with the service quality it provided CLECs in Pennsylvania.³ The measures using parity standards fall into two categories: mean variables and percent variables. Mean variables are metrics of means or averages, such as "mean time to repair." Percent variables are metrics of proportions, such as the percent of missed appointments.

Second, for measures for which there is no reasonably analogous Verizon PA retail service, Verizon PA will use a "benchmark" (or an "absolute") standard to determine whether Verizon PA is providing the CLECs with a specified level of service.

For each submetric, there is a section of the Guidelines entitled "Performance Standard," which indicates whether there is a performance standard and, if there is, what the performance standard is.

II. Methods of Judging Compliance With Performance Standards.

Verizon PA will use statistical methodologies as one means of judging whether its performance for a CLEC, or for CLECs in aggregate, was equivalent to its performance for its own retail operations in Pennsylvania. For measurements for which parity is the appropriate performance standard and for which there are a sufficiently large number of observations for Verizon PA and for the CLEC, Verizon PA will use the modified Z statistic for percent measures and the modified t statistic for mean (or average) measures. The equations for the modified Z and modified t tests are shown in Appendix J to the Guidelines.

For measurements with a parity standard, Verizon PA's performance for a CLEC will be judged not to have met the performance standard if the critical Z or t value is less than -1.645, which provides a 95% confidence level that Verizon PA's performance for a CLEC was different from its performance for its own retail operations. With a Z or t score of -1.645, however, there is a 5% probability that Verizon PA will be judged to have missed a measure even though it provided a CLEC with the same service quality Verizon PA provided its own retail operations. In other words, random variation within the measurement system will cause Verizon PA to miss approximately 5% of the performance measurements (*i.e.*, 5 out of every 100 on average) even if it provides

³ There are exceptions to the general rule that Verizon PA will compare its actual Pennsylvania performance for CLECs against its actual Pennsylvania performance for retail operations. For example, the PO-1 submetrics, which measure the timeliness of responses from Verizon PA's Operations Support Systems ("OSS"), use the EnView emulation process to compare Verizon PA's service for CLECs (submitted to the OSS through the access platform) against Verizon PA's retail operations (submitted directly to the OSS). The OSS interface may handle transactions for CLEC operations in states other than Pennsylvania.

CLECs exactly the same level of service quality it provided to Verizon PA's retail customers. This is known as Type I error. There is no mechanism in the Commission's Performance Assurance Plan that adjusts automatically for Type I error.

Verizon PA will not use statistical methodologies for measurements using benchmark performance standards. For those submetrics, Verizon PA will compare its performance for a CLEC, or for CLECs in aggregate, against the benchmark performance standard. Verizon PA will be judged to have missed a submetric for which there is a benchmark performance standard if Verizon PA's performance for a CLEC is not within 95% of the target. At this strict level of performance, unless Verizon PA's average level of performance is well above the target, normal variation in Verizon PA's performance will cause it, on occasion, to fall outside the 95% benchmark standard.

For measurements using either parity or benchmark performance standards, Verizon PA will calculate whether it met the applicable standard only if there are 10 or more observations in the month for Verizon PA and for the CLEC. Verizon PA will report its performance for a measurement even if there are fewer than 10 observations, but will not calculate whether its performance met the applicable standard.

Verizon PA will perform other standard tests of statistical validity before it uses data to draw conclusions about its performance for CLECs. The modified Z or t test will be used only if there are 30 or more observations for Verizon PA and the CLEC. If the number of observations is between 10 and 29, and Verizon PA's performance for a CLEC is worse in absolute terms than Verizon PA's performance for itself, Verizon PA will perform a permutation test.⁴ Sample size requirements are described in Appendix J to the Guidelines.

The Commission's Performance Assurance Plan sets a minimum sample size because, with small sample sizes, very slight changes in Verizon PA's performance – changes that are not competitively meaningful – can affect whether the measurement meets the performance standard.⁵ There may also be significant problems associated with large sample sizes. With very large sample sizes, the modified Z and t tests become overly sensitive to any difference, which can cause Verizon PA's performance to be judged out of parity even though its actual performance is at a very high level. Problems of large sample size are a type of statistical invalidity or "skewed data," which Verizon PA will handle according to the procedures summarized below, and described more fully in Exhibit I to the Guidelines.

⁴ A permutation test is a way of calculating whether Verizon PA met a performance standard when the sample size is relatively small and the distribution is not "normal."

⁵ The modified Z or t test assumes that, if the sample size is large enough, the sample mean will follow a known "normal distribution" that is dependent on the variance within the data and sample size. It is this assumption of normality that allows one to compare the Z or t score with its known theoretical distribution and determine the probability of its occurrence. When the sample size is too small, the distribution around the sample mean is no longer normal, and the modified Z or t test is no longer reliable.

III. Performance Assurance Payments.

Verizon PA will make two types of performance assurance payments to CLECs: Tier I refund payments and Tier II "liquidated damages" payments.

A. Tier I Refund Payments.

Under Tier I, Verizon PA will provide a CLEC with a pro rated refund of charges paid by the CLEC for services the CLEC did not receive. A CLEC is not entitled to a Tier I refund if it received the service or never paid for the service.

B. Tier II "Liquidated Damages" Payments.

Under Tier II, Verizon PA will provide an affected CLEC with an automatic "liquidated damages" payment if Verizon PA misses the performance standard for a submetric (that is subject to performance payments) for two or more consecutive months. For each payment made to a CLEC, Verizon PA will also provide a payment to the Pennsylvania Public Utility Commission (PUC). Specifically, Verizon PA will pay \$2,000 to a CLEC and \$1,000 to the Commission⁶ -- total of \$3000 (per CLEC) if it misses a performance standard for a submetric for two consecutive months. Verizon PA will pay \$4,000 to a CLEC and \$1,000 to the Commission -- total of \$5000 (per CLEC) if it misses the performance standard for the same submetric for three or more consecutive months. If Verizon PA misses the performance standard for the same submetric for four or more consecutive months, in addition to the automatic \$4,000 to a CLEC and \$1,000 to the Commission described above, Verizon PA will file a report with the Commission explaining the nature of the problem and efforts to correct it. Likewise, if Verizon PA misses the performance standards for six or more different submetrics (that are subject to performance payments) for four or more consecutive months, Verizon PA will file a report with the Commission explaining the nature of the problem and efforts to correct it. In both circumstances, Verizon PA may argue that no Tier II "liquidated damages" payment, or some lesser amount than \$4,000 to the CLEC and \$1,000 to the Commission, is necessary or appropriate and seek the return of any payment. An affected CLEC may argue that it is entitled to a Tier II payment greater than \$4,000. The Commission may order Verizon PA to pay up to \$25,000.⁷

⁶ The requirement to pay Tier II payments to the PUC was detailed in PUC Docket No. M-00001353 (re: Structural Separation of Bell Atlantic -Pennsylvania, Inc. Retail and Wholesale Operations) Adopted March 22, 2001. The terms of the order were accepted by Verizon PA by letter of April 20, 2001.

⁷ Verizon PA might show, for example, that although it missed the performance standard for the same measurement for four or more consecutive months, the CLEC was not competitively injured (*e.g.*, because the difference in performance was so tiny as to be competitively meaningless). Or as another example, Verizon PA might show that it missed more than five different performance measures for four consecutive months, merely because of randomness inherent in the statistical test (*i.e.*, Type I error), not because of deficient performance on its part.

Verizon PA will make Tier II "liquidated damages" payments at the submetric level.⁸ The calculation at a submetric level looks at Verizon PA's performance for a CLEC, or for CLECs in aggregate, at the state level and aggregates Verizon PA's performance data for all product categories and all modes of entry. To ensure that natural differences between Verizon PA and CLECs in terms of their customers, locations, types of services, and volumes do not skew the comparison, Verizon PA will weight its retail performance data to make it proportionate to the CLEC's performance data.⁹

Verizon PA is entitled to put a Tier II "liquidated damages" payment in escrow rather than paying it to the CLEC under five circumstances. These are: Lack of independence (or "clustering" of data); CLEC action; *force majeure* events; exogenous events; and statistical invalidity. To put a payment in escrow, Verizon PA must notify the Commission of its intent to withhold payment within five days. Depending on the underlying circumstances, this may be five days from the "real world" event (*e.g.*, in the case of a *force majeure* event such as a snow storm or hurricane) or five days from Verizon PA's calculation of its performance for the preceding month (which reveals, *e.g.*, the statistical invalidity of a measurement or a "clustering" problem). The CLEC that would otherwise have been entitled to the Tier II "liquidated damages" payment may contest Verizon PA's decision not to pay over the funds by asking for resolution through Alternative Dispute Resolution. If the affected CLEC has not taken action within five days of being informed of Verizon PA's decision to withhold payment and to place the funds in escrow, the Tier II "liquidated damages" payment shall come out of escrow and revert to Verizon PA.

Refund payments and "liquidated damages" payments will be made by means of checks issued by Verizon PA to the Commission and CLECs entitled to receive such payments.

⁸ The Commission ordered Verizon PA to pay for missed "metrics." Order at 159-60. Because Verizon PA's performance for CLECs is not measured at the "metric" level, Verizon PA assumes the Commission means for Tier II payments to be at the "submetric" level.

⁹ For example, imagine a provisioning submetric with two product categories, POTS and specials. If the CLEC does 50% of its total volume in specials, whereas Verizon PA does only 25% of its volume in specials, to compare accurately Verizon PA's performance for itself and for the CLEC, Verizon PA's performance in specials must be given a 50% weight.