VERIZON

Performance Assurance Plan

Massachusetts

Version 4.0

Implementation: July 2007

Filing Date: April 10, 2007

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MASSACHUSETTS
PERFORMANCE ASSURANCE PLAN

I. INTRODUCTION

To ensure that Verizon continues to provide high-quality service to Competitive Local Exchange Carriers (the "CLECs") pursuant to Section 271 of the Telecommunications Act of 1996 (the "1996 Act") the commitments set forth in this Performance Assurance Plan (the "Plan") are in effect.[1] The actions include, *inter alia*, the adoption of both carrier-to-carrier service measurements and standards, scoring mechanisms to determine whether CLECs are receiving non-discriminatory treatment (including statistical methodologies), the payment of bill credits to CLECs if Verizon's reported performance does not meet the standards defined in the Plan, monthly reporting requirements, and provisions for annual reviews, updates and audits.[2] Also included are provisions for Exceptions and Waivers, subject to Department approval.[3]

II. PROVISIONS OF THE PLAN

A. Measures

The measures and standards in this Plan are generally taken directly from the effective version of the Guidelines for Carrier-to-Carrier Performance Standards and Reports (the

[1] The Department of Telecommunications and Energy (the "Department") retains the first line of authority for enforcing these commitments. The Federal Communications Commission (the "FCC") will have authority for preventing Verizon from future marketing in long distance should post-entry developments so warrant.

[2] Verizon will be specifically prohibited from recovering revenue losses attributable to the Performance Assurance Plan.

[3] This Plan also includes the following appendices:
Appendix A: Mode of Entry;
Appendix B: Critical Measures;
Appendix C: Performance Evaluation Methodology;
Appendix D: Statistical Evaluation Procedures;
Appendix E: Sample Report Format; and
Appendix F: Background, Incentives, Reporting and Other Provisions.

"Guidelines"),[4] and cover the areas of Pre-order, Ordering, Provisioning, Maintenance and Repair, Billing, Network Performance and Change Control. These measures and standards result from many years of collaborative meetings with CLECs. Accordingly, these measures and standards represent the interests of a broad body of stakeholders.

The 1996 Telecommunications Act requires that Verizon provide interconnection "that is at least equal in quality" to that provided to itself, and "non-discriminatory access" to unbundled elements. Each month, for performance measures requiring parity with retail (the "Parity measures"), Verizon will apply statistical tests, which are outlined in Appendix D, to both Verizon and CLEC performance data to compute performance results (p-values and/or Z statistics). For performance measures with a benchmark standard (the "Benchmark Measures"), Verizon will compare actual performance to the benchmark. Thus, under the Plan the Benchmark and Parity measures are used to determine whether Verizon is providing non-discriminatory service to the CLECs. Parity or Benchmark measures can be averages ("Measured" variables), such as "Mean Time to Repair," or proportions ("Counted" variables), such as "% On Time" and rates, such as "Installation Troubles."

B. Methods of Evaluation

The performance measures are distributed among two sections of the plan for evaluation: (1) Mode of Entry ("MOE"), and (2) Critical Measures, which are described below.

1. Mode of Entry

The MOE section of the Plan is designed to measure Verizon's overall Section 271 performance in three categories that correspond to the general modes CLECs use to obtain facilities from Verizon to support the services that they offer in the local exchange market:

[4] *See* DTE 03-50 (formerly DTE 99-271).

Loop-Based; Resale-POTS; and Interconnection Trunks ("Trunks"). The performance for these measurements is evaluated at the industry (aggregate CLEC) level each month for each MOE grouping. A pre-specified amount of annual bill credits is available to the CLECs if Verizon's performance reaches the maximum allowable unsatisfactory performance in each of the three MOE categories.

Each month Verizon applies statistical tests outlined in Appendix D to the Parity metrics, and compares metrics without a retail analog to a Benchmark standard. From these results, a performance score for each MOE is calculated separately as a weighted average of the performance score for all measures within the mode. Bill credits are due when the minimum threshold for the mode is exceeded. The minimum threshold for each MOE category, which depends on the number of measures and their weights, corresponds to the value at which there is a 95% confidence that the number of missed standards may be more than what would be expected from random variation in the underlying data.

Annual bill credits are assigned to the MOE section of the Plan and are distributed to each of the MOEs in amounts that reflect the importance of that MOE to the local exchange competition. Each month, one-twelfth (1/12) of the annual amount assigned to the MOEs is available for bill credits. These amounts are subject to doubling under certain circumstances. Appendix A contains additional details for the MOE provisions, and Appendix C contains details regarding metric scoring.

2. Critical Measures

This Plan also includes stand-alone Critical Measures that cover Verizon's service in areas critical to the CLECs. Should Verizon's performance miss an applicable performance standard for even *one* of the Critical Measures, the eligible CLECs will be entitled to bill credits. Each month, one-twelfth (1/12) of the annual amount assigned to each Critical Measure is

available for bill credits. The Critical Measures have either Benchmark or Parity standards and are analyzed at both the aggregate level of performance (the "Aggregate Rule") and the individual CLEC-level of performance (the "Individual Rule").

For Benchmark metrics (without a retail analog), the payment of bill credits, if any are due, is determined on CLEC-specific performance and CLEC-specific volume of activity.[5] For Parity metrics, Verizon applies statistical tests outlined in Appendix D.[6] If Verizon's performance at the aggregate level does not meet the corresponding standard (*i.e.*, for parity metrics a -1.645 statistical score or worse, p-value of 0.05 or less), Verizon will pay CLECs a bill credit.

At the Aggregate level, performance is scored at a 0, -1 or -2. Additionally, if Verizon meets the performance standard in the Aggregate, but provides service to any individual CLEC with a -3 performance score, Verizon will credit that individual CLEC's bill. Appendix B contains additional details for the Critical Measures, and Appendix C contains details regarding metric scoring.

[5] Certain performance measures are not reported at the CLEC specific level. Allocation of bill credits will be determined using methodology described in Appendix B.

[6] For instances where the sample size criteria detailed in Appendix D are not met, a statistical score will not be reported; rather, nothing will be reported in the statistical score column.

C. Annual Incentive Amounts

Incentives for the MOE and Critical Measures sections of the Plan total $53,536,999 annually and are distributed among the major sections of the Plan as follows:

Mode of Entry[7]					
	Loop-Based	**Resale POTS**	**Interconnection Trunks**	**Total**	**Total with Doubling**
Annual	$7,934,759	$2,644,920	$2,644,920	$13,224,598	$26,449,196
Monthly	$661,230	$220,410	$220,410	$1,102,050	$2,204,100

Critical Measures	
	Total
Annual	$27,087,803
Monthly	$2,257,317

Details regarding the specific calculation of bill credits that may be due for each reporting period are described in Appendices A, B and C.

D. Reallocation of Potential Bill Credits

The Department has the authority to reallocate the monthly distribution of bill credits between and among any provisions of the Plan, and the Department will give Verizon 15 days notice prior to the beginning of the month in which the reallocation may occur. Any reallocation is done pursuant to Department order.

E. Monthly Reports

In order to ensure that there is timely information regarding Verizon's performance, Verizon will report its performance on a monthly basis, and aggregate PAP reports will be filed with the Department.[8] Additionally, each month, an electronic report will be made available to all requesting CLECs that are providing service in the state. The reports will include bill credit

[7] Monthly amounts are subject to doubling as specified in Appendix A. Doubling raises the MOE total to $26,449,196.

[8] A two-year statute of limitation on challenges to PAP performance is in effect.

amounts, if any, due to the individual CLEC. A sample copy of the report appears in Appendix E.

This report will provide information regarding the MOE measures, a listing of the Critical Measures, and the bill credits, if any, which are due for these measures on a CLEC Aggregate basis. It also includes performance details for Critical Measures. CLECs can obtain their individual reports and the aggregate report from Verizon's Web site.

Verizon will continue to provide separate monthly reports on all measures in the Guidelines to any CLEC requesting the reports. In addition, Verizon will continue to provide to each requesting CLEC in a usable format the underlying data (flat files) used to calculate Verizon's performance for that CLEC.

F. Term of Performance Assurance Plan

Until a replacement mechanism is developed or until the Plan is rescinded, this Plan, as it may be modified from time-to-time by the Department and Verizon, shall remain in effect.

G. Exceptions and Waiver Process

Recognizing that C2C service quality data may be influenced by factors beyond Verizon's control, Verizon may file Exception or Waiver petitions with the Department seeking to have the monthly service quality results modified on the grounds that are described in Appendices C and D.

H. Annual Review, Updates and Audits

Provisions for reviews, updates and audits are detailed in Appendix F.

III. FULLY INTEGRATED DOCUMENT

The terms and provisions of this Plan are submitted in their entirety to the Department for approval. This Plan represents a fully integrated statement of the commitments Verizon undertakes, including the payment of bill credits if Verizon's reported performance does not

meet the standards for the measures specified in the Plan. It is not offered to the Department for approval on a piecemeal basis.

Verizon

Performance Assurance Plan

APPENDIX A: Mode of Entry

APPENDIX A: MODE OF ENTRY

I. MOE: MEASURES AND WEIGHTS

The Mode of Entry ("MOE") section of the Plan is designed to measure Verizon's overall Section 271 performance in three individual MOE categories that correspond to the methods or modes CLECs use to obtain facilities from Verizon to support the service that they offer in the local exchange market: Loop-Based; Resale - POTS; and Interconnection Trunks. The MOE measurements provide a mechanism to measure the overall level of Verizon's service to the entire CLEC industry in the three areas.

The allocation of dollars at risk for each MOE is as follows:

Table A-1: Allocation of Incentive Amounts for Mode of Entry

Mode of Entry				
	Loop-Based	**Resale-POTS**	**Interconnection Trunks**	**Total**
Monthly without Doubling	$661,230	$220,410	$220,410	$1,102,050
Monthly with Doubling[9]	$1,322,460	$440,820	$440,820	$2,204,100
Annual without Doubling	$7,934,759	$2,644,920	$2,644,920	$13,224,598
Annual with Doubling	$15,869,518	$5,289,840	$5,289,840	$26,449,196

As Table A-1 demonstrates, each month, one-twelfth (1/12) of the annual amount is available for MOE bill credits. The measures found in each MOE, and their respective weights are listed in the three tables below.

[9] Monthly amounts are subject to doubling as specified in Appendix A, Section III(B).

Table A-2: Loop Based - Measures and Weights

Metric Number	Metric Description	Product	Weight	Standard Type
PO-1-01-6020	Average Response Time - Customer Service Record (CSR)	EDI	2	Benchmark
PO-1-01-6030	Average Response Time - Customer Service Record (CSR)	CORBA	2	Benchmark
PO-1-01-6050	Average Response Time - Customer Service Record (CSR)	WEB GUI/LSI/W	5	Benchmark
PO-1-03-6020	Average Response Time - Address Validation	EDI	2	Benchmark
PO-1-03-6030	Average Response Time - Address Validation	CORBA	2	Benchmark
PO-1-03-6050	Average Response Time - Address Validation	WEB GUI/LSI/W	5	Benchmark
PO-1-06-6020	Average Response Time - Mechanized Loop Qualification – xDSL	EDI	2	Benchmark
PO-1-06-6050	Average Response Time - Mechanized Loop Qualification – xDSL	WEB GUI/LSI/W	2	Benchmark
PO-2-02-6010	OSS Interface Availability - Prime-Time	WPTS	5	Benchmark
PO-2-02-6020	OSS Interface Availability - Prime Time	EDI	5	Benchmark
PO-2-02-6030	OSS Interface Availability - Prime Time	CORBA	5	Benchmark
PO-2-02-6080	OSS Interface Availability - Prime Time	WEB GUI/LSI/W	5	Benchmark
PO-8-01-6000	% On Time - Manual Loop Qualification	Systems Metrics	2	Benchmark
OR-1-02-3331	% On Time LSRC - Flow Through	UNE Loop/Pre-qualified Complex/LNP	10	Benchmark
OR-1-04-3331	% On Time LSRC/ASRC - No Facility Check (Electronic - No Flow Through)	UNE Loop/Pre-qualified Complex/LNP	5	Benchmark
OR-1-06-3331	% On Time LSRC/ASRC - Facility Check (Electronic - No Flow-through)	UNE Loop/Pre-qualified Complex/LNP	5	Benchmark
OR-2-02-3331	% On Time LSR Reject (Flow-Through)	UNE Loop/Pre-qualified Complex/LNP	5	Benchmark
OR-2-04-3331	% On Time LSR/ASR Reject - No Facility Check (Electronic - No Flow-through)	UNE Loop/Pre-qualified Complex/LNP	5	Benchmark
OR-2-04-3341	% On Time LSR/ASR Reject - No Facility Check (Electronic - No Flow-through)	UNE 2-Wire Digital Services	2	Benchmark
OR-2-04-3342	% On Time LSR/ASR Reject - No Facility Check (Electronic - No Flow-through)	UNE 2-Wire xDSL Loops	2	Benchmark
OR-2-06-3331	% On Time LSR/ASR Reject - Facility Check (Electronic - No Flow-Through)	UNE Loop/Pre-qualified Complex/LNP	2	Benchmark
OR-2-06-3341	% On Time LSR/ASR Reject - Facility Check (Electronic - No Flow-Through)	UNE 2-Wire Digital Services	2	Benchmark
OR-4-16-1000	% Provisioning Completion Notifiers sent within one (1) Business Day	Resale & UNE combined (EDI)	5	Benchmark
OR-5-03-3112	% Flow Through Achieved	UNE POTS - Loop	5	Benchmark
OR-6-03-3331	% Accuracy – LSRC	UNE Loop/Complex/LNP	5	Benchmark
PR-3-10-3342	% Completed in six (6) Days one (1) to five (5) Lines – Total	UNE 2-Wire xDSL Loops	5	Benchmark
PR-4-02-3112	Average Delay Days – Total	UNE POTS - Loop	10	Parity
PR-4-02-3341	Average Delay Days – Total	UNE 2-Wire Digital Services	2	Parity
PR-4-02-3342	Average Delay Days – Total	UNE 2-Wire xDSL Loops	5	Parity
PR-4-04-3113	% Missed Appointment - Verizon – Dispatch	UNE POTS Loop New	5	Parity
PR-4-04-1341	% Missed Appointment - Verizon – Dispatch	UNE/Resale 2-Wire Digital Services	2	Parity
PR-4-05-3341	% Missed Appointment - Verizon - No Dispatch	UNE 2-Wire Digital Services	2	Parity
PR-4-14-3342	% Completed On Time - 2-Wire xDSL	UNE 2-Wire xDSL Loops	2	Benchmark
PR-5-01-3112	% Missed Appointment - Verizon – Facilities	UNE POTS Loop	5	Parity
PR-5-02-3112	% Orders Held for Facilities > 15 Days	UNE POTS Loop	5	Parity
PR-6-01-3113	% Installation Troubles reported within 30 Days	UNE POTS - Loop - New	10	Parity
PR-6-01-3341	% Installation Troubles reported within 30 Days	UNE 2-Wire Digital Services	2	Parity
PR-6-01-3342	% Installation Troubles reported within 30 Days	UNE 2-Wire xDSL Loops	10	Parity
PR-6-02-3520	% Installation Troubles reported within seven (7) Days	UNE Loop Basic Hot Cut	20	Benchmark

APPENDIX A

Metric Number	Metric Description	Product	Weight	Standard Type
PR-6-02-3523	% Installation Troubles reported within seven (7) Days	UNE Loop - Large Job Hot Cut	10	Benchmark
PR-8-01-3341	Percent Open Orders in a Hold Status > 30 Days	UNE 2-Wire Digital Services	2	Parity
PR-8-01-3342	Percent Open Orders in a Hold Status > 30 Days	UNE 2-Wire xDSL Loops	5	Parity
PR-9-01-3520	% On Time Performance - Hot Cut	UNE Loop - Basic Hot Cut	20	Benchmark
PR-9-01-3523	% On Time Performance - Hot Cut	UNE Loop - Large Job Hot Cut	10	Benchmark
PR-9-08-3533	Average Duration of Hot Cut Installation Troubles	UNE POTS - Loop - Hot Cut Total	10	Parity
MR-1-01-6050	Average Response Time - Create Trouble	LSI-TA	2	Benchmark
MR-3-01-3112	% Missed Repair Appointment – Loop	UNE POTS Loop	10	Parity
MR-3-01-3341	% Missed Repair Appointment – Loop	UNE 2-Wire Digital Loops	2	Parity
MR-3-01-3342	% Missed Repair Appointment – Loop	UNE 2-Wire xDSL Loops	5	Parity
MR-3-02-3112	% Missed Repair Appointment - Central Office	UNE POTS Loop	10	Parity
MR-3-02-3341	% Missed Repair Appointment - Central Office	UNE 2-Wire Digital Loops	2	Parity
MR-3-02-3342	% Missed Repair Appointment - Central Office	UNE 2-Wire xDSL Loops	5	Parity
MR-4-02-3112	Mean Time To Repair - Loop Trouble	UNE POTS Loop	5	Parity
MR-4-02-3341	Mean Time To Repair - Loop Trouble	UNE 2-Wire Digital Loops	2	Parity
MR-4-02-3342	Mean Time To Repair - Loop Trouble	UNE 2-Wire xDSL Loops	2	Parity
MR-4-03-3112	Mean Time To Repair - Central Office Trouble	UNE POTS Loop	5	Parity
MR-4-03-3341	Mean Time To Repair - Central Office Trouble	UNE 2-Wire Digital Loops	2	Parity
MR-4-03-3342	Mean Time To Repair - Central Office Trouble	UNE 2-Wire xDSL Loops	2	Parity
MR-4-04-3341	% Cleared (all troubles) within 24 Hours	UNE 2-Wire Digital Loops	2	Parity
MR-4-04-3342	% Cleared (all troubles) within 24 Hours	UNE 2-Wire xDSL Loops	2	Parity
MR-4-07-3112	% Out of Service > 12 Hours	UNE POTS Loop	5	Parity
MR-4-07-3341	% Out of Service > 12 Hours	UNE 2-Wire Digital Loops	2	Parity
MR-4-07-3342	% Out of Service > 12 Hours	UNE 2-Wire xDSL Loops	2	Parity
MR-4-08-3112	% Out of Service > 24 Hours	UNE POTS Loop	10	Parity
MR-5-01-3112	% Repeat Reports within 30 Days	UNE POTS Loop	10	Parity
MR-5-01-3341	% Repeat Reports within 30 Days	UNE 2-Wire Digital Loops	2	Parity
MR-5-01-3342	% Repeat Reports within 30 Days	UNE 2-Wire xDSL Loops	2	Parity
	Total Weights		330	

Table A-3: Resale POTS - Measures and Weights

Metric Number	Metric Description – Resale	Product	Weight	Standard Type
PO-1-01-6020	Average Response Time - Customer Service Record (CSR)	EDI	2	Benchmark
PO-1-01-6050	Average Response Time - Customer Service Record (CSR)	WEB GUI/LSI/W	2	Benchmark
PO-1-03-6020	Average Response Time - Address Validation	EDI	2	Benchmark
PO-1-03-6050	Average Response Time - Address Validation	WEB GUI/LSI/W	2	Benchmark
PO-2-02-6020	OSS Interface Availability - Prime Time	EDI	5	Benchmark
PO-2-02-6080	OSS Interface Availability - Prime Time	Maintenance Web GUI (RETAS) / Pre-ordering/Ordering Web GUI combined	5	Benchmark
OR-1-02-2320	% On Time LSRC - Flow Through	Resale POTS/Pre-qualified Complex	10	Benchmark
OR-1-04-2320	% On Time LSRC/ASRC - No Facility Check (Electronic - No Flow Through)	Resale POTS/Pre-qualified Complex	5	Benchmark
OR-2-02-2320	% On Time LSR Reject (Flow-Through)	Resale POTS/Pre-qualified Complex	5	Benchmark
OR-2-04-2320	% On Time LSR/ASR Reject - No Facility Check (Electronic - No Flow-through)	Resale POTS/Pre-qualified Complex	2	Benchmark
OR-2-06-2320	% On Time LSR/ASR Reject - Facility Check (Electronic - No Flow-Through)	Resale POTS/Pre-qualified Complex	2	Benchmark
OR-4-16-1000	% Provisioning Completion Notifiers sent within one (1) Business Day	Resale & UNE combined (EDI)	5	Benchmark
OR-5-03-2000	% Flow Through Achieved	Resale	10	Benchmark
OR-6-03-2000	% Accuracy – LSRC	Resale	10	Benchmark
PR-3-01-2100	% Completed in one (1) Day one (1) to five (5) Lines - No Dispatch	Resale POTS	5	Parity
PR-4-02-2100	Average Delay Days – Total	Resale POTS	15	Parity
PR-4-04-2100	% Missed Appointment - Verizon – Dispatch	Resale POTS	10	Parity
PR-4-05-2100	% Missed Appointment - Verizon - No Dispatch	Resale POTS	20	Parity
PR-5-01-2100	% Missed Appointment - Verizon – Facilities	Resale POTS	5	Parity
PR-5-02-2100	% Orders Held for Facilities > 15 Days	Resale POTS	5	Parity
PR-6-01-2100	% Installation Troubles reported within 30 Days	Resale POTS	15	Parity
MR-1-01-6050	Average Response Time - Create Trouble	LSI-TA	2	Benchmark
MR-1-06-6050	Average Response Time - Test Trouble (POTS Only)	LSI-TA	2	Benchmark
MR-3-01-2110	% Missed Repair Appointment – Loop	Resale POTS Business	10	Parity
MR-3-01-2120	% Missed Repair Appointment – Loop	Resale POTS Residence	10	Parity
MR-3-02-2110	% Missed Repair Appointment - Central Office	Resale POTS Business	10	Parity
MR-3-02-2120	% Missed Repair Appointment - Central Office	Resale POTS Residence	10	Parity
MR-4-02-2110	Mean Time To Repair - Loop Trouble	Resale POTS Business	5	Parity
MR-4-02-2120	Mean Time To Repair - Loop Trouble	Resale POTS Residence	5	Parity
MR-4-03-2110	Mean Time To Repair - Central Office Trouble	Resale POTS Business	5	Parity
MR-4-03-2120	Mean Time To Repair - Central Office Trouble	Resale POTS Residence	5	Parity
MR-4-07-2110	% Out of Service > 12 Hours	Resale POTS – Business	5	Parity
MR-4-07-2120	% Out of Service > 12 Hours	Resale POTS - Residence	5	Parity
MR-4-08-2110	% Out of Service > 24 Hours	Resale POTS - Business	5	Parity
MR-4-08-2120	% Out of Service > 24 Hours	Resale POTS Residence	5	Parity
MR-5-01-2100	% Repeat Reports within 30 Days	Resale POTS	10	Parity
BI-1-02-1000	% DUF in 4 Business Days	POTS	5	Benchmark
	Total Weights		241	

Table A-4: Interconnection Trunks - Measures and Weights

Metric Number	Metric Description – Trunks	Product	Weight	Standard Type
OR-1-12-5020	% On Time FOC	Interconnection Trunks (CLEC) (<= 192 Forecasted Trunks)	5	Benchmark
OR-1-13-5000	% On Time Design Layout Record (DLR)	Interconnection Trunks (CLEC)	10	Benchmark
OR-1-19-5020	% On Time Response - Request for Inbound Augment Trunks	Verizon Inbound Augment Trunks (<= 192 Trunks)	5	Benchmark
OR-2-12-5020	% On Time Trunk ASR Reject	Interconnection Trunks (CLEC)	5	Benchmark
PR-4-07-3540	% On Time Performance - LNP Only	UNE LNP	20	Benchmark
PR-4-15-5000	% On Time Provisioning – Trunks	Interconnection Trunks (CLEC)	20	Benchmark
PR-5-01-5000	% Missed Appointment - Verizon – Facilities	Interconnection Trunks (CLEC)	5	Parity
PR-5-02-5000	% Orders Held for Facilities > 15 Days	Interconnection Trunks (CLEC)	5	Parity
PR-6-01-5000	% Installation Troubles reported within 30 Days	Interconnection Trunks (CLEC)	10	Parity
PR-8-01-5000	Percent Open Orders in a Hold Status > 30 Days	Interconnection Trunks (CLEC)	5	Parity
MR-4-01-5000	Mean Time To Repair – Total	Interconnection Trunks (CLEC)	5	Parity
MR-4-05-5000	% Out of Service > 2 Hours	Interconnection Trunks (CLEC)	5	Parity
MR-4-06-5000	% Out of Service > 4 Hours	Interconnection Trunks (CLEC)	5	Parity
MR-4-07-5000	% Out of Service > 12 Hours	Interconnection Trunks (CLEC)	5	Parity
MR-4-08-5000	% Out of Service > 24 Hours	Interconnection Trunks (CLEC)	5	Parity
MR-5-01-5000	% Repeat Reports within 30 Days	Interconnection Trunks (CLEC)	10	Parity
NP-1-03-5000	Number Final Trunk Groups Exceeding Blocking Standard - Two (2) Months	CLEC Trunks	5	Benchmark
NP-1-04-5000	Number Final Trunk Groups Exceeding Blocking Standard - Three (3) Months	CLEC Trunks	10	Benchmark
	Total Weights		140	

II. MOE: PERFORMANCE EVALUATION

Each metric's performance is evaluated monthly at the industry (CLEC Aggregate) level. Parity and Benchmark performance for each metric is transformed into a performance score of "0", "-1", or "-2". The methodology for determining performance scores is contained in Appendix C. Each measure in each MOE also had been given a weight that reflects the importance of each measure in the category relative to the other metrics. The overall score for each MOE is determined by calculating the weighted average performance score for all metrics in the MOE. If this score exceeds the minimum threshold for the respective MOE (*see* discussion below) then the affected CLECs are eligible for bill credits.

The following are the steps that will be undertaken to determine whether Bill Credits are due to CLECs for the each of the MOE categories.

A. Determine Performance Score of Each Metric

Details on the determination of performance scores are contained in Appendix C.

B. Calculate Aggregate MOE Scores for Each MOE

For each metric, multiply the performance score by the assigned weight and divide by the total weights contained in the MOE. The total MOE score is the sum of the weighted metric scores.

III. MOE: BILL CREDIT CALCULATION

A. Minimum and Maximum Bill Credit Tables

If Verizon's overall weighted score in any MOE is less than (more negative than) the applicable minimum score in a given month, credits pursuant to a credit table for each MOE category will be applied. The minimum and maximum overall weighted scores and the start point percentages are as follows:

Table A-5: Minimum/Maximum Performance Scores

Mode of Entry	Minimum Market Adj.	Maximum Market Adj.	% Market Adj. at Minimum
Loop Based	-0.11515	-.67000	10%
Resale POTS	-0.13278	-.67000	10%
Interconnection Trunks	-0.17857	-1.0000	10%

If Verizon's weighted score is more negative than the minimum market adjustment performance score for any MOE, at least 10% of the allocated dollars for that MOE will be applied to bill credits. The intent is that the minimum score for each MOE category corresponds to the threshold at which there is a 95% confidence that the number of missed standards may be more than what would be expected from random variation in the underlying data. For example, if Verizon scored -0.11515 on the Loop-Based MOE in a month, then 10% of the monthly amount would be allocated as bill credits.

If Verizon's weighted score is more negative than the maximum performance score for any MOE, 100% of the allocated dollars for the MOE would be applied as bill credits. The maximum scores represent the maximum allowable out of parity condition, which would significantly limit a mode of entry as a competitively viable option. The Resale, Trunks and Loop-Based MOEs are divided into increasing increments until the maximum at risk amount is allocated as bill credits. The minimum and maximum ranges and the associated amount of bill credits for each MOE appear in Tables A-7 through A-9, which appear at the end of this appendix. The MOE bill credit tables reflect: (1) the range of the aggregate performance scores from the minimum to maximum, and (2) the monthly dollars attributable to each score. These tables will be used with the aggregate and individual CLEC monthly volumes for the MOE to determine the corresponding monthly amount that will be paid to each CLEC if Verizon's performance is at that particular level.

The measurement unit for each of the MOEs is "Lines in Service"[10] and is determined as follows:

1. Lines in Service for Loop-Based refers to UNE 2-Wire Analog Loops, UNE 2-Wire Digital Loops, Resale 2-Wire Digital Loops, and UNE 2-Wire xDSL Loops;

2. Lines in Service for Resale POTS refers to Resale POTS lines; and

3. Lines in Service for Interconnection Trunks refers to Trunks in service (reported at the DS0 level).

The bill credits, if any, due to the individual CLECs will be determined as follows. Each month, Verizon will determine the bill credit amount corresponding to the overall MOE score (*see* Tables A-7 to A-9). If a bill credit amount is due, it will be allocated to CLECs based upon their proportion of the lines in service that month for the MOE. For example, a step of the Loop-Based Bill Credit Table appears below in Table A-6.

Table A-6: Example - Loop-Based Bill Credit Calculation

Score Range		**Percent**	**Month's Aggregate Volume**	**Month's Rate**
<	**And ≥**			
-0.17356	-0.20276	19.47%	200,000	[19.47%] *[maximum monthly amount] / [month's volume]

If the Aggregate Loop-Based MOE score was -0.1900 and a CLEC had 20,000 Loop Based lines (at the end of the month), it would be entitled to a $12,874 Bill Credit ([20,000] x [0.1947] x [$661,230] / [200,000] = $12,874).

B. MOE: Doubling Provision

If an MOE weighted score is less than (farther from zero) or equal to the midpoint for

[10] Source for Lines in Service: Corresponding denominator for MR-2 Report Rate Metrics as reported in monthly Carrier-to-Carrier Reports.

three (3) consecutive months, the bill credits available will be doubled for that same three-month period for the applicable MOE category. The bill credits paid in the third month will include the incremental (doubling) impact of the two prior months as well as the doubled third month. The amounts will remain doubled until the month in which the MOE performance score is reduced in magnitude (closer to zero) to one-half the difference between the minimum and the midpoint, the one-quarter point. The midpoint and one-quarter values are shown in Tables A-7 through A-9 for each of the Modes of Entry.

C. MOE: Bill Credit Tables

Tables A-7 through A-9 depict the three Mode of Entry bill credit tables associated with performance score ranges. Also shown on each is the minimum (or upper) threshold, as well as the mid-point and quarter point score ranges associated with the doubling provision.

Table A-7: Loop Based MOE

Monthly Maximum Amount:	**$661,230**			
Minimum/Midpoint/Maximum	**Score Range**		**Percentages**	**Amounts**
	<	**And ≥**		
Upper Threshold: -0.11515		-0.11515	0.00%	$0
	-0.11515	-0.14435	10.00%	$66,123
	-0.14435	-0.17356	14.74%	$97,444
	-0.17356	-0.20276	19.47%	$128,766
	-0.20276	-0.23196	24.21%	$160,087
One-quarter: -0.25387	-0.23196	-0.26116	28.95%	$191,409
	-0.26116	-0.29037	33.68%	$222,730
	-0.29037	-0.31957	38.42%	$254,052
	-0.31957	-0.34877	43.16%	$285,373
	-0.34877	-0.37797	47.89%	$316,694
Midpoint: –0.39258	-0.37797	-0.40718	52.63%	$348,016
	-0.40718	-0.43638	57.37%	$379,337
	-0.43638	-0.46558	62.11%	$410,659
	-0.46558	-0.49478	66.84%	$441,980
	-0.49478	-0.52399	71.58%	$473,301
	-0.52399	-0.55319	76.32%	$504,623
	-0.55319	-0.58239	81.05%	$535,944
	-0.58239	-0.61159	85.79%	$567,266
	-0.61159	-0.64080	90.53%	$598,587
	-0.64080	-0.67000	95.26%	$629,909
Lower Threshold: -0.67000	-0.67000		100.00%	$661,230

Table A-8: Resale – POTS MOE

Monthly Maximum Amount:	**$220,410**			
Minimum/Midpoint/Maximum	**Score Range**		**Percentages**	**Amounts**
	<	**And ≥**		
Upper Threshold: -0.13278		-0.13278	0.00%	$ 0
	-0.13278	-0.16105	10.00%	$22,041
	-0.16105	-0.18933	14.74%	$32,481
	-0.18933	-0.21760	19.47%	$42,922
	-0.21760	-0.24588	24.21%	$53,362
One-quarter: -0.26709	-0.24588	-0.27415	28.95%	$63,803
	-0.27415	-0.30243	33.68%	$74,243
	-0.30243	-0.33070	38.42%	$84,684
	-0.33070	-0.35898	43.16%	$95,124
	-0.35898	-0.38725	47.89%	$105,565
Midpoint: –0.40139	-0.38725	-0.41553	52.63%	$116,005
	-0.41553	-0.44380	57.37%	$126,446
	-0.44380	-0.47208	62.11%	$136,886
	-0.47208	-0.50035	66.84%	$147,327
	-0.50035	-0.52863	71.58%	$157,767
	-0.52863	-0.55690	76.32%	$168,208
	-0.55690	-0.58518	81.05%	$178,648
	-0.58518	-0.61345	85.79%	$189,089
	-0.61345	-0.64173	90.53%	$199,529
	-0.64173	-0.67000	95.26%	$209,970
Lower Threshold: -0.67000	-0.67000		100.00%	$220,410

Table A-9: Interconnection Trunks MOE

Monthly Maximum Amount:	**$220,410**			
Minimum/Midpoint/Maximum	**Score Range**		**Percentages**	**Amounts**
	<	**And ≥**		
Upper Threshold: -0.17857		-0.17857	0.00%	$ 0
	-0.17857	-0.24176	10.00%	$22,041
	-0.24176	-0.30494	16.92%	$37,300
	-0.30494	-0.36813	23.85%	$52,559
One-quarter: -0.38393	-0.36813	-0.43132	30.77%	$67,818
	-0.43132	-0.49450	37.69%	$83,078
	-0.49450	-0.55769	44.62%	$98,337
Midpoint: -0.58929	-0.55769	-0.62088	51.54%	$113,596
	-0.62088	-0.68407	58.46%	$128,855
	-0.68407	-0.74725	65.38%	$144,114
	-0.74725	-0.81044	72.31%	$159,373
	-0.81044	-0.87363	79.23%	$174,633
	-0.87363	-0.93681	86.15%	$189,892
	-0.93681	-1.00000	93.08%	$205,151
Lower Threshold: -1.00000	-1.00000		100.00%	$220,410

VERIZON

PERFORMANCE ASSURANCE PLAN

APPENDIX B: Critical Measures

APPENDIX B: CRITICAL MEASURES

I. CRITICAL MEASURES: MEASURES AND WEIGHTS

Verizon's performance on each of the measures included in this section of the Plan is considered to be critical to the CLECs' ability to compete in the Massachusetts local exchange market. Should Verizon performance miss an applicable performance standard for even one of these measures, the eligible CLECs will be entitled to bill credits. Each Critical Measure is assigned its own maximum penalty amount and has been given a weight relative to its importance to the marketplace. Table B-1 below demonstrates the annual and monthly amounts of bill credits at risk under this section of the Plan.

Table B-1: Allocation of Incentive Amounts for Critical Measures

Critical Measures	
Annual Amount	$27,087,803
Monthly Amount	$2,257,317

II. CRITICAL MEASURES: THE AGGREGATE AND INDIVIDUAL RULES

In addition to measuring performance at the CLEC aggregate level (the "Aggregate Rule"), the Critical Measures take CLEC-specific performance into consideration as well (the "Individual Rule"). Each CLEC's eligibility for Critical Measure bill credits is based on the corresponding CLEC-specific performance.[11]

A. Aggregate Rule

For each Critical Measure, Verizon's performance for all CLECs during a given month will be evaluated at the CLEC state-aggregate level. Should the resulting CLEC aggregate performance score for any Critical Measure fall to -1 or below, bill credits for that measure will

[11] Note that metrics PO-2-02-6010, PO-2-02-6020, PO-2-02-6080, and PO-4-01-6660 which are measured at the aggregate level only for Critical Measures and any bill credits due are prorated by lines in service during the corresponding report period.

be payable to the eligible CLECs. The eligible CLECs are all those CLECs with qualified misses for that month. *See* Appendix C for scoring methodologies.

If the aggregate level performance score is -1 or worse, individual CLECs with qualified misses would be entitled to bill credits for that Critical Measure. For performance scores between -1 and -2, the bill credits will increase by ten equal incremental amounts based on the actual performance for a Benchmark measure and the equivalent z-score for a Parity measure. If the aggregate score falls to a -2, the maximum bill credits for that Critical Measure will be applied. *See* Tables B-2 and B-3 below. The amounts payable to each CLEC will be determined based upon individual CLEC performance as defined in Sections III and IV of this appendix.

B. Individual Rule

Additionally, if Verizon meets the performance standard in the Aggregate, but provides service to any individual CLEC resulting in a -3 performance score,[12] Verizon will credit that individual CLEC's bill. *See* Appendix C, Table C-2 for details.

III. CRITICAL MEASURES: PERFORMANCE EVALUATION

Like the MOE performance scoring, Verizon's performance on each of the measures within the Critical Measures section will be evaluated monthly at the industry (CLEC Aggregate) level. Parity and Benchmark performance for each metric is transformed into a performance score of "0", "-1", or "-2". The Critical Measures Aggregate Rule also applies the performance scoring and small sample criteria described in Appendices C and D.

The Individual Rule ensures that individual CLECs are not disadvantaged when the industry's aggregate performance is acceptable, and some individual CLEC's service is poorer. This rule is applied only when the Aggregate Rule is not triggered in a given reporting period. A

[12] *See* Appendix C for details on -1, -2 and -3 performance scores.

"-3" performance score at the CLEC-specific level will be used to determine eligibility for Individual Rule payments. *See* Appendix C for details.

IV. CRITICAL MEASURES: BILL CREDIT CALCULATION

A. Incentive Amounts for Critical Measures

Given the total annual dollars assigned to Critical Measures, Table B-2 allocates dollars by percent to each metric by assigned weight.

Table B-2: Allocation of Critical Measure Weights and Incentive Dollars

Mode	Metric Number	Metric Name	Product	Weight	Standard Type	Maximum Bill Credit	Individual Rule Evaluation
Loop	OR-1-02-3331	% On Time LSRC - Flow Through	UNE Loop/Pre-qualified Complex/LNP	10	Benchmark	$64,865	Yes
Loop	OR-1-04-3331	% On Time LSRC/ASRC - No Facility Check (Electronic - No Flow Through)	UNE Loop/Pre-qualified Complex/LNP	5	Benchmark	$32,433	Yes
Loop	OR-1-06-3331	% On Time LSRC/ASRC - Facility Check (Electronic - No Flow-through)	UNE Loop/Pre-qualified Complex/LNP	5	Benchmark	$32,433	Yes
Loop	PR-4-04-1341	% Missed Appointment - Verizon – Dispatch	UNE/Resale 2-Wire Digital Services	2	Parity	$12,973	Yes
Loop	PR-4-04-3113	% Missed Appointment - Verizon – Dispatch	UNE POTS Loop New	10	Parity	$64,865	Yes
Loop	PR-4-14-3342	% Completed On Time - 2-Wire xDSL	UNE 2-Wire xDSL Loops	2	Benchmark	$12,973	Yes
Loop	PR-6-01-3113	% Installation Troubles reported within 30 Days	UNE POTS - Loop - New	10	Parity	$64,865	Yes
Loop	PR-6-01-3342	% Installation Troubles reported within 30 Days	UNE 2-Wire xDSL Loops	2	Parity	$12,973	Yes
Loop	PR-6-02-3520	% Installation Troubles reported within seven (7) Days	UNE Loop Basic Hot Cut (all line size)	20	Benchmark	$129,731	Yes
Loop	PR-6-02-3523	% Installation Troubles reported within seven (7) Days	UNE Loop - Large Job Hot Cut (all line size)	10	Benchmark	$64,865	Yes
Loop	PR-9-01-3520	% On Time Performance - Hot Cut	UNE Loop - Basic Hot Cut (all line size)	20	Benchmark	$129,731	Yes
Loop	PR-9-01-3523	% On Time Performance - Hot Cut	UNE Loop - Large Job Hot Cut (all line size)	10	Benchmark	$64,865	Yes
Loop	MR-3-01-3112	% Missed Repair Appointment – Loop	UNE POTS Loop	2	Parity	$12,973	Yes
Loop	MR-3-01-3342	% Missed Repair Appointment – Loop	UNE 2-Wire xDSL Loops	2	Parity	$12,973	Yes
Loop	MR-4-08-3112	% Out of Service > 24 Hours	UNE POTS Loop	10	Parity	$64,865	Yes
Resale	OR-1-02-2320	% On Time LSRC - Flow Through	Resale POTS/Pre-qualified Complex	10	Parity	$64,865	Yes
Resale	OR-1-04-2320	% On Time LSRC/ASRC - No Facility Check (Electronic - No Flow Through)	Resale POTS/Pre-qualified Complex	5	Parity	$32,433	Yes
Resale	PR-4-04-2100	% Missed Appointment - Verizon – Dispatch	Resale POTS	10	Parity	$64,865	Yes
Resale	PR-4-05-2100	% Missed Appointment - Verizon - No Dispatch	Resale POTS	20	Parity	$129,731	Yes
Resale	PR-6-01-2100	% Installation Troubles reported within 30 Days	Resale POTS	15	Parity	$97,298	Yes

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Mode	Metric Number	Metric Name	Product	Weight	Standard Type	Maximum Bill Credit	Individual Rule Evaluation
Resale	MR-3-01-2110	% Missed Repair Appointment – Loop	Resale POTS Business	1	Parity	$6,487	Yes
Resale	MR-3-01-2120	% Missed Repair Appointment – Loop	Resale POTS Residence	1	Parity	$6,487	Yes
Resale	MR-4-08-2110	% Out of Service > 24 Hours	Resale POTS Business	5	Parity	$32,433	Yes
Resale	MR-4-08-2120	% Out of Service > 24 Hours	Resale POTS Residence	5	Parity	$32,433	Yes
Trunks	OR-1-12-5020	% On Time FOC	Interconnection Trunks (CLEC) (<= 192 Forecasted Trunks)	5	Benchmark	$32,433	Yes
Trunks	OR-1-13-5000	% On Time Design Layout Record (DLR)	Interconnection Trunks (CLEC)	10	Benchmark	$64,865	Yes
Trunks	PR-4-07-3540	% On Time Performance - LNP Only	UNE LNP	20	Benchmark	$129,731	Yes
Trunks	PR-4-15-5000	% On Time Provisioning – Trunks	Interconnection Trunks (CLEC)	20	Benchmark	$129,731	Yes
Trunks	NP-1-04-5000	Number Final Trunk Groups Exceeding Blocking Standard - Three (3) Months	CLEC Trunks	10	Benchmark	$64,865	No
Specials	OR-1-06-3211	% On Time LSRC/ASRC - Facility Check (Electronic - No Flow-through)	UNE Specials DS1	2	Benchmark	$12,973	Yes
Specials	OR-2-04-1200	% On Time LSR/ASR Reject - No Facility Check (Electronic - No Flow-through)	UNE/Resale Specials	2	Benchmark	$12,973	Yes
Specials	OR-2-06-1200	% On Time LSR/ASR Reject - Facility Check (Electronic - No Flow-Through)	UNE/Resale Specials	2	Benchmark	$12,973	Yes
Specials	PR-4-01-1210	% Missed Appointment - Verizon – Total	UNE/Resale Specials DS0	2	Parity	$12,973	Yes
Specials	PR-4-01-1211	% Missed Appointment - Verizon – Total	UNE/Resale Specials DS1	2	Parity	$12,973	Yes
Specials	PR-4-01-1213	% Missed Appointment - Verizon – Total	UNE/Resale Specials DS3	2	Parity	$12,973	Yes
Specials	PR-4-01-3530	% Missed Appointment - Verizon – Total	UNE IOF	2	Parity	$12,973	Yes
Specials	PR-4-02-1200	Average Delay Days – Total	UNE/Resale Specials	2	Parity	$12,973	Yes
Specials	PR-4-02-3530	Average Delay Days – Total	UNE IOF	5	Parity	$32,433	Yes
Specials	PR-5-01-1200	% Missed Appointment - Verizon – Facilities	UNE/Resale Specials	5	Parity	$32,433	Yes
Specials	PR-5-02-1200	% Orders Held for Facilities > 15 Days	UNE/Resale Specials	5	Parity	$32,433	Yes
Specials	PR-6-01-1200	% Installation Troubles reported within 30 Days	UNE/Resale Specials	5	Parity	$32,433	Yes
Specials	MR-4-01-1216	Mean Time To Repair – Total	UNE/Resale Specials (Non DS0 & DS0)	2	Parity	$12,973	Yes

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Mode	Metric Number	Metric Name	Product	Weight	Standard Type	Maximum Bill Credit	Individual Rule Evaluation
Specials	MR-4-01-1217	Mean Time To Repair – Total	UNE/Resale Specials (DS1 & DS3)	2	Parity	$12,973	Yes
Specials	MR-4-08-1216	% Out of Service > 24 Hours	UNE/Resale Specials (Non DS0 & DS0)	2	Parity	$12,973	Yes
Specials	MR-4-08-1217	% Out of Service > 24 Hours	UNE/Resale Specials (DS1 & DS3)	2	Parity	$12,973	Yes
Other	PO-2-02-6010	OSS Interface Availability - Prime Time	WPTS	2	Benchmark	$12,973	No
Other	PO-2-02-6020	OSS Interface Availability - Prime Time	EDI	5	Benchmark	$32,433	No
Other	PO-2-02-6080	OSS Interface Availability - Prime Time	Maintenance Web GUI (RETAS) / Pre-ordering/Ordering Web GUI combined	5	Benchmark	$32,433	No
Other	PO-4-01-6660	% Change Management Notices Sent on Time	Change Notification/Confirmation: Types 3, 4 and 5 (combined)	10	Benchmark	$64,865	No
Other	BI-9-01-1000	% Billing Completeness in Twelve Billing Cycles	Resale & UNE combined	25	Benchmark	$162,164	Yes
		Monthly Total		348		$2,257,317	
		Annual Total				$27,087,803	

B. Bill Credit Calculation: Aggregate Rule

The following steps will be taken to determine which CLECs will be entitled to Bill Credits pursuant to the Aggregate Rule, *i.e.,* when aggregate CLEC performance falls below standard for a Critical Measure.

1. Calculate Total Dollars Available for Bill Credits Per Critical Measure Per Month

Example tables appear below using statistical and performance scores for a parity measure, and using performance results and scores for a Benchmark measure.

Table B-3:
Example Bill Credits for a Parity Critical Measure with $64,865 Allocation

Statistical Score		Performance Score	Increment	Dollars
From	To			
	>-1.645	0	0%	$0
≤ -1.645	>-1.8095	-1	50%	$32,433
≤ -1.8095	> -1.9740	-1	55%	$35,676
≤ -1.9740	> -2.1385	-1	60%	$38,919
≤ -2.1385	> -2.3030	-1	65%	$42,162
≤ -2.3030	> -2.4675	-1	70%	$45,406
≤ -2.4675	> -2.6320	-1	75%	$48,649
≤ -2.6320	> -2.7965	-1	80%	$51,892
≤ -2.7965	> -2.9610	-1	85%	$55,135
≤ -2.9610	> -3.1255	-1	90%	$58,379
≤ -3.1255	> -3.2900	-1	95%	$61,622
≤ - 3.290		-2	100%	$64,865

Table B-4:
Example Bill Credits for a 95% Benchmark Critical Measure and $64,865[13] Allocation

% Performance		Performance	Increment	Dollars
From	To	Score		
	≥ 95.0	0	0%	$0
< 95.0	≥ 94.5	-1	50%	$32,433
< 94.5	≥ 94.0	-1	55%	$35,676
< 94.0	≥ 93.5	-1	60%	$38,919
< 93.5	≥ 93.0	-1	65%	$42,162
< 93.0	≥ 92.5	-1	70%	$45,406
< 92.5	≥ 92.0	-1	75%	$48,649
< 92.0	≥ 91.5	-1	80%	$51,892
< 91.5	≥ 91.0	-1	85%	$55,135
< 91.0	≥ 90.5	-1	90%	$58,379
< 90.5	≥ 90.0	-1	95%	$61,622
< 90.0		-2	100%	$64,865

2. Aggregate Performance Determines the Bill Credits Available for Critical Measure Metrics

For Critical Measure aggregate CLEC performance resulting in -1 or -2 performance scores, the aggregate performance score and the Statistical score for parity metrics (Table B-3) or the aggregate performance result for benchmark metrics (Table B-4) will be used to determine the bill credits available for each metric as shown in the tables above. A metric with a benchmark standard and a small sample size (defined in Appendix C) in a given month that is assigned a performance score of "-1" from Table C-1 in the same month will result in an allocation of 50% for that month.

3. Determine Which CLECs Qualify for the Market Adjustment

For Parity measures, where the statistical score is used, and the statistical score for the aggregate performance is less than (more negative than) -1.645, CLECs with "qualified misses" will be eligible for a portion of the bill credits. When calculating a market adjustment for

[13] For Performance Measures with other benchmark standards, the range of performance will be similarly distributed in 10 even increments.

metrics that use Benchmark standards (generally a 95% standard) all CLECs at the -1 level or less would qualify. The calculation of the dollars is similar to the statistical score method. "Qualified misses" are described below.

4. Steps Used to Calculate the Individual Market Adjustments for Qualified CLECs

a. Determine Each CLEC's Qualified Misses

Each CLEC's allocation depends upon its individual share of qualified volume that is eligible for bill credits. Qualified volume is a portion of the total volume for the measure during the month based upon each CLEC's individual performance and the standard for the measure. For each eligible CLEC, determine the difference between the CLEC's individual performance and the corresponding standard used to determine the metric "miss." Divide this difference by 100 and multiply this by the CLEC's total volume for the measure in the performance month to determine the qualified volume ([qualified volume] = [performance standard – CLEC performance] /100 x [CLEC observations]).

b. Determine Each CLEC's Market Adjustment Amount Per Qualified Miss

Divide the aggregate market adjustment amount that corresponds to the metric's aggregate performance during that month by the sum of the CLEC qualified misses for that metric from Step (a) to determine the market adjustment per qualified miss.

c. Determine Each CLEC's Dollar Share

Multiply each eligible CLEC's qualified misses by the market adjustment amount per qualified miss.

Tables B-5 and B-6, below, illustrate how CLEC Aggregate Rule bill credits allocations are calculated for metrics with Benchmark and Parity standards.

Table B-5: Example Aggregate Rule Allocation for a Benchmark Measure

Metric #	Metric Name	Agg/ CLEC	VZ Perf./ Bnchmrk	CLEC Perf.	VZ Obs	CLEC Obs.	Stat Score	Qualified Misses	Agg Bill credit/ miss	Agg Bill Credit
OR-1-02-3331	% On Time LSRC-Flow Thru-Loop/Pre-Qual-2hrs	Agg	95.00	89.30		1,000				$64,865
OR-1-02-3331	% On Time LSRC-Flow Thru-Loop/Pre-Qual-2hrs	<CLEC1>	95.00	95.00		300		0.0	$1,138	$ 0
OR-1-02-3331	% On Time LSRC-Flow Thru-Loop/Pre-Qual-2hrs	<CLEC2>	95.00	92.00		200		6.0	$1,138	$6,828
OR-1-02-3331	% On Time LSRC-Flow Thru-Loop/Pre-Qual-2hrs	<CLEC3>	95.00	88.00		200		14.0	$1,138	$15,932
OR-1-02-3331	% On Time LSRC-Flow Thru-Loop/Pre-Qual-2hrs	<CLEC4>	95.00	88.00		100		7.0	$1,138	$7,966
OR-1-02-3331	% On Time LSRC-Flow Thru-Loop/Pre-Qual-2hrs	<CLEC5>	95.00	80.00		200		30.0	$1,138	$34,139
OR-1-02-3331	% On Time LSRC-Flow Thru-Loop/Pre-Qual-2hrs	Total		89.30				57.0		$64,865

Table B-6: Example Aggregate Rule Allocation for a Parity Measure

Metric #	Metric Name	Agg/ CLEC	VZ Perf./ Bnchmrk	CLEC Perf.	VZ Obs	CLEC Obs.	Stat Score	Qualified Misses	Agg Bill credit/ miss	Agg Bill Credit
PR-4-04-1341	% Missed Appointment -Dispatch -2W Digital - UNE/Resale	Agg	4.00	6.00	10,000	1,000	-2.7981			$11,027
PR-4-04-1341	% Missed Appointment -Dispatch -2W Digital - UNE/Resale	<CLEC1>	4.00	4.00	10,000	300	0.1065	0.0	$ 551	$ 0
PR-4-04-1341	% Missed Appointment -Dispatch -2W Digital - UNE/Resale	<CLEC2>	4.00	8.00	10,000	200	-2.4214	8.0	$ 551	$4,411
PR-4-04-1341	% Missed Appointment -Dispatch -2W Digital - UNE/Resale	<CLEC3>	4.00	6.00	10,000	200	-1.2212	4.0	$ 551	$2,205
PR-4-04-1341	% Missed Appointment -Dispatch -2W Digital - UNE/Resale	<CLEC4>	4.00	6.00	10,000	100	-0.7928	2.0	$ 551	$1,103
PR-4-04-1341	% Missed Appointment -Dispatch -2W Digital - UNE/Resale	<CLEC5>	4.00	7.00	10,000	200	-1.8361	6.0	$ 551	$3,308
PR-4-04-1341	% Missed Appointment -Dispatch -2W Digital – UNE/Resale	Total		6.00				20.0		$11,027

C. Bill Credit Calculation: Individual Rule

1. Determine If Any CLECs Qualify for Bill Credit Adjustment

If there are no Aggregate Rule payments in the report period, individual CLECs qualify for Individual Rule Bill Credits if they received a performance score equal to -3 on any of the measures included in the Critical Measures for the applicable month that is evaluated for the Individual Rule.

2. Determine Each CLEC's Bill Credit Adjustment Base (Qualified Misses)

The difference between the standard and the CLEC's individual performance is used to determine the CLEC's qualified misses as described under the Aggregate Rule for the report period.

3. Calculate Bill Credit Adjustment to Apply to the CLECs Impacted

The full (100%) monthly at risk dollars are used to develop a rate for the Individual Rule in the following manner. The total dollars at risk for a Critical Measure (shown in Table B-2) are divided by one third of the CLEC-Aggregate observations to create a bill credit rate for the Individual Rule. For example, metric OR-1-02-3331, % On Time LSRC-Flow Thru-Loop/Pre-Qual-2hrs, shows $64,865 in bill credits assigned in Table B-2. If there were 1,000 observations at the CLEC aggregate level, one third of those observations would equal 333. The rate used for the Individual Rule on that metric would then be $ 195 per qualified miss ($64,865 ÷ 333 = $ 195). This rate is multiplied by the CLEC's qualified misses to determine the amount to be credited to the CLEC for that Critical Measure. The Individual Rule payment applies to the full 100% credit level when the individual CLEC receives service at the -3 level (*i.e.*, there is no 50% to 100% scaling of payment rates as is done for the Aggregate Rule).

4. Examples of Individual Rule Bill Credit Calculation

a. Benchmark Measure Example

For Benchmarks, the Individual Rule will be triggered by a performance score of -3 for CLEC-specific performance (assuming the aggregate performance score was 0). The qualified misses will be calculated as the difference between the CLEC-specific performance and the C2C standard,[14] divided by 100, and multiplied by the CLEC-specific observations.

For example, if for a metric with a 95% Benchmark Standard, Aggregate performance is 95.10 and a CLEC's specific performance was 84.00% for 100 observations, the Individual Rule eligibility would be determined by the 84.00% CLEC-specific performance being less than 95.00%. However, the qualified misses would be determined by the difference between 84.00% and the 95% C2C standard, *e.g.*, [95.00-84.00]/100 * 100 = 11 qualified misses].

b. Parity Measure Example

For Parity, the Individual Rule will be triggered by performance score of -3 where the z-score is less (more negative) than -4.935 for CLEC-specific performance (assuming the aggregate performance score was 0). The qualified misses will be calculated as the difference between the CLEC-specific performance and the VZ retail compare performance, divided by 100, and multiplied by the CLEC-specific observations.

For example, if an individual CLEC's specific performance was 12.50% for 200 observations on a missed appointment metric, which resulted in a z-score being less (more negative) than -4.935, and VZ's retail performance was 4% while the CLEC-aggregate performance was 5.10%, the Individual Rule would apply. The qualified misses would be

[14] *See* Appendix C, Table C-2, for each of the Benchmark metrics the C2C standard is translated into a "0" performance score.

determined by the difference between 4.00% VZ performance and the 12.50% CLEC specific performance, *e.g.*, [12.50-4.00]/100 * 200 = 17 qualified misses)].

Tables B-7 and B-8 illustrate how CLEC Individual Rule bill credits are calculated for metrics with Benchmark and Parity standards.

Table B-7: Example Individual Rule Calculation for a Benchmark Measure

Metric #	Metric Name	Agg/ CLEC	VZ Perf./ Bnchmrk	CLEC Perf.	VZ Obs	CLEC Obs.	Stat Score	Qualified Misses	Ind Bill credit/ miss	Ind Bill Credit
OR-1-02-3331	% On Time LSRC-Flow Thru-Loop/Pre-Qual-2hrs	Agg	95.00	95.10		1,000				
OR-1-02-3331	% On Time LSRC-Flow Thru-Loop/Pre-Qual-2hrs	<CLEC1>	95.00	99.00		300		0.0	$ 195	$0
OR-1-02-3331	% On Time LSRC-Flow Thru-Loop/Pre-Qual-2hrs	<CLEC2>	95.00	98.00		200		0.0	$ 195	$0
OR-1-02-3331	% On Time LSRC-Flow Thru-Loop/Pre-Qual-2hrs	<CLEC3>	95.00	88.00		200		14.0	$ 195	$0
OR-1-02-3331	% On Time LSRC-Flow Thru-Loop/Pre-Qual-2hrs	<CLEC4>	95.00	84.00		100		11.0	$ 195	$2,145
OR-1-02-3331	% On Time LSRC-Flow Thru-Loop/Pre-Qual-2hrs	<CLEC5>	95.00	99.00		200		0.0	$ 195	$0
OR-1-02-3331	% On Time LSRC-Flow Thru-Loop/Pre-Qual-2hrs	Total		95.10				57.0		$2,145

Table B-8: Example Individual Rule Calculation for a Parity Measure

Metric #	Metric Name	Agg/ CLEC	VZ Perf./ Bnchmrk	CLEC Perf.	VZ Obs	CLEC Obs.	Stat Score	Qualified Misses	Ind Bill credit/ miss	Ind Bill Credit
PR-4-04-1341	% Missed Appointment -Dispatch -2W Digital - UNE/Resale	Agg	4.00	5.00	10,000	1,000	-1.4188			
PR-4-04-1341	% Missed Appointment -Dispatch -2W Digital - UNE/Resale	<CLEC1>	4.00	1.00	10,000	200	2.7715	0.0	$ 39	$0
PR-4-04-1341	% Missed Appointment -Dispatch -2W Digital - UNE/Resale	<CLEC2>	4.00	11.00	10,000	300	-4.9496	21.0	$ 39	$ 819
PR-4-04-1341	% Missed Appointment -Dispatch -2W Digital - UNE/Resale	<CLEC3>	4.00	5.00	10,000	200	-0.5696	2.0	$ 39	$0
PR-4-04-1341	% Missed Appointment -Dispatch -2W Digital - UNE/Resale	<CLEC4>	4.00	5.00	10,000	100	-0.3237	1.0	$ 39	$0
PR-4-04-1341	% Missed Appointment -Dispatch -2W Digital - UNE/Resale	<CLEC5>	4.00	0.00	10,000	200	5.0000	0.0	$ 39	$0
PR-4-04-1341	% Missed Appointment -Dispatch -2W Digital - UNE/Resale	Total		5.00				24.0		$ 819

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PERFORMANCE ASSURANCE PLAN

APPENDIX C: Performance Evaluation Methodology

APPENDIX C: PERFORMANCE EVALUATION METHODOLOGY

The Performance Assurance Plan uses the following methodologies to evaluate performance for the purposes of market adjustment calculations.

I. PERFORMANCE SCORES

A. Performance Scores for Measures with Parity Standards

Performance for metrics with Parity standards is evaluated according to the statistical procedures defined in Appendix D. Table C-2, which appears at the end of this appendix, shows how statistical scores are converted into performance scores of "0", "-1", and "-2" in Mode of Entry and Critical Measures and into a performance score of "-3" for the Individual Rule in Critical Measures. If there is no, or insufficient, CLEC activity in any metric, the metric is scored as a "0".

B. Performance Scores for Measures with Benchmark Standards

Performance for metrics with Benchmark standards, *i.e.*, metrics without retail analogs, is evaluated against pre-established standards. Table C-2 shows how performance for metrics with Benchmark standards is converted into performance scores of "0", "-1", and "-2" in Mode of Entry and Critical Measures, and into a performance score of "-3" for the Individual Rule in Critical Measures, when there is sufficient sample size. If there is no CLEC activity in any metric, the metric is scored as a "0". Scoring requirements for small sample size is defined below.

1. Small Sample Benchmark Scoring Procedures

For Counted Variables with Benchmark standards, it is possible to have small sample sizes, such that just a single missed transaction within a report period can cause the measure to miss its Benchmark. The Plan recognizes that without an allowance for a single miss, the Plan

would effectively require perfection to avoid bill credits, which would be above the designated Benchmark for the measure. Some Benchmark metrics have standards such that higher than the benchmark is better (HIB). Other Benchmark metrics have standards where lower than the benchmark is better performance (LIB). The number of observations ("n") necessary to qualify as a "small" sample on Benchmark measures for the allowable miss table is determined using the applicable performance standard in one of the following two formulas:

HIB: $n < \{1/[1\text{-standard}]\}$

LIB: $n < \{1/[\text{standard}]\}$

Table C-1 shows the application of performance scores if the number of observations "n" meets the requirements above.

Table C-1: Allowable Miss Table for Small Sample Size Benchmark Scoring

	CLEC Aggregate Scoring			**CLEC Individual Rule Scoring**
	0	**-1**	**-2**	**-3**
Number of Misses	≤ 1	2	3	>3

Applying this formula to a performance standard of 95%, where higher performance is better, the sample size "n" would have to be less than (1 ÷ (1-0.95)) or 20 in order to use the table. For a performance standard of 2%, where lower performance is better, "n" would have to be less than (1 ÷ 0.02) or 50 to use the table. The following table shows performance scores for a 95% and 2% metrics using this methodology:

Examples:

Performance Standard	CLEC Aggregate or Individual Rule	Number of Observations	Performance	# of Misses	Performance Score
95%	Aggregate	12	83.33%	2	-1
95%	Individual	18	77.78%	4	-3
95%	Aggregate	9	88.88%	1	0
2%	Aggregate	42	7.14%	3	-2
2%	Individual	22	4.55%	1	0
2%	Aggregate	10	10.00%	1	0

2. CLEC Exceptions

Each month each CLEC will have the right to challenge the allowable misses or exclusions that Verizon may exercise pursuant to the small sample size table for performance measures with benchmark standards.

If a CLEC exercises this right, it must file a petition with the Department demonstrating that the exclusion will have a significant impact on the operations of the CLEC's business and that Verizon should not be allowed to exclude the event pursuant to the above table. Verizon will have a right to respond to such a challenge by a CLEC.

The Timeline for CLEC Exceptions will be the same as the Timeline for Verizon Exceptions under the small sample size section in Appendix D. If a CLEC's Exception Petition is granted, the appropriate bill credits will be reflected on the CLEC's bill as soon as is practical.

C. Waivers

Recognizing that C2C service quality data may be influenced by factors beyond Verizon's control, Verizon may file Exception or Waiver petitions with the Department seeking to have the monthly service quality results modified on three generic grounds.

The first involves the potential for "clustering" of data, and the effect that such clustering has on the statistical models used in this Plan. The requirements of the clustering exception are set forth in Appendix D.

The second ground for filing exceptions relates to CLEC behavior. If performance for any measure is impacted by unusual CLEC behavior, Verizon will bring such behavior to the attention of the CLEC and attempt to resolve the problem. If such action negatively influences Verizon's performance on any metric, Verizon is permitted to petition for relief. The petition, which will be filed with the Department and served on the CLEC, will provide appropriate, detailed documentation of the events, and will demonstrate that the CLEC behavior has caused Verizon to miss the service quality target. Verizon's petition must include all data that demonstrates how the measure was missed. It should also include information that excludes the data affected by the CLEC behavior. CLECs and other interested parties will be given an opportunity to respond to any Verizon petition for an Exception. If the Department determines that the service results were influenced by inappropriate CLEC behavior, the data will be excluded from the monthly reports.

The third ground for filing Waivers relates to situations beyond Verizon's control that negatively affect its ability to satisfy only those measures with Benchmark standards. The performance requirements dictated by Benchmark standards establish the quality of service under normal operating conditions, and do not necessarily establish the level of performance to be achieved during periods of emergency, catastrophe, natural disaster, severe storms, work stoppage, or other events beyond Verizon's control. Other events beyond Verizon's control may include random variation. Verizon may therefore petition the Department for a waiver of

specific performance results for those metrics that have performance targets dictated by Benchmark standards, if Verizon's performance results do not meet the specific standard.

Any petition pursuant to this provision, except for random variation described below, must demonstrate clearly and convincingly the following: the extraordinary nature of the circumstances involved; the impact that the circumstances had on Verizon's service quality; why Verizon's normal, reasonable preparations for difficult situations proved inadequate; and the specific days affected by the event. The petition must also include an analysis of the extent to which the parity metrics (retail and wholesale) were affected by the subject event.

Any petition pursuant to this provision for random variation must demonstrate that there was more than a 5% chance that the observed result was caused by random variation. In addition, Verizon shall provide the Department detailed information demonstrating that Verizon's underlying wholesale processes were operating and managed to be at or above the performance standard**.**

Any waiver petition must be filed within 45 days from the end of month in which the event occurred. The Department will determine which, if any, of the daily and monthly results should be adjusted in light of the extraordinary event or random variation cited, and will have full discretion to consider all available evidence submitted. Insufficient filings may be dismissed for failure to make a *prima facie* showing that relief is justified.

The resolution of a waiver exception request will occur prior to the scheduled payment of bill credits for a report period. To facilitate this, any petition seeking a waiver shall be filed within 45 days of the last day of the month in which the challenged event occurred. CLECs will have 10 days to serve and file replies to Verizon-requested exceptions. A timeline can be found in Appendix F.

II. PERFORMANCE SCORE TABLES

As noted above, Table C-2 below is used to convert Verizon's performance on the Parity and Benchmark metrics into scores of "0", "-1", "-2", or "-3" (for Individual Rule only). Table C-3 lists the numerous metrics with a Benchmark standard of 95%.

III. PERFORMANCE METRICS WITH PRODUCT COMBINATIONS DIFFERENT THAN C2C REPORTS

Certain products for some performance measures are reported and evaluated on a combined basis under the Performance Assurance Plan. Table C-4 lists the metrics that report performance of products on a combined basis. CLEC performance for these metrics is combined on a weighted basis where there is activity in both products reported under the Carrier-to-Carrier reports.

Table C-2: Performance Scoring for Mode of Entry and/or Critical Measures (as applicable)

		CLEC Aggregate Scoring			CLEC-Specific or Individual Rule Scoring
Metric #'s	**Measure**	**0 Standard**	**-1 Standard**	**-2 Standard**	**-3 Standard**
Various	All Metrics with Parity standards	Z score > -1.645 (less negative)	Z score ≤ -1.645 (equal or more negative) and > -3.290 (less negative)	Z score ≤ -3.290 (equal or more negative)	Z score ≤ -4.935 (equal or more negative)
Various	All Metrics with 95% standards [15]	≥ 95%	≥ 90 and < 95%	< 90%	< 85%
PO-1-01 PO-1-03 PO-1-06 MR-1-01 MR-1-06	OSS Response Time Measures Excluding WEB GUI	≤ 4 second difference	> 4 and ≤ 6 second difference	> 6 second difference	N/A
PO-1-01 PO-1-03 PO-1-06	OSS Response Time Measures for WEB GUI	≤ 7 second difference	> 7 and ≤ 9 second difference	> 9 second difference	N/A
PO-2-02	OSS System Availability - Prime	≥ 99.5%	≥ 98 and < 99.5%	< 98%	N/A
OR-6-03-2000 OR-6-03-3331	% Accuracy-LSRC % Accuracy-LSRC-Loop	≤ 5%	> 5% and ≤ 10%	> 10%	N/A

[15] A list of applicable 95% standards can be found on Table C-3.

		CLEC Aggregate Scoring			CLEC-Specific or Individual Rule Scoring
Metric #'s	**Measure**	**0 Standard**	**-1 Standard**	**-2 Standard**	**-3 Standard**
PR-6-02-3520 PR-6-02-3523	% Installation Troubles within 7 Days - Hot Cuts (Basic and Large Job)	≤ 2%	> 2% and ≤ 3%	> 3%	> 4.5%
NP-1-03	# of Final Trunk Groups Blocked for 2 Months	Final Interconnection Trunks meeting or exceeding blocking standard for less than two months	An individual Final Interconnection Trunk group exceeding blocking standard for 2 months in a row	N/A	N/A
NP-1-04	# of Final Trunk Groups Blocked for 3 Months	Final Interconnection Trunks meeting or exceeding blocking standard for less than three months	N/A	An individual Final Interconnection Trunk group exceeding blocking standard for 3 months in a row	N/A
BI-9	% Billing Completeness in Twelve Billing Cycles	≥ 96%	≥ 92 and < 96%	< 92%	< 88%

Table C-3: Performance Metrics with 95% Performance Standard

	Pre-Ordering
PO-4-01-6660	% Change Management Notices sent on Time (type 3,4,5)
PO-8-01-6000	% On Time-Manual Loop Qualification
	Ordering
OR-1-02-2320	% On Time LSRC-Flow Thru-POTS/Pre-Qual Cmplx-2hrs
OR-1-02-3331	% On Time LSRC-Flow Thru-Loop/Pre-Qual-2hrs
OR-1-04-2320	% OT LSRC-No Facility Chk-POTS/Pre-Qual Cmplx
OR-1-04-3331	% On Time LSRC/ASRC - No Facility Check (Electronic – No Flow Through)
OR-1-06-3211	% On Time LSRC/ASRC - Facility Check (Electronic - No Flow-through)-UNE DS1
OR-1-06-3331	% On Time LSRC/ASRC - Facility Check (Electronic - No Flow-through)
OR-1-12-5020	% On Time FOC Interconnection Trunks
OR-1-13-5000	% On Time Design Layout Record
OR-1-19-5020	% On Time Response-Request for Inbound Aug(<=192)
OR-2-02-2320	% On Time LSR Rej-Flow Thru-POTS/Pre-Qualified Complex
OR-2-02-3331	% On Time LSR Reject-Flow Thru-Loop/Pre-Qual
OR-2-04-1200	% OT LSR Rej-No Facility Chk-UNE/Resale Specials
OR-2-04-2320	% OT LSR Rej-No Facility Chk-POTS/Pre-Qual Cmplx
OR-2-04-3331	% OT LSR Rej-No Facility Chk-Loop/LNP
OR-2-04-3341	% On Time LSR Rej-No Facility Chk-2W Digital-UNE
OR-2-04-3342	% OT LSR Rej-No Facility Chk-2W xDSL Loops
OR-2-06-1200	% OT LSR/ASR Rej-Facility Chk-UNE/Resale Specials
OR-2-06-2320	% OT LSR/ASR Rej-Facility Chk-POTS/Pre-Qual Cmplx
OR-2-06-3331	% OT LSR/ASR Rej-Facility Chk-Loop/LNP
OR-2-06-3341	% OT LSR/ASR Rej-Facility Chk-2W Digital-UNE
OR-2-12-5020	% On TimeTrunk ASR Reject
OR-4-16-1000	% On Time PCN-1 Business Day
OR-5-03-2000	% Flow Through-Achieved-POTS
OR-5-03-3112	% Flow Through-Achieved-POTS
	Provisioning
PR-3-10-3342	% Comp w/in 6 Days (1-5 lines) Tot-2W xDSL Loops
PR-4-07-3540	% On Time Performance-LNP only
PR-4-14-3342	% Completed On Time-2W xDSL Loops
PR-4-15-5000	% On Time Provisioning-Trunks
PR-9-01-3520	% On Time Performance-Loop-Basic Hot Cut
PR-9-01-3523	% On Time Performance-Loop-Lg Job Hot Cut
	Billing
BI-1-02-1000	% DUF in 4 Business Days

Table C-4: Metrics with Combined Products

PAP Metric #	Metric Title	PAP Products	Combination of C2C Metric #s	Combination of C2C Products
PR-4-04-1341	% Missed Appointment - Verizon – Dispatch	UNE/Resale 2-Wire Digital Services	• PR-4-04-3341 • PR-4-04-2341	• UNE 2-Wire Digital Loops • Resale 2-Wire Digital Svcs
OR-2-04-1200	% On Time LSR/ASR Reject - No Facility Check (Electronic - No Flow-through)	UNE/Resale Specials	• OR-2-04-3200 • OR-2-04-2200	• UNE Specials Total • Resale Specials Total
OR-2-06-1200	% On Time LSR/ASR Reject - Facility Check (Electronic - No Flow-Through)	UNE/Resale Specials	• OR-2-06-3200 • OR-2-06-2200	• UNE Specials Total • Resale Specials Total
PR-4-01-1210	% Missed Appointment - Verizon – Total	UNE/Resale Specials DS0	• PR-4-01-3210 • PR-4-01-2210	• UNE Specials DS0 • Resale Specials DS0
PR-4-01-1211	% Missed Appointment - Verizon – Total	UNE/Resale Specials DS1	• PR-4-01-3211 • PR-4-01-2211	• UNE Specials DS1 • Resale Specials DS1
PR-4-01-1213	% Missed Appointment - Verizon – Total	UNE/Resale Specials DS3	• PR-4-01-3213 • PR-4-01-2213	• UNE Specials DS3 • Resale Specials DS3
PR-4-02-1200	Average Delay Days – Total	UNE/Resale Specials	• PR-4-02-3200 • PR-4-02-2200	• UNE Specials Total • Resale Specials Total
PR-5-01-1200	% Missed Appointment - Verizon – Facilities	UNE/Resale Specials	• PR-5-01-3200 • PR-5-01-2200	• UNE Specials Total • Resale Specials Total
PR-5-02-1200	% Orders Held for Facilities > 15 Days	UNE/Resale Specials	• PR-5-02-3200 • PR-5-02-2200	• UNE Specials Total • Resale Specials Total
PR-6-01-1200	% Installation Troubles reported within 30 Days	UNE/Resale Specials	• PR-6-01-3200 • PR-6-01-2200	• UNE Specials Total • Resale Specials Total
MR-4-01-1216	Mean Time To Repair – Total	UNE/Resale Specials (Non DS0 & DS0)	• MR-4-01-3216 • MR-4-01-2216	• UNE Specials NonDS0 & DS0 • Resale Specials s Non DS0 & DS0
MR-4-01-1217	Mean Time To Repair – Total	UNE/Resale Specials (DS1 & DS3)	• MR-4-01-3217 • MR-4-01-2217	• UNE Specials DS1 & DS3 • Resale Specials DS1 & DS3
MR-4-08-1216	% Out of Service > 24 Hours	UNE/Resale Specials (Non DS0 & DS0)	• MR-4-08-3216 • MR-4-08-2216	• UNE Specials NonDS0 & DS0 • Resale Specials s Non DS0 & DS0
MR-4-08-1217	% Out of Service > 24 Hours	UNE/Resale Specials (DS1 & DS3)	• MR-4-08-3217 • MR-4-08-2217	• UNE Specials DS1 & DS3 • Resale Specials DS1 & DS3
PO-4-01-6660	% Change Management Notices Sent on Time	Change Notification/ Confirmation: Types 3, 4 and 5 (Combined)	• PO-4-01-6661 • PO-4-01-6662	• Change Notification Type 3, 4 & 5 • Change Confirmation Type 3, 4 & 5

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APPENDIX D: Performance Evaluation Methodology

APPENDIX D: STATISTICAL EVALUATION PROCEDURES

The Performance Assurance Plan uses the following methodologies for evaluating performance for the purposes of market adjustment calculations for Parity Measures.

I. CARRIER TO CARRIER STATISTICAL METRIC EVALUATION PROCEDURES

Statistical evaluation is used here as a tool to assess whether the Verizon's wholesale service performance to the Competitive Local Exchange Companies (CLECs) is at least equal in quality to the service performance that Verizon provides to itself (i.e., parity). Carrier-to-Carrier (C2C) measurements having a parity standard are metrics where both the CLEC and Verizon performance are reported.[16]

A. Statistical Framework

The statistical tests of the null hypothesis of parity against the alternative hypothesis of non-parity defined in these guidelines use Verizon and CLEC observational data. Verizon and CLEC observations for each month are treated as random samples drawn from operational processes that run over multiple months. The null hypothesis is that the CLEC mean performance is at least equal to or better than the Verizon mean performance.

Statistical tests should be performed under the following conditions.

1) The data must be reasonably free of measurement/reporting error.

2) Verizon to CLEC comparisons should be reasonably like to like.

[16] Section 251(c)(2)(C) of the Telecommunications Act of 1996 states that facilities should be provided to CLECs on a basis "that is at least equal in quality to that provided by the local exchange carrier to itself." Paragraph 3 of Appendix B of FCC Opinion 99-404 states, "Statistical tests can be used as a tool in determining whether a difference in the measured values of two metrics means that the metrics probably measure two different processes, or instead that the two measurements are likely to have been produced by the same process."

3) The minimum sample size requirement for statistical testing is met. (Section B)

4) The observations are independent. (Section D)

These conditions are presumed to be met until contrary evidence indicates otherwise.

To the extent that the data and/or operational analysis indicate that additional analysis is warranted, a metric may be taken to the Carrier Working Group for investigation.

B. Sample Size Requirements

The assumptions that underlie the C2C Guidelines statistical models include the requirement that the two groups of data are comparable. With larger sample sizes, differences in characteristics associated with individual customers are more likely to average out. With smaller sample sizes, the characteristics of the sample may not reasonably represent those of the population. Meaningful statistical analysis may be performed and confident conclusions may be drawn, if the sample size is sufficiently large to minimize the violations of the assumptions underlying the statistical model.

The following sample size requirements, based upon both statistical considerations and also some practical judgment, indicate the minimum sample sizes above which parity metric test results (for both counted and measured variables) may permit reasonable statistical conclusions.

The statistical tests defined in these guidelines are valid under the following conditions:

If there are only 6 of one group (Verizon or CLEC), the other must be at least 30.

If there are only 7 of one, the other must be at least 18.

If there are only 8 of one, the other must be at least 14.

If there are only 9 of one, the other must be at least 12.

Any sample of at least 10 of one and at least 10 of the other is to be used for statistical evaluation.

When a parity metric comparison does not meet the above sample size criteria, it may be taken to the Carrier Working Group for alternative evaluation. In such instances, a statistical score (Z score equivalent) will not be reported, but rather an "SS" (for Small Sample) will be recorded in the statistical score column; however, the means (or proportions), number of observations and standard deviations (for means only) will be reported.

C. Statistical Testing Procedures

Parity metric measurements that meet the sample size criteria in Section B will be evaluated according to the one-tailed permutation test procedure defined below.

Combine the Verizon and CLEC observations into one group, where the total number of observations is $n_{VZ+}\, n_{clec}$. Take a sufficiently large number of random samples of size n_{clec} (e.g., 500,000). Record the mean of each re-sample of size n_{clec}. Sort the re-sampled means from best to worst (left to right) and compare where on the distribution of re-sampled means the original CLEC mean is located. If 5% or less of the means lie to the right of the reported CLEC mean, then reject the null hypothesis that the original CLEC sample and the original Verizon sample came from the same population.

If the null hypothesis is correct, a permutation test yields a probability value (*p value)* representing the probability that the difference (or larger) in the Verizon and CLEC sample means is due to random variation.

Permutation test *p values* are transformed into "Z score equivalents." These "Z score equivalents" refer to the standard normal Z score that has the same probability as the p-values from the permutation test. Specifically, this statistical score equivalent refers to the inverse of the standard normal cumulative distribution associated with the probability of seeing the reported CLEC mean, or worse, in the distribution of re-sampled permutation test means. A Z score of less than or equal to –1.645 occurs at most 5% of the time under the null hypothesis that the

CLEC mean is at least equal to or better than the Verizon mean. A Z score greater than –1.645 (p-value greater than 5%) supports the belief that the CLEC mean is at least equal to or better than the Verizon mean. For reporting purposes, Z score equivalents equal to or greater than 5.0000 are displayed on monthly reports as 5.0000. Similarly, values for a Z statistics equal to or less than –5.0000 are displayed as –5.0000.

Alternative computational procedures (i.e., computationally more efficient procedures) may be used to perform measured and counted variable permutation tests so long as those procedures produce the same p-values as would be obtained by the permutation test procedure described above. The results should not vary at or before the fourth decimal place to the Z score equivalent associated with the result generated from the exact permutation test (i.e., the test based upon the exact number of combinations of n_{clec} from the combined n_{VZ+} n_{clec}).

Measured Variables (i.e., metrics of intervals, such as mean time to repair or average delay days):

The following permutation test procedure is applied to measured variable metrics:

1. Compute and store the mean for the original CLEC data set.
2. Combine the Verizon and CLEC data to form one data set.
3. Draw a random sample without replacement of size n_{clec} (sample size of original CLEC data) from the combined data set.
    a) Compute the test statistic (re-sampled CLEC mean).
    b) Store the new value of test statistic for comparison with the value obtained from the original observations.
    c) Recombine the data set.

4. Repeat Step 3 enough times such that if the test were re-run many times the results would not vary at or before the fourth decimal place of the reported Z score equivalent (e.g., draw 500,000 re-samples per Step 3).
5. Sort the CLEC means created and stored in Step 3 and Step 4 in ascending order (CLEC means from best to worst).
6. Determine where the original CLEC sample mean is located relative to the collection of re-sampled CLEC sample means. Specifically, compute the percentile of the original CLEC sample mean.
7. Reject the null hypothesis if the percentile of the test statistic (original CLEC mean) for the observations is less than .05 (5%). That is, if 95% or more of the re-sampled CLEC means are better than the original CLEC sample mean, then reject the null hypothesis that the CLEC mean is at least equal to or better than the Verizon mean. Otherwise, the data support the belief that the CLEC mean is at least equal to or better than the Verizon mean.
8. Generate the C2C Report "Z Score Equivalent," known in this document as the standard normal Z score that has the same percentile as the test statistic.

Counted Variables (i.e., metrics of proportions, such as percent measures):

A hypergeometric distribution based procedure (a.k.a., Fisher's Exact test)[17] is an appropriate method to evaluate performance for counted metrics where performance is measured in terms of success and failure. Using sample data, the hypergeometric distribution estimates the probability (*p value*) of seeing **at least** the number of failures found in the CLEC sample. In turn, this probability is converted to a Z score equivalent using the inverse of the

[17] This procedure produces the same results as a permutation test of the equality of the means for the ILEC and CLEC distributions of 1s and 0s, where successes are recorded as 0s and failures as 1s.

standard normal cumulative distribution.

The hypergeometric distribution is as follows:

$$p\,value = 1 - \left\{ \sum_{i=\max(0,\{[n_{vz}p_{ilec} + n_{clec}p_{clec}] + [n_{clec}] - [n_{vz} + n_{clec}]\})}^{n_{clec}p_{clec}-1} \frac{\binom{[n_{clec}p_{clec} + n_{vz}p_{vz}]}{i}\binom{[n_{clec} + n_{vz}] - [n_{clec}p_{clec} + n_{vz}p_{vz}]}{n_{clec} - i}}{\binom{[n_{clec} + n_{vz}]}{n_{clec}}} \right\}$$

Where:

p value = the probability that the difference in the Verizon and CLEC sample proportions could have arisen from random variation, assuming the null hypothesis

n_{clec} and n_{VZ} = the CLEC and Verizon sample sizes (i.e., number of failures + number of successes)

p_{clec} and p_{VZ} = the proportions of CLEC and Verizon failed performance, for percentages 10% translates to a 0.10 proportion = number of failures / (number of failures + number of successes)

Either of the following two equations can be used to implement a hypergeometric distribution-based procedure:

The probability of observing **exactly** *fclec* $_{\text{failures}}$ is given by:

$$\Pr(i = f_{clec}) = \frac{\binom{(f_{clec} + f_{vz})}{f_{clec}}\binom{(n_{clec} + n_{vz}) - (f_{clec} + f_{vz})}{n_{clec} - f_{clec}}}{\binom{(n_{clec} + n_{vz})}{n_{clec}}}$$

Where:

f_{clec} = CLEC failures in the chosen sample = $n_{clec}\,p_{clec}$

f_{VZ} = Verizon failures in the chosen sample = $n_{VZ}\,p_{VZ}$

n_{clec}= size of the CLEC sample

n_{VZ}= size of the Verizon sample

Alternatively, the probability of observing **exactly** f_{clec} failures is given by:

$$\Pr(i = f_{clec}) = \frac{n_{clec}!n_{vz}!\, f_{total}!s_{total}!}{(n_{clec}+n_{vz})!\, f_{clec}!(n_{clec}-f_{clec})!(f_{total}-f_{clec})!(n_{vz}-f_{total}+f_{clec})!}$$

Where:

s_{clec} = the number of CLEC successes = $n_{clec}\ (1-p_{clec})$

s_{VZ} = the number of Verizon successes = $n_{VZ}\ (1-p_{VZ})$

$f_{total} \equiv f_{clec} + f_{VZ}$

$s_{total} \equiv s_{clec} + s_{VZ}$

The probability of observing f_{clec} **or more** failures [$Pr(i \geq f_{clec})$] is calculated according to the following steps:

1. Calculate the probability of observing exactly f_{clec} using either of the equations above.
2. Calculate the probability of observing all more extreme frequencies than $i = f_{clec}$, conditional on the
    a. total number of successes (s_{total}),
    b. total number of failures (f_{total}),
    c. total number of CLEC observations (n_{clec}), and the
    d. total number of Verizon observations (n_{VZ}) remaining fixed.
3. Sum up all of the probabilities for $Pr(i \geq f_{clec})$.
4. If that value is less than or equal to 0.05, then the null hypothesis is rejected.

D. Root Cause/Exceptions

Root Cause: If the permutation test shows an "out-of-parity" condition, Verizon may perform a root cause analysis to determine cause. Alternatively, Verizon may be required by the Carrier Working Group to perform a root cause analysis. If the cause is the result of "clustering" within the data, Verizon will provide such documentation.

Clustering Exceptions: Due to the definitional nature of the variables used in the performance measures, some comparisons may not meet the requirements for statistical testing. Individual data points may not be independent. The primary example of such non-independence is a cable failure. If a particular CLEC has fewer than 30 troubles and all are within the same cable failure with long duration, the performance will appear out of parity. However, for all troubles, including Verizon's troubles, within that individual event, the trouble duration is identical.

Another example of clustering is if a CLEC has a small number of orders in a single location with a facility problem. If this facility problem exists for all customers served by that cable and is longer than the average facility problem, the orders are not independent and clustering occurs.

Finally, if root cause shows that the difference in performance is the result of CLEC behavior, Verizon will identify such behavior and work with the respective CLEC on corrective action.

Another assumption underlying the statistical models used here is the assumption that the data are independent. In some instances, events included in the performance measures of provisioning and maintenance of telecommunication services are not independent. The lack of independence contributes to "clustering" of data. Clustering occurs when individual items (orders, troubles, etc.) are clustered together as one single event. This being the case, Verizon

will have the right to file an exception to the performance scores in the Performance Assurance Plan if the following events occur:

a) Event-Driven Clustering - Cable Failure: If a significant proportion of a CLEC's troubles are in a single cable failure, Verizon will provide data demonstrating that all troubles within that failure, including Verizon troubles, were resolved in an equivalent manner. Then, Verizon also will provide the repair performance data with that cable failure performance excluded from the overall performance for both the CLEC and Verizon and the remaining troubles will be compared according to normal statistical methodologies.

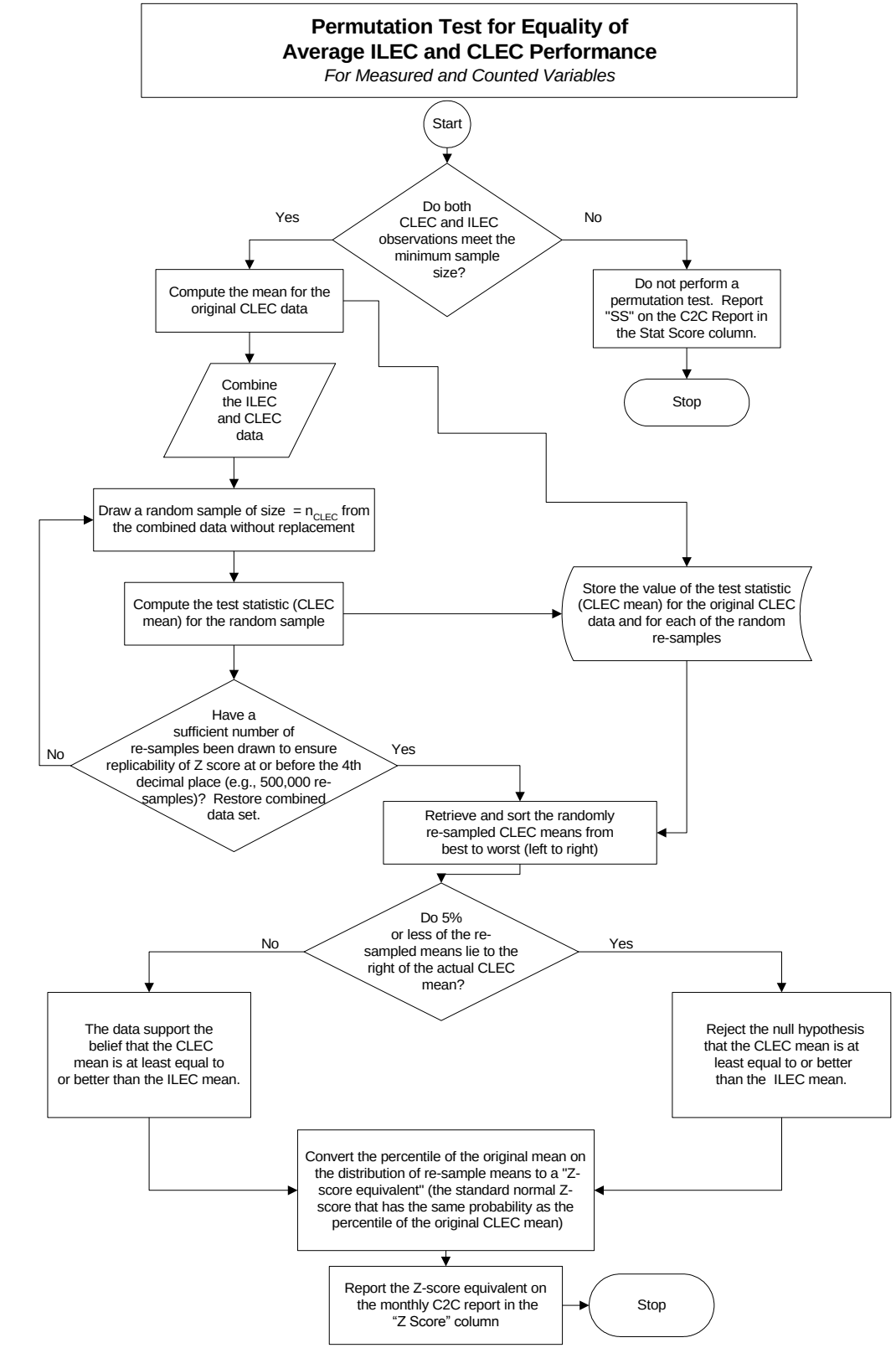
b) Location-Driven Clustering - Facility Problems: If a significant proportion of a CLEC's missed installation orders and resulting delay days were due to an individual location with a significant facility problem, Verizon will provide the data demonstrating that the orders were "clustered" in a single facility shortfall. Then, Verizon will provide the provisioning performance with that data excluded from the overall performance for both the CLEC and Verizon and the remaining troubles will be compared according to normal statistical methodologies. Additional location-driven clustering may be demonstrated by disaggregating performance into smaller geographic areas.

c) Time-Driven Clustering - Single Day Events: If a significant proportion of CLEC activity, provisioning, or maintenance occurs on a single day within a month, and that day represents an unusual amount of activity in a

single day, Verizon will provide the data demonstrating the activity is on that day. Verizon will compare that single day's performance for the CLEC to Verizon own performance. Then Verizon will provide data with that day excluded from overall performance to demonstrate "parity."

CLEC Actions: If performance for any measure is impacted by unusual CLEC behavior, Verizon will bring such behavior to the attention of the CLEC to attempt resolution. Examples of CLEC behavior impacting performance results include order quality, causing excessive missed appointments; incorrect dispatch identification, resulting in excessive multiple dispatch and repeat reports, inappropriate X coding on orders, where extended due dates are desired; and delays in rescheduling appointments, when Verizon has missed an appointment. If such action negatively impacts performance, Verizon will provide appropriate detailed documentation of the events and communication to the individual CLEC and the Department.

Documentation: Verizon will provide all necessary detailed documentation to support its claim that an exception is warranted, ensuring protection of customer proprietary information, to the CLEC(s) and Department. Verizon and CLEC performance details include information on individual trouble reports or orders. For cable failures, Verizon will provide appropriate documentation detailing all other troubles associated with that cable failure.


Permutation Test for Equality of
Average ILEC and CLEC Performance
For Measured and Counted Variables
Start
Do both CLEC and ILEC observations meet the minimum sample size?
Yes
No
Compute the mean for the original CLEC data
Do not perform a permutation test. Report "SS" on the C2C Report in the Stat Score column.
Stop
Combine the ILEC and CLEC data
Draw a random sample of size = n_{CLEC} from the combined data without replacement
Compute the test statistic (CLEC mean) for the random sample
Store the value of the test statistic (CLEC mean) for the original CLEC data and for each of the random re-samples
Have a sufficient number of re-samples been drawn to ensure replicability of Z score at or before the 4th decimal place (e.g., 500,000 re-samples)? Restore combined data set.
No
Yes
Retrieve and sort the randomly re-sampled CLEC means from best to worst (left to right)
Do 5% or less of the re-sampled means lie to the right of the actual CLEC mean?
No
Yes
The data support the belief that the CLEC mean is at least equal to or better than the ILEC mean.
Reject the null hypothesis that the CLEC mean is at least equal to or better than the ILEC mean.
Convert the percentile of the original mean on the distribution of re-sample means to a "Z-score equivalent" (the standard normal Z-score that has the same probability as the percentile of the original CLEC mean)
Report the Z-score equivalent on the monthly C2C report in the "Z Score" column
Stop

VERIZON

PERFORMANCE ASSURANCE PLAN

APPENDIX E: Sample Report Format

APPENDIX E: SAMPLE REPORT FORMAT

I. SAMPLE MARKET SUMMARY REPORT PAGE

	Performance Assurance Plan - Verizon		**Version 4.0**
Section	**Mode**	**Weighted Score**	**Market Adjustment**
MOE	Loop Based		
MOE	Resale POTS		
MOE	Trunks		
MOE	**Total**		
Critical Measure	**Total**		
Individual Rule	Total		
All	**Grand Total**		

II. SAMPLE LOOP MODE OF ENTRY REPORT PAGE

Performance Assurance Plan - Verizon **Version 4.0**

Perf. Score	Wgt	Wgtd Score	Metric #	Metric Description	Product	VZ Perf.	CLEC Perf.	VZ Obs.	CLEC Obs.	VZ Std. Dev.	Difference or Stat. Score	Bill Credit
	330		**MOE-LOOP**	**Loop Based Mode of Entry Totals**								
	2		PO-1-01-6020	Average Response Time - Customer Service Record (CSR)	EDI							
	2		PO-1-01-6030	Average Response Time - Customer Service Record (CSR)	CORBA							
	5		PO-1-01-6050	Average Response Time - Customer Service Record (CSR)	WEB GUI/LSI/W							
	2		PO-1-03-6020	Average Response Time - Address Validation	EDI							
	2		PO-1-03-6030	Average Response Time - Address Validation	CORBA							
	5		PO-1-03-6050	Average Response Time - Address Validation	WEB GUI/LSI/W							
	2		PO-1-06-6020	Average Response Time - Mechanized Loop Qualification - xDSL	EDI							
	2		PO-1-06-6050	Average Response Time - Mechanized Loop Qualification - xDSL	WEB GUI/LSI/W							
	5		PO-2-02-6010	OSS Interface Availability - Prime-Time	WPTS							
	5		PO-2-02-6020	OSS Interface Availability - Prime Time	EDI							
	5		PO-2-02-6030	OSS Interface Availability - Prime Time	CORBA							
	5		PO-2-02-6080	OSS Interface Availability - Prime Time	Web GUI							
	2		PO-8-01-6000	% On Time - Manual Loop Qualification	Systems Metrics							
	10		OR-1-02-3331	% On Time LSRC - Flow-through	UNE-L/Pre-qual							
	5		OR-1-04-3331	% On Time LSRC/ASRC - No Facil Chk (Electr. No Flow-through)	UNE-L/Pre-qual							
	5		OR-1-06-3331	% On Time LSRC/ASRC - Facil Chk (Electr. No Flow-through)	UNE-L/Pre-qual							
	5		OR-2-02-3331	% On Time LSR Reject - Flow-through	UNE-L/Pre-qual							
	5		OR-2-04-3331	% On Time LSR/ASR Rej - No Facil Chk (Electr. No Flow-through)	UNE-L/Pre-qual							
	2		OR-2-04-3341	% On Time LSR/ASR Rej - No Facil Chk (Electr. No Flow-through)	UNE 2W Digital							
	2		OR-2-04-3342	% On Time LSR/ASR Rej - No Facil Chk (Electr. No Flow-through)	UNE 2W xDSL							
	2		OR-2-06-3331	% On Time LSR/ASR Rej - Facil Chk (Electr. No Flow-through)	UNE-L/Pre-qual							
	2		OR-2-06-3341	% On Time LSR/ASR Rej - Facil Chk (Electr. No Flow-through)	UNE 2W Digital							
	5		OR-4-16-1000	% Provisioning Comp. Notifiers sent - 1 Business Day	Resale/UNE (EDI)							
	5		OR-5-03-3112	% Flow Through Achieved	UNE-L							
	5		OR-6-03-3331	% Accuracy - LSRC	UNE-							
	5		PR-3-10-3342	% Completed in six (6) Days one (1) to five (5) Lines - Total	UNE 2W xDSL							
	10		PR-4-02-3112	Average Delay Days - Total	UNE-L							
	2		PR-4-02-3341	Average Delay Days - Total	UNE 2W Digital							
	5		PR-4-02-3342	Average Delay Days - Total	UNE 2W xDSL							
	5		PR-4-04-3113	% Missed Appointment - Verizon - Dispatch	UNE-L New							
	2		PR-4-04-1341	% Missed Appointment - Verizon - Dispatch	Resale/UNE 2W							
	2		PR-4-05-3341	% Missed Appointment - Verizon - No Dispatch	UNE 2W Digital							
	2		PR-4-14-3342	% Completed On Time - 2-Wire xDSL	UNE 2W xDSL							
	5		PR-5-01-3112	% Missed Appointment - Verizon - Facilities	UNE-L							
	5		PR-5-02-3112	% Orders Held for Facilities > 15 Days	UNE-L							
	10		PR-6-01-3113	% Installation Troubles reported within 30 Days	UNE-L New							
	2		PR-6-01-3341	% Installation Troubles reported within 30 Days	UNE 2W Digital							
	10		PR-6-01-3342	% Installation Troubles reported within 30 Days	UNE 2W xDSL							
	20		PR-6-02-3520	% Installation Troubles reported within seven (7) Days	UNE-L Basic HC							
	10		PR-6-02-3523	% Installation Troubles reported within seven (7) Days	UNE-L Large Job							
	2		PR-8-01-3341	Percent Open Orders in a Hold Status > 30 Days	UNE 2W Digital							
	5		PR-8-01-3342	Percent Open Orders in a Hold Status > 30 Days	UNE 2W xDSL							
	20		PR-9-01-3520	% On Time Performance - Hot Cut	UNE-L Basic HC							
	10		PR-9-01-3523	% On Time Performance - Hot Cut	UNE-L Large Job							
	10		PR-9-08-3533	Average Duration of Hot Cut Installation Troubles	UNE-L Total HC							
	2		MR-1-01-6050	Average Response Time - Create Trouble	LSI-TA							
	10		MR-3-01-3112	% Missed Repair Appointment - Loop	UNE-L							
	2		MR-3-01-3341	% Missed Repair Appointment - Loop	UNE 2W Digital							
	5		MR-3-01-3342	% Missed Repair Appointment - Loop	UNE 2W xDSL							
	10		MR-3-02-3112	% Missed Repair Appointment - Central Office	UNE-L							
	2		MR-3-02-3341	% Missed Repair Appointment - Central Office	UNE 2W Digital							
	5		MR-3-02-3342	% Missed Repair Appointment - Central Office	UNE 2W xDSL							
	5		MR-4-02-3112	Mean Time To Repair - Loop Trouble	UNE-L							
	2		MR-4-02-3341	Mean Time To Repair - Loop Trouble	UNE 2W Digital							
	2		MR-4-02-3342	Mean Time To Repair - Loop Trouble	UNE 2W xDSL							
	5		MR-4-03-3112	Mean Time To Repair - Central Office Trouble	UNE-L							
	2		MR-4-03-3341	Mean Time To Repair - Central Office Trouble	UNE 2W Digital							
	2		MR-4-03-3342	Mean Time To Repair - Central Office Trouble	UNE 2W xDSL							
	2		MR-4-04-3341	% Cleared (all troubles) within 24 Hours	UNE 2W Digital							
	2		MR-4-04-3342	% Cleared (all troubles) within 24 Hours	UNE 2W xDSL							
	5		MR-4-07-3112	% Out of Service > 12 Hours	UNE-L							
	2		MR-4-07-3341	% Out of Service > 12 Hours	UNE 2W Digital							
	2		MR-4-07-3342	% Out of Service > 12 Hours	UNE 2W xDSL							
	10		MR-4-08-3112	% Out of Service > 24 Hours	UNE-L							
	10		MR-5-01-3112	% Repeat Reports within 30 Days	UNE-L							
	2		MR-5-01-3341	% Repeat Reports within 30 Days	UNE 2W Digital							
	2		MR-5-01-3342	% Repeat Reports within 30 Days	UNE 2W xDSL							

III. SAMPLE RESALE MODE OF ENTRY REPORT PAGE

Performance Assurance Plan - Verizon **Version 4.0**

Perf. Score	Wgt	Wgtd Score	Metric #	Metric Description	Product	VZ Perf.	CLEC Perf.	VZ Obs.	CLEC Obs.	VZ Std. Dev.	Difference or Stat. Score	Bill Credit
	241		**MOE-Resale**	**Resale Mode of Entry Totals**								
	2		PO-1-01-6020	Average Response Time - Customer Service Record (CSR)	EDI							
	2		PO-1-01-6050	Average Response Time - Customer Service Record (CSR)	WEB GUI/LSI/W							
	2		PO-1-03-6020	Average Response Time - Address Validation	EDI							
	2		PO-1-03-6050	Average Response Time - Address Validation	WEB GUI/LSI/W							
	5		PO-2-02-6020	OSS Interface Availability - Prime Time	EDI							
	5		PO-2-02-6080	OSS Interface Availability - Prime Time	Web GUI							
	10		OR-1-02-2320	% On Time LSRC - Flow-through	Resale POTS/Pre-							
	5		OR-1-04-2320	% On Time LSRC/ASRC - No Facil Chk (Electr. No Flow-through)	Resale POTS/Pre-							
	5		OR-2-02-2320	% On Time LSR Reject - Flow-through	Resale POTS/Pre-							
	2		OR-2-04-2320	% On Time LSR/ASR Rej - No Facil Chk (Electr. No Flow-through)	Resale POTS/Pre-							
	2		OR-2-06-2320	% On Time LSR/ASR Rej - Facil Chk (Electr. No Flow-through)	Resale POTS/Pre-							
	5		OR-4-16-1000	% Provisioning Comp. Notifiers sent - 1 Business Day	Resale/UNE (EDI)							
	10		OR-5-03-2000	% Flow Through Achieved	Resale							
	10		OR-6-03-2000	% Accuracy - LSRC	Resale							
	5		PR-3-01-2100	% Completed in 1 Day - one (1) to five (5) Lines - No Dispatch	Resale POTS							
	15		PR-4-02-2100	Average Delay Days - Total	Resale POTS							
	10		PR-4-04-2100	% Missed Appointment - Verizon - Dispatch	Resale POTS							
	20		PR-4-05-2100	% Missed Appointment - Verizon - No Dispatch	Resale POTS							
	5		PR-5-01-2100	% Missed Appointment - Verizon - Facilities	Resale POTS							
	5		PR-5-02-2100	% Orders Held for Facilities > 15 Days	Resale POTS							
	15		PR-6-01-2100	% Installation Troubles reported within 30 Days	Resale POTS							
	2		MR-1-01-6050	Average Response Time - Create Trouble	LSI-TA							
	2		MR-1-06-6050	Average Response Time - Test Trouble (POTS Only)	LSI-TA							
	10		MR-3-01-2110	% Missed Repair Appointment - Loop	Resale POTS Bus							
	10		MR-3-01-2120	% Missed Repair Appointment - Loop	Resale POTS Res							
	10		MR-3-02-2110	% Missed Repair Appointment - Central Office	Resale POTS Bus							
	10		MR-3-02-2120	% Missed Repair Appointment - Central Office	Resale POTS Res							
	5		MR-4-02-2110	Mean Time To Repair - Loop Trouble	Resale POTS Bus							
	5		MR-4-02-2120	Mean Time To Repair - Loop Trouble	Resale POTS Res							
	5		MR-4-03-2110	Mean Time To Repair - Central Office Trouble	Resale POTS Bus							
	5		MR-4-03-2120	Mean Time To Repair - Central Office Trouble	Resale POTS Res							
	5		MR-4-07-2110	% Out of Service > 12 Hours	Resale POTS -							
	5		MR-4-07-2120	% Out of Service > 12 Hours	Resale POTS -							
	5		MR-4-08-2110	% Out of Service > 24 Hours	Resale POTS Bus							
	5		MR-4-08-2120	% Out of Service > 24 Hours	Resale POTS Res							
	10		MR-5-01-2100	% Repeat Reports within 30 Days	Resale POTS							
	5		BI-1-02-1000	% DUF in four (4) Business Days	Resale & UNE							

IV. SAMPLE INTERCONNECTION TRUNKS MODE OF ENTRY REPORT PAGE

Performance Assurance Plan - Verizon **Version 4.0**

Perf. Score	Wgt	Wgtd Score	Metric #	Metric Description	Product	VZ Perf.	CLEC Perf.	VZ Obs.	CLEC Obs.	VZ Std. Dev.	Difference or Stat. Score	Bill Credit
	140		**MOE-Trunks**	**Trunks Mode of Entry Totals**								
	5		OR-1-12-5020	% On Time FOC	Interconnect							
	10		OR-1-13-5000	% On Time Design Layout Record (DLR)	Interconnect							
	5		OR-1-19-5020	% On Time Response - Request for Inbound Augment Trunks	VZ Inbound Aug							
	5		OR-2-12-5020	% On Time Trunk ASR Reject	Interconnect.							
	20		PR-4-07-3540	% On Time Performance - LNP Only	UNE LNP							
	20		PR-4-15-5000	% On Time Provisioning - Trunks	Interconnect							
	5		PR-5-01-5000	% Missed Appointment - Verizon - Facilities	Interconnect							
	5		PR-5-02-5000	% Orders Held for Facilities > 15 Days	Interconnect							
	10		PR-6-01-5000	% Installation Troubles reported within 30 Days	Interconnect							
	5		PR-8-01-5000	Percent Open Orders in a Hold Status > 30 Days	Interconnect							
	5		MR-4-01-5000	Mean Time To Repair - Total	Interconnect							
	5		MR-4-05-5000	% Out of Service > 2 Hours	Interconnect							
	5		MR-4-06-5000	% Out of Service > 4 Hours	Interconnect							
	5		MR-4-07-5000	% Out of Service > 12 Hours	Interconnect							
	5		MR-4-08-5000	% Out of Service > 24 Hours	Interconnect							
	10		MR-5-01-5000	% Repeat Reports within 30 Days	Interconnect							
	5		NP-1-03-5000	# of Final Trunk Groups Blocked 2 months	CLEC Trunks							
	10		NP-1-04-5000	# of Final Trunk Groups Blocked 3 months	CLEC Trunks							

V. SAMPLE CRITICAL MEASURE REPORT PAGE

Performance Assurance Plan - Verizon **Version 4.0**

Perf. Score	Wgt	Wgtd Score	Metric #	Metric Description	Product	VZ Perf.	CLEC Perf.	VZ Obs.	CLEC Obs.	VZ Std. Dev.	Difference or Stat. Score	Bill Credit
			CM-ALL	**Critical Measures Totals**								
	10		OR-1-02-3331	% On Time LSRC - Flow-through	UNE-L/Pre-qual							
	5		OR-1-04-3331	% On Time LSRC/ASRC - No Facil Chk (Electr. No Flow-through)	UNE-L/Pre-qual							
	5		OR-1-06-3331	% On Time LSRC/ASRC - Facil Chk (Electr. No Flow-through)	UNE-L/Pre-qual							
	2		PR-4-04-1341	% Missed Appointment - Verizon - Dispatch	Resale/UNE 2W							
	10		PR-4-04-3113	% Missed Appointment - Verizon - Dispatch	UNE-L New							
	2		PR-4-14-3342	% Completed On Time - 2-Wire xDSL	UNE 2W xDSL							
	10		PR-6-01-3113	% Installation Troubles reported within 30 Days	UNE-L New							
	2		PR-6-01-3342	% Installation Troubles reported within 30 Days	UNE 2W xDSL							
	20		PR-6-02-3520	% Installation Troubles reported within seven (7) Days	UNE-L Basic HC							
	10		PR-6-02-3523	% Installation Troubles reported within seven (7) Days	UNE-L Large Job							
	20		PR-9-01-3520	% On Time Performance - Hot Cut	UNE-L Basic HC							
	10		PR-9-01-3523	% On Time Performance - Hot Cut	UNE-L Large Job							
	2		MR-3-01-3112	% Missed Repair Appointment - Loop	UNE-L							
	2		MR-3-01-3342	% Missed Repair Appointment - Loop	UNE 2W xDSL							
	10		MR-4-08-3112	% Out of Service > 24 Hours	UNE-L							
	10		OR-1-02-2320	% On Time LSRC - Flow-through	Resale POTS/Pre-							
	5		OR-1-04-2320	% On Time LSRC/ASRC - No Facil Chk (Electr. No Flow-through)	Resale POTS/Pre-							
	10		PR-4-04-2100	% Missed Appointment - Verizon - Dispatch	Resale POTS							
	20		PR-4-05-2100	% Missed Appointment - Verizon - No Dispatch	Resale POTS							
	15		PR-6-01-2100	% Installation Troubles reported within 30 Days	Resale POTS							
	1		MR-3-01-2110	% Missed Repair Appointment - Loop	Resale POTS Bus							
	1		MR-3-01-2120	% Missed Repair Appointment - Loop	Resale POTS Res							
	5		MR-4-08-2110	% Out of Service > 24 Hours	Resale POTS Bus							
	5		MR-4-08-2120	% Out of Service > 24 Hours	Resale POTS Res							
	5		OR-1-12-5020	% On Time FOC	Interconnect							
	10		OR-1-13-5000	% On Time Design Layout Record (DLR)	Interconnect							
	20		PR-4-07-3540	% On Time Performance - LNP Only	UNE LNP							
	20		PR-4-15-5000	% On Time Provisioning - Trunks	Interconnect							
	10		NP-1-04-5000	# of Final Trunk Groups Blocked 3 months	CLEC Trunks							
	2		OR-1-06-3211	% On Time LSRC/ASRC - Facil Chk (Electr. No Flow-through)	UNE Specials DS1							
	2		OR-2-04-1200	% On Time LSR/ASR Rej - No Facil Chk (Electr. No Flow-through)	UNE/RES Specials							
	2		OR-2-06-1200	% On Time LSR/ASR Rej - Facil Chk (Electr. No Flow-through)	UNE/RES Specials							
	2		PR-4-01-1210	% Missed Appointment - Verizon - Total	UNE/RES Specials							
	2		PR-4-01-1211	% Missed Appointment - Verizon - Total	UNE/RES Specials							
	2		PR-4-01-1213	% Missed Appointment - Verizon - Total	UNE/RES Specials							
	2		PR-4-01-3530	% Missed Appointment - Verizon - Total	UNE IOF							
	2		PR-4-02-1200	Average Delay Days - Total	UNE/RES Specials							
	5		PR-4-02-3530	Average Delay Days - Total	UNE IOF							
	5		PR-5-01-1200	% Missed Appointment - Verizon - Facilities	UNE/RES Specials							
	5		PR-5-02-1200	% Orders Held for Facilities > 15 Days	UNE/RES Specials							
	5		PR-6-01-1200	% Installation Troubles reported within 30 Days	UNE/RES Specials							
	2		MR-4-01-1216	Mean Time To Repair - Total	UNE/RES Specials							
	2		MR-4-01-1217	Mean Time To Repair - Total	UNE/RES Specials							
	2		MR-4-08-1216	% Out of Service > 24 Hours	UNE/RES Specials							
	2		MR-4-08-1217	% Out of Service > 24 Hours	UNE/RES Specials							
	2		PO-2-02-6010	OSS Interface Availability - Prime-Time	WPTS							
	5		PO-2-02-6020	OSS Interface Availability - Prime Time	EDI							
	5		PO-2-02-6080	OSS Interface Availability - Prime Time	Web GUI							
	10		PO-4-01-6660	% Change Management Notices Sent on Time	Change							
	25		BI-9-01-1000	% Billing Completeness in Twelve Billing Cycles	Resale/UNE							

VERIZON

PERFORMANCE ASSURANCE PLAN

APPENDIX F: Background, Incentives, Reporting and Other Provisions

APPENDIX F: BACKGROUND, INCENTIVES, REPORTING AND OTHER PROVISIONS

I. MASSACHUSETTS

A. Massachusetts Performance Assurance Plan Background Information

- **Case Number:** DTE 03-50 (formerly DTE 99-271).
- **Initial Performance Assurance Plan:** Ordered by the Massachusetts Department of Telecommunications and Energy on September 5, 2000.
- **Initial Performance Assurance Plan Effective Date:** The April 2001 performance data.
- **Other revisions to the Plan since its inception:**

Version	Order Date	Implementation Performance Month
2.0	9/05/2000 11/21/2000	April 2001
2.1	9/05/2000 11/21/2000	May 2001
3.0	5/29/2003	July 2003
3.1	7/29/2005	November 2005
4.0	3/29/2007	July 2007

- **Performance Assurance Plan Version 4.0:** Ordered by the Massachusetts Department of Telecommunications and Energy on March 29, 2007.
- **Performance Assurance Plan Version 4.0 Implementation Month:** Performance Data Month July 2007.
- **Performance Assurance Plan Version 4.0 Filing Date:** April 10, 2007.

B. Incentive Amounts

Incentives for all sections of the Plan total $53,536,999 annually and are distributed among the major sections of the Plan as follows:

Mode of Entry[18]					
	Loop-Based	**Resale POTS**	**Trunks**	**Total**	**Total with Doubling**
Annual	$7,934,759	$2,644,920	$2,644,920	$13,224,598	$26,449,196
Monthly	$661,230	$220,410	$220,410	$1,102,050	$2,204,100

Critical Measures	
	Total
Annual	$27,087,803
Monthly	$2,257,317

C. Annual Review, Updates and Audits

1. Annual Review and Updates

Each year, the Massachusetts Department and Verizon will review the Performance Assurance Plan to determine whether any modifications or additions should be made. All aspects of the Plan will be subject to review.

The annual review will not be subject to limitation, and any topic legitimately related to the Plan may be reviewed. All disputes are to be resolved by the Department. Nothing in the Performance Assurance Plan can or will diminish Department jurisdiction over Verizon service. Any modifications to the Plan will be implemented as soon as is reasonably practical after Department approval of the modifications.

2. Data Accuracy and Audits

The validation of Verizon MA's performance reporting was included as part of the independent, third-party OSS testing conducted by KPMG. Additional third party audits were

[18] Monthly amounts are subject to doubling as specified in Appendix A. Doubling raises the MOE total to $26,449,196.

completed in 2003 and 2005. The first audit included an examination of data reliability issues. Subsequent audits will include an examination of data reliability issues at the Department's discretion. Going forward, the Massachusetts PAP reporting of results will be subject to a triennial audit.

Every three years the Department will audit Verizon's data and reporting. The next audit will be conducted in 2008 and will evaluate the most current "final" monthly results during the most recent twelve months of performance. The audits shall be performed by an independent auditor, selected by the Department through a competitive bidding process and paid for by Verizon. A Request for Proposal (RFP) is due to the Department for review no later that June 30, 2007. Additionally, in order to facilitate the Department's review of other state audit results, by March 1 of each year, Verizon is required to report to the Department the results of all audits in other states that were conducted during the previous calendar year, as well as a schedule of audits to be conducted during the upcoming calendar year.

In addition, CLECs, upon a showing of good cause will have the right to challenge the accuracy of the data and/or scores related to any measure Verizon reports in the monthly summary reports.[19] (*See* Appendix E.) In the event of such a challenge, Verizon, in consultation with the Department, will employ an independent outside auditor that will conduct a review of the challenged material. If the outside auditor finds that no material errors were made in the reporting of the data and/or scores, the CLEC initiating the audit will be responsible for paying all costs associated with the audit. If the CLEC's claim is sustained, Verizon will be responsible for the payment of such costs.

[19] A two-year statute of limitation on challenges to Plan performance is in effect.

D. Changes to the New York Plan

Changes to the New York Plan adopted by the New York PSC will be filed with the Department within 30 days of the compliance filings in New York for review and inclusion in the Massachusetts Plan upon the Department's approval.

E. Bill Credit Payments and Exceptions Process

1. Bill Credit Payments

Should Verizon's performance not meet the standards set forth above for the MOE and Critical Measure measurements, CLECs will receive bill credits for those MOE categories or Critical Measures scores that fall below the respective minimum levels. To the extent warranted, bill credits will appear on each CLEC's bill within three months after the month in which the unsatisfactory performance has occurred. If the bill credits exceed the balance due Verizon on the CLEC's bill, the net balance will be carried as a credit on to the CLEC's next month's bill.

Verizon will issue checks in lieu of outstanding bill credits to CLECs that discontinue taking service from Verizon. Verizon may, however, exercise ordinary commercial means to ensure that it will not issue such a check prior to receipt of a CLEC's undisputed payments due Verizon.

2. Timeline for Performance Reports and Bill Credits

The following is the timeline for the filing reports, processing bill credits and the Exception Process.

Step	Action	Timing
1	Performance Reports	The 25th calendar day following the data month reported.[20]
2	Verizon Files Exceptions/Waiver on Performance (if applicable)	15 business days after filing of report
3	Non Disputed Credits Processed[21]	On the next CLEC bill[22]
4	CLEC and other interested parties Files Reply to Verizon Exceptions/Waiver	7 business days from Verizon's filing of Exception/Waiver
5	Massachusetts DTE Issues Ruling on Exceptions	15 business days after CLEC Comments

[20] If the 25th falls on a holiday or weekend, reports will be filed on the next business day.

[21] Verizon will hold contested bill credits pending resolution of Exception/Waiver. If the waiver is denied by the Department, Verizon will compensate CLECs for up to 2 months of lost interest for amounts held while the waiver is under review. The lost interest rate will be set at the same rate Verizon applies to CLEC late payments.

[22] Verizon will process bill credits on the CLEC's bill within 15 days of Performance reporting. The credit will appear on the next available bill, subject to bill closing date.