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April 16, 2010

Catrice Williams, Secretary
Department of Telecommunications and Cable
Two South Station, Fourth Floor
Boston, MA 02110

RE: In re Verizon Service Quality in Western Massachusetts, D.T.C. 09-1

Dear Secretary Williams:

Enclosed please find the Attorney General's Responses to Evidentiary Record Request DTC-3 through 5 in the above-captioned matter.

In addition, during the evidentiary hearings, the Hearing Officer asked the Attorney General for the URL to Evidentiary Exhibit 53. The URL for the 2009 population density map that the Attorney General asked to have marked for identification is as follows. http://www.census.gov/popest/gallery/maps/PopDensity_09.pdf

Thank you very much. Please contact me if you have any questions.

Sincerely,

/s/

Sandra Callahan Merrick
Assistant Attorney General

Enclosures

cc: Service List

Evidentiary Record Request DTC-3

Request

Discuss any revisions necessary to the hypothetical plan (Evidentiary Exhibit #16) so that it is limited to measuring service quality metrics in Western Massachusetts. Also discuss the potential of any administrative or other burdens placed upon the Company in collecting and reporting the data contained within the hypothetical plan that is not already captured by the statewide SQI. Also, discuss the potential of any administrative or other burdens placed upon the company if it were required to submit to a Western Massachusetts SQI in addition to continuing its submission to the statewide SQI.

Response

In Ms. Baldwin's view it is entirely feasible for the Hypothetical Service Quality Index ("HSQI") to apply to the "413" area code or Western Massachusetts region:

- RPHL
 - The evidence in this proceeding clearly demonstrates that Verizon can compute the RPHL for the Springfield district (i.e., Western Massachusetts).
 - Verizon reports the RPHL each month on a wire center basis – it is a question of straightforward arithmetic to aggregate this metric to the Springfield district.
 - Therefore this metric can (and in Ms. Baldwin's view should) be assessed on a Western Massachusetts basis and on a wire center basis.
- Four maintenance metrics concerning percent cleared
 - As Ms. Baldwin's Rebuttal Testimony shows (see, e.g., Tables 8 through 13), data regarding clearance time relative to various time intervals can be readily computed. The data in these tables correspond with Western Massachusetts and were provided by Verizon in response to information requests. Ms. Baldwin does not believe that Verizon would hesitate to object if responding to particular data requests possibly would be burdensome. Because Verizon did not object to AG-VZ 8-20 through AG-VZ 8-23, and also because it is reasonable to assume that Verizon maintains electronic records, in Ms. Baldwin's view, the four HSQI elements concerning percent cleared within 24 or 48 hours could be readily applied on a Western Massachusetts basis.
 - Because troubles begin with a customer located at a particular address and served by a particular wire center, and because Verizon presumably relies on automated systems for recording troubles and dispatching technicians,

Ms. Baldwin believes that the percent of troubles cleared could also be measured, as set forth in the HSQI on a wire center basis.

- Repeat Trouble Rate
 - See Verizon's response to AG-VZ 8-23 and see discussion above regarding the RPHL, as measured on a Western Massachusetts basis.
 - Because troubles begin with a customer located at a particular address and served by a particular wire center, and because Verizon presumably relies on automated systems for recording troubles and dispatching technicians, Ms. Baldwin believes that repeat troubles could be measured, as set forth in the HSQI on a wire center basis. Furthermore, it is Ms. Baldwin's understanding that Verizon relies on repeat troubles as a way to assess where outside plant efforts should be focused. Therefore, Verizon presumably already tracks repeat troubles by wire center in order to determine where work should be focused.
 - Therefore this metric can (and in Ms. Baldwin's view should) be assessed on a Western Massachusetts basis and on a wire center basis.
- Installation Items
 - Because requests for installation begin with a customer located at a particular address and served by a particular wire center, and because Verizon presumably relies on automated systems for placing orders to install service and to dispatch technicians, Ms. Baldwin believes that all of the installation items can be measured for the Western Massachusetts region as well as on a wire center basis.
 - Furthermore, the "413" area code uniquely identifies Western Massachusetts installations.
 - Also, 20 years ago, when Ms. Baldwin served as the Director of the Telecommunications Division for the Massachusetts Department of Public Utilities, the Department, using data that was submitted on paper, was able to examine data on a district basis. See, e.g., discussion of the Western Region in the Department's June 29, 1990 Order issued in D.P.U.89-300, 343-346; see also id., 382-404, including tables, many of which concern the Western District and other geographically disaggregated analyses. Ms. Baldwin believes that it is reasonable to assume that Verizon's databases and records are significantly more automated in 2010 than they were in 1989.
- Service Response Items
 - As Ms. Baldwin understands Verizon's operations, call centers support customers throughout Massachusetts and Rhode Island, and therefore geographically disaggregated data is not readily available. Nonetheless the five metrics that are now included in the monthly quality of service reports can be reasonably included as elements of a Western Massachusetts SQI.
 - Presently, the Department receives data for these five items based on services offered to Rhode Island customers as well as to Massachusetts customers, and yet the Department relies on these data to assess the quality of service offered to consumers in Massachusetts. This is reasonable because presumably Verizon does not provide different levels of service quality for calls that originate from Rhode Island as compared

to those originating from Massachusetts. Therefore, it is certainly reasonable to consider the same set of data as providing a reasonable proxy for the quality of service that Western Massachusetts consumers receive. In other words, the same data set should also reasonably represent the quality of service offered to customers in Western Massachusetts.

- Although Ms. Baldwin does not believe it to be necessary, the Department could require Verizon to conduct a statistically valid sample for a period of time based solely on calls coming in from the 413 area code (this methodology would not include those customers residing in Western Massachusetts who use wireless telephones with a different NPA) and determine whether the results are reasonably similar to the statewide results for the same period of time.

In summary, Ms. Baldwin is not aware of any revisions that would be necessary to the hypothetical plan (Evidentiary Exhibit #16) such that the hypothetical plan could be limited to measuring service quality metrics in Western Massachusetts. Furthermore, she is unaware of any revisions that would be necessary to the “modified” hypothetical service quality index that she recommends in response to Record Request 5.

In Ms. Baldwin’s view any potential administrative or other burdens placed upon the company in collecting and reporting the data contained within the hypothetical plan (either as proposed or as modified by Ms. Baldwin in response to Record Request 5) would be negligible and could be reasonably implemented if Verizon were required to submit to a western Massachusetts SQI in addition to continuing its submission to the statewide SQI. Today’s computing capabilities and resources should make such reporting straightforward.

Prepared by Susan M. Baldwin

Evidentiary Record Request DTC-4

Request

Referring to the following three Reporting Metrics contained in the hypothetical plan (Evidentiary Exhibit #16): (1) Percent Out of Service Over 24 Hours; (2) Percent Service Affecting Over 48 Hours; and (3) Percent Repeat Troubles (per 100 initial trouble reports within 60 days), recommend how “Standard” and “Target” benchmarks should be established for these three metrics.

Response

Please see Ms. Baldwin’s response to Record Request #5.

Prepared by Susan M. Baldwin

Evidentiary Record Request DTC-5

Request

Suggest ways to improve the hypothetical plan (Evidentiary Exhibit #16) by adding or deleting or modifying measures so as to meet the objective of improving Service Quality in Western Massachusetts.

Response

This document responds to Record Request 5, issued by the Department, concerning the Hypothetical Service Quality Index (“HSQI”) that the Department distributed during the hearing as Evidentiary Exhibit # 16, in Northampton on April 1, 2010, and which is reproduced at the end of this response. As a preface, Ms. Baldwin reiterates her view, which she stated during cross-examination during these hearings, that although a well-designed SQI would assist the Department in protecting consumers in Western Massachusetts from service quality deterioration and inadequate service quality, the SQI would not, alone, be sufficient. As Ms. Baldwin testified during hearings, many states have sought to implement diverse service quality plans to establish economic incentives that encourage incumbent local exchange carriers to provide adequate service quality. Tr.Vol. 2, pp. 362-363. Despite regulators’ best efforts, this has been a challenge and state regulators continue to seek the “right” plan.

In part because of the inevitable uncertainty about whether any particular service quality regime will actually lead to the desired results, other remedies are also critical to enable the Department to protect consumers of basic local service from inadequate and unreliable telephone service as Verizon makes the transition from a landline business to lines of business that are dominated by wireless, FiOS, and entertainment. For example, a comprehensive audit would address, at least in part, the information asymmetry that exists between the Department and Verizon, where Verizon possesses substantially more knowledge about its operations and infrastructure than does the Department.

That being said, the HSQI provides an excellent, balanced approach that seeks to measure aspects likely to be of greatest importance to customers, and appears based on information and data that Verizon already tracks for internal purposes or could reasonably track based on its existing systems (see also response to Record Request 3) and the HSQI also includes penalties that would assist in preventing persistent problems either in particular communities and/or of a particular aspect of service quality.

Ms. Baldwin reiterates her view expressed on April 1, 2010: “Generally, I think it’s an excellent plan, in that it holds Verizon to standards that better serve consumers in Western Massachusetts.” Tr.Vol. 2, p. 324.

Explanation of some of the terms used in this response to the Department's Record Request:

"Metrics" are the particular aspects of Verizon's service quality that can be measured and reported to the Department, such as "reports per hundred lines" or "percent of troubles cleared."

"Standards" are associated with each of the metrics. Standards are the minimum levels of performance that Verizon is expected to meet, such as 1.9 RPHL or 60% cleared within 24 hours. In the context of the existing Service Quality Index, there are two tiers of standards: the Department uses a scoring system whereby Verizon "earns" one point for meeting the standard and two points for meeting a more stringent target level. For example, the existing standard for the RPHL, as measured at the SBU-level, is 2.25 and the target is 1.90.

Financial consequences (penalties) are the consequences of Verizon MA's failure to meet Department-established standards. For example, one could design a system whereby if Verizon fails to clear 60% of troubles within 24 hours, Verizon must pay \$10,000 for each month of non-compliance. This response does not address the use of the monies that such penalties yield, but one possible use would be to return them across the board to basic local customers in Western Massachusetts.

Assessment of Verizon MA's performance. Assessing Verizon MA's service quality is important for two reasons: (1) for informational purposes and (2) for the purpose of computing financial consequences. For example, Verizon MA presently submits a *monthly* quality of service report to the Department with data that shows Verizon MA's performance, as measured according to the existing metrics, as well as additional information (e.g., RPHL for individual wire centers on a monthly basis (the Wire Center Report); information on major service outages; and installation and maintenance results for Public Access Lines). The report may also include additional items requested by the Department, such as the reports per hundred lines for Middlefield filed with Department from May 1, 2008 through October 31, 2009. This information assists the Department with determining whether Verizon meets the Department's expectations and requirements, and also with generally monitoring the level of service quality that Verizon provides in Massachusetts. Presently, on an *annual* basis a determination is made as to whether any financial consequences ensue as a result of Verizon's actual performance. A penalty is incurred for each month Verizon MA fails to meet the SQI (one-twelfth of one percent of total annual retail revenue).

Geographic area of reporting - for example, under the existing SQI, Verizon is accountable for its performance as measured for seven metrics at the SBU level and for five metrics at the statewide level. Currently, Verizon MA provides a monthly Quality of Service Report which, in addition to the SQI-related information, includes (in Section II) a Wire Center Report that provides monthly trouble report rates by wire center. However, the wire center level data is not included in the SQI nor the calculation of the penalties.

Use of averaging over time: Footnote 3 of the HSQI states: "All measures will be calculated for the month and will no longer be a rolling average of the previous months." The current SQI calculations are based on a 12-month rolling average.

Standard Miss Criteria – Verizon’s existing plan includes a requirement, in addition to meeting a threshold SQI, that Verizon meet a certain number of individual service quality metric standards in each month. Presently, Verizon is assessed a penalty if Verizon fails to meet the standard for three or more metrics in a given month (calculated on a rolling basis). The “Standard Miss” criteria is applied on a statewide basis to all twelve metrics. By contrast, under the HSQI, Verizon is held more accountable to meeting critically important standards each month.

Description of the Western Massachusetts Region

Western Massachusetts includes 101 municipalities served by 63 wire centers in the Berkshire, Franklin, Hampden, and Hampshire counties. The region that the Department’s Hypothetical Service Quality Index encompasses includes 101 municipalities, that is, nearly one-third of the 351 towns and cities in the Commonwealth. The region includes urban areas (such as Springfield) and rural, sparsely populated areas, such as Egremont. According to Verizon’s testimony, the ten largest wire centers in Western Massachusetts serve approximately 55% of the lines in the region as clarified during the Department’s cross-examination on April 13, 2010.

The fact that 101 unique communities, including self-proclaimed “tourism destinations” in the Commonwealth, are impacted by this investigation underscores the importance of the public switched network to Western Massachusetts. Any SQI needs to weigh community impacts rather than merely counting access lines to recognize that a community is “greater than the sum of its lines.” In other words, the approximate 700 lines that serve Worthington affect the welfare and safety of an entire community – households, businesses, town centers, and the local economy. The sum of the 700 lines far exceeds a simple tallying of *only* 700 lines. The modifications suggested below seek to reflect the importance and value of the public switched telephone network to the well-being and future of the many diverse communities that make up western Massachusetts.

The fact that the “413” area code coincides with the Western Massachusetts region facilitates data gathering and analysis.

Overview of the Department’s Hypothetical Service Quality Index

The Hypothetical Service Quality Index, distributed during the hearing on April 1, 2010, includes six metrics corresponding with the quality of Verizon’s maintenance of its network; five metrics corresponding with installation of basic service, and five metrics corresponding with service response items. Under the HSQI, some penalties would be assessed based on Verizon’s performance, as measured by certain metrics, at both the statewide¹ level and the wire center level, some at just the statewide level, and some just the wire center level. It is not clear from the HSQI whether the Department’s intention is to utilize the current SQI threshold (i.e. 33 points) to trigger the penalty. Whether or not that is the case, the HSQI also includes a “Standard Miss” criteria whereby a penalty is assessed for missing one or more standards in a month on a statewide (or region-wide) basis for certain maintenance items and a penalty is assessed for missing one or more standards for certain maintenance items on a central office basis.

¹ This response to the Department’s record request does not address the arguments about scope and whether or not the hypothetical SQI should include “statewide” or “region-wide” as a heading for Column 2 of the table.

The modification of the “Standard Miss” criteria is a significant improvement in that it requires Verizon MA to pay attention to all of the metrics and, for example, results in a penalty if Verizon MA fails to meet out-of-service standard in a given month. Currently, Verizon MA can miss the Percent Troubles Cleared within 24 Hours in every month and still pass the 33 point threshold and standard miss criteria and thus pay no penalty.

Criteria used to evaluate the HSQI

In order to analyze the HSQI, Ms. Baldwin considered particularly the following criteria:

- Whether the economic incentives that the HSQI encompasses would counteract the economic incentives that Verizon MA confronts to:
 - Invest capital expenditures, operating and maintenance expenses, and staffing resources disproportionately in Eastern Massachusetts.
 - Under-invest in capital expenditures, operating and maintenance expenses, and staffing resources in less densely populated and rural communities.
- The societal costs associated with consumers’ lack of reliable access to E-911 service.
- Administrative feasibility.
- Transparency (easy to understand and to apply).
- Accountability.
- The timing of the implementation of the standards in the HSQI.
- The importance of preventing “backsliding.”

Components of the Department’s HSQI

As Ms. Baldwin understands the HSQI, it would include the following metrics for the purposes of measuring the adequacy of service quality as provided by Verizon in Western Massachusetts:

Maintenance Items:

- Network Trouble Report Rate;
- Percent Out-of-Service Over 24 Hours – Residential;
- Percent Service Affecting Over 48 Hours – Residential;
- Percent Out-of-Service Over 24 Hours – Business;
- Percent Service Affecting Over 48 Hours – Business; and
- Percent Repeat Troubles (per 100 initial Trouble Reports within 60 days).

Installation Items

- % Missed Appointments for Company Reasons – Total customers
- % Missed Appointments for Company Reasons – Residence customers
- % Missed Appointments for Company Reasons – Company facilities
- % Installation Trouble Reports

Service Response Items

- DA Average Speed of Answer
- Toll & Assist Average Speed of Answer
- Repair Resolution Center Average Speed of Answer
- Residence Service Level
- Business Service Level

The next section of this response to the Department's Record Request provides recommended modifications to the various components of the Department's HSQI, in a slightly different order than as they appear in Evidentiary Exhibit 16.

Recommended Modifications to the Department's Hypothetical SQI

Overview

Ms. Baldwin recommends modifications to the metrics and standards as follows:

Metrics Providing Information about the Condition of Network

1. ***HSQI Metric: RPHL:*** Trouble reports per hundred lines (RPHL). As defined by Mr. Sordillo on April 12, the trouble reports include initial and repeat troubles reported by residential and business customers.
 - a. ***Standard*** As Ms. Baldwin understands the HSQI, the Department has not proposed a specific standard for the RPHL. Ms. Baldwin recommends that the following standards be established for the Western Region: 2010: 1.30 RPHL; 2011: 1.15 RPHL; and 2012: 1.00 RPHL.
 - b. ***Penalty for missing the metric:*** As Ms. Baldwin understands the HSQI, the penalty for missing the RPHL would only apply at the statewide level. Ms. Baldwin recommends that a penalty also be assessed for missing the RPHL standard in any given central office for 3 or more months within a six-month period.
 - c. ***Rationale for Proposed Standard:*** There is substantial evidence in the proceeding to support an RPHL standard that is significantly lower than the 2.25/1.90 standard//target that now exists. Among the relevant evidence are the following:
 - The RPHL for the other five districts that Verizon serves in Massachusetts are 0.9 (Boston); 1.1 (MetroNorth); 1.2 (Northeast); 1.2 (Marlborough); and 1.6 (Southeast). Certainly consumers in Western Massachusetts should expect comparable levels of service quality to all but the outlier district of the Southeast.²
 - For Western Massachusetts, the average RPHL for the twelve months ending September 2009 was 1.57, and for the twelve months ending January 2010, was

² For sources for these numbers see Update to Table 7 of Ms. Baldwin's Rebuttal Testimony, marked as Evidentiary Exhibit 17.

1.40, which is a decline of 0.17 percentage points in one-third of a year. See Figure 1 on page 6 of Verizon's Rebuttal Testimony. Therefore, during this four month period (from September 2009 to January 2010, Verizon was able to lower the RPHL by 11% which translates into an annual reduction in its trouble report rate of approximately one third.

- Verizon is taking steps to reduce the volume of trouble reports (see e.g. transcripts for April 12-13, 2010). As Table 12 in Ms. Baldwin's Rebuttal Testimony shows, the volume of total residential troubles declined by 31% between 2008 and 2009 (from 56,106 to 38,648). Even adjusting for line loss, the decline was substantial. Also see Attachment A which summarizes the monthly data for 2008 and 2009 for residential initial and repeat troubles that Verizon provided in response to AG-VZ 8-23 and which shows a 32% decline in the annual volume of residential trouble reports.
- The RPHL is computed by dividing the total quantity of troubles by the total number of access lines and then multiplying that result by 100. Therefore, in order to compute the RPHL, it is necessary to have the quantity of access lines. As is shown in the proprietary attachment to Verizon's response to AG-VZ 8-50, the total quantity of access lines in Western Massachusetts has been declining by an amount that is purportedly confidential.
- According to testimony provided by Mr. Sordillo on April 12 (Tr. Vol. 4, p. 678), the trouble report rate reflects initial and repeat troubles: "Q. When you say report rate, you're referring to reports per hundred lines? A. [SORDILLO] Yes. We term it report rate. Q. Just to confirm, the report rate includes the initial and repeat reports; is that correct? A. [SORDILLO] Yes."
- Frontier agreed to a RPHL of 1.03 in a settlement now pending before the Illinois Commerce Commission (see Baldwin Rebuttal, at 15, footnote 14 and Attorney General's response to Record Request No. 2).
- Ms. Baldwin also observes that there may be some data inconsistencies in the record regarding quantities of troubles.
 - Attachment A, which summarizes the monthly data for 2008 and 2009 for residential initial and repeat troubles that Verizon provided in response to AG-VZ 8-23, shows that during 2009, the average monthly number of initial and repeat residential troubles was 3,702.
 - Table 12 in Ms. Baldwin's Rebuttal Testimony, which summarizes data that Verizon provided in response to AG-VZ 8-20 shows an annual 2009 total of 38,648 residential troubles, which translates into a monthly total of 3,221 for residential customers, which is approximately 481 troubles fewer than the average based on the data provided in response to AG-VZ 8-23.
 - Furthermore, "Update to Table 7 of Ms. Baldwin's Rebuttal Testimony," marked as Evidentiary Exhibit 17 and which is based on data provided by Verizon in its monthly quality of service reports shows that the average number of *total* (residential and business) monthly troubles reported in 2009 was 3,649, an amount that is *less* than the average residential troubles of 3,702 shown in Attachment A (based on the data provided in response to AG-VZ 8-23) and *less* than the 3,221 discussed above. The QOS report does not include the number 3,649 directly. The quantity of

3,649 is derived from the numbers of access lines and the trouble report rates found in the QOS report, computed as follows:

- 1. Sum, for each of the 12 months in 2009, the following: (trouble report rate report for each month) * (December 2009 line) / 100. 2. Average the 12 sums.
- It may be useful for the Department to seek and to examine workpapers that underlie the Panel's Figure 1 in their Rebuttal Testimony and possibly to clarify the calculation of the RPHL during the May 21 hearing.

2. **Repeat trouble report rate:** Repeat troubles provide valuable information about the condition of the network and the degree to which short-term “band-aids” versus long-term improvements are deployed to fix problems. Therefore this metric is appropriately included in the HSQI.

The HSQI uses a percent repeat trouble that corresponds with “per 100 initial trouble reports within 60 days.” As Ms. Baldwin understands the HSQI metric, one would determine the ratio of repeat troubles to initial troubles. The advantage of this approach is that it shows, relative to initial troubles, the percentage that are repeat troubles. Another approach would be to use the methodology that Verizon presently uses, that is, to compute the repeat trouble report rate by dividing the quantity of repeat troubles by the quantity of total troubles. This methodology shows the percentage of total troubles that correspond with repeat troubles. Total troubles include initial and repeat troubles reported by residential and business customers. This is apparently consistent with the way that Verizon computes the repeat trouble report rate. For example, in Verizon's response to AG-VZ 8-23, the total troubles equals the sum of the quantities shown in the columns entitled “initial” and “repeater.” See cross-examination of Panel on 4/13 (Tr. 759-761).

“A. [CONROY] If, for example, we were to look at January of 2008 as we were before, in order to get the total number of reports, we would have to add those two columns, both initial reports and repeater. So the total number of reports in that month would have been 4,860.”

...

“Q. So Mr. Sordillo, can I clarify before the break what I had asked would be a reasonable way to express repeat trouble reports. You had said percent of initial total reports. I think since the break, since we clarified that, you would add the number of initial reports to the repeater to get the total number of reports, that might change your answer. Would it?”

A. [SORDILLO] Jack had people put this together. The word "initial reports" means something different to me than whoever put this together. As he said, they disaggregated the repeats from the overall reports, even though they are all reports. You would have to get the two together to get your total base. And then divide that base into the number of repeats and you come up with the 12.7 percent.”

By way of illustration, Attachment A shows that in December 2009, there were 2,697 initial troubles and 331 repeat trouble reports. Dividing 331 by 3,028 (which is the sum of the initial and repeat troubles) yields a trouble report rate of 11%. Attachment A provides the monthly repeat trouble report rate, based on this methodology, for the time period spanning January 2008 through December 2009. Ms. Baldwin has also included annual average rates for 2008 and 2009 of 13.6% and 13.0%, respectively, showing a decline in the rate of 5% (as expressed in percentage points, a decline of 0.6 percentage points).

a. ***Rationale for adding this metric to the HSQI:*** A repeat trouble report rate provides important information about the condition of the network. For example, where there are underlying problems of a longer-term nature, one would expect consumers to report more repeat troubles. The HSQI should create an incentive for Verizon to implement repairs of long duration so that the same consumers are not repeatedly inconvenienced. Also, as testified by Mr. Sordillo on April 13, the top reason given in customer survey for repair dissatisfaction is repeat trouble. (“A. [SORDILLO] The very first one is repeat reports. The second one is duration. The third is missed appointments. That’s on the maintenance side, which I’m taking for granted that’s what you’re asking.” Tr. Vol.4, p. 718.)

b. ***Standard :***

Ms. Baldwin proposes the following standards: 2010: 12.5%; 2011: 11.5%; 2012: 10.5%; 2013: 9.5%.

c. ***Rationale for Standard***

Attachment A shows Verizon’s actual repeat trouble report rates for 2008 and 2009, which shows decline from average in 2008 of 13.6% to average in 2009 of 13.0%. The standards that Ms. Baldwin proposes are consistent with Verizon’s internal objectives. “Our goal is between the 12 and 14 percent. Anything under 12 is excellent. Anything over 14 percent is an issue to us.” Tr. Vol. 4, p. 762. Furthermore, the work that Verizon presently is undertaking and has been undertaking to close open plant and in preventive maintenance cable work should cause the quantity of repeat troubles to decline.

d. ***Penalty for missing metric:*** The assessment of the penalty at the wire center for the repeat trouble report is reasonable and creates an incentive to ensure that small communities receive sufficient resources by Verizon to receive adequate service quality.

Metrics Providing Information about the Timeliness of Repair

1. Percent of Out-of-Service (“OOS”) Troubles Cleared Over 24 Hours – Residence

a. ***Standard:*** As Ms. Baldwin interprets the HSQI, the standard for clearing residence OOS troubles would be 20% and the target would be 10%, but as Ms. Baldwin testified on April 1, she is not clear how the standard and the target apply within the mechanics of the HSQI, that is, whether the HSQI contemplates some type of overall score. Ms. Baldwin proposes that the standard be gradually ramped up. 2010: 20%; 2011: 10%; 2012: 5%

b. Rationale for Standard: According to Mr. Sordillo, Verizon, for internal purposes, measures OOS relative to a 24-hour period. Tr. Vol. 4, pp. 614-615. Therefore this metric comports with Verizon’s existing practices. Furthermore, as Verizon continues to reduce the total volume of troubles, resources will be freed up for improving the timeliness of repair. Therefore it is reasonable to expect Verizon’s timeliness of repair to improve. Also, see Ms. Baldwin’s direct, rebuttal and oral surrebuttal testimony regarding “best practices” in other states.

A. [SORDILLO] We break it down to out of service and affecting service. We look at our out-of-service troubles and we try to clear them in 24 hours. We look at our affecting service and try to clear those in 48 hours. We will always give a preference to an out-of-service customer . . . Q. If your internal objectives are based on out of service and service-affecting, do you have an internal objective percentage, a number of what you want to see cleared in that 24 hours for out of service and 48 hours for service-affecting? A. [SORDILLO] Yes. Q. What are those? A [SORDILLO] I told you once, about 60 percent for out of service cleared in 24 hours. As far as cleared in 48, we used 70 percent. . . . Our object is to be better yesterday than we have been cumulative every month. That means we are executing better. Q. Those internal objectives are independent of the service quality metric? A. [SORDILLO] Yes.

2. Percent of Service Affecting (“SA”) Troubles Cleared Over 48 Hours – Residence

a. Standard: The HSQI sets forth a standard of 20% and a target of 10% for troubles not cleared. Ms. Baldwin proposes that the target be gradually ramped up. 2010: 20%; 2011: 10%.

b. Rationale for Standard: See discussion re OOS above.

3. Percent of OOS Troubles Cleared Over 24 Hours – Business See discussion above.

4. Percent of SA Troubles Cleared within 48 Hours – Business See discussion above.

5. Repair Interval – Residence

At this time, Ms. Baldwin does not propose that a standard be established for the residential repair interval. However, as Ms. Baldwin explains in her direct and rebuttal testimony, for those customers that wait longer than 24 hours, the previous four metrics do not shed light on the duration of the wait time – yet a customer who waits 25 hours is clearly of less concern than a customer who waits 96 hours. Therefore information about repair intervals provides valuable information to the Department and to interested parties. Furthermore, Verizon has the capability of providing this data, as is evidenced by the ARMIS reports that Verizon submits to the FCC and that Ms. Baldwin analyzed in her direct and rebuttal testimony. Finally, Verizon indicates that the second of the top three reasons for customers’ dissatisfaction with repairs is the duration of the wait for the repair. Tr. Vol. 4, p. 718.

Therefore, because the information would be valuable, is feasible for Verizon to provide, and corresponds with customers' second major concern about repairs, Verizon should provide data regarding repair intervals to the Department for monitoring purposes.

6. *Repair Interval – Business* See discussion regarding repair interval – residence.

Metrics Providing Information about the Installation of Service

The four installation metrics in the HSQI seem reasonable. One possible consequence of focusing relatively more on the maintenance items, however, is that Verizon may underallocate resources to installation. (Tr. 324-325.) None of the metrics measure the installation interval, that is, the time between a customer calls to request service and the date that Verizon installs service. As Ms. Baldwin indicated in her Direct Testimony (at 26, cite omitted), statewide: "Average installation intervals for all residential customers rose from 0.8 days in 2005 to 2.4 in 2008."

Ms. Baldwin has reviewed 2009 ARMIS data and the quality of installation service has deteriorated significantly. The 2009 total residential average interval was 6.5 days. Because the ARMIS data corresponds with basic local service, Ms. Baldwin assumes that this ARMIS metric does not include the installation of DSL lines, but this may be worth clarifying with Verizon. See FCC Report 43-05, the ARMIS Service Quality Report Table II. Installation and Repair Intervals (Local Service), Row 134, Columns ad (Residence: MSA), ae (Residence: Non-MSA), and af (Residence: Total).

At a minimum, Ms. Baldwin recommends that Verizon submit data regarding the installation interval for residence customers. Verizon has the capability of providing this data, as is evidenced by the ARMIS reports that Verizon submits to the FCC and that Ms. Baldwin analyzed in her direct and rebuttal testimony.

Ms. Baldwin has not analyzed the reasonableness of the standards and targets for these four metrics.

Metrics Providing Information about Service Response Items

As Ms. Baldwin understands the five Service Response Items, centralized call centers handle calls from Massachusetts and Rhode Island. Ms. Baldwin does not have any recommendations regarding the first three Service Response metrics (i.e., DA Average Speed of Answer, Toll & Assist Average Speed of Answer, and Repair Resolution Center Average Speed of Answer). However, Ms. Baldwin recommends that the Department monitor the quality of Verizon's Residence and Business Service Levels and consider modifying the HSQI to elevate their importance. The combination of Verizon's performance regarding the ability of representatives to respond to calls in a timely manner combined with the fact that Verizon indicated that the primary reason for customer dissatisfaction with installation was calls to the customer service center suggests that the Department may want to focus attention on this aspect of Verizon's service quality.

Q. On the installation side, do you know the top three reasons that customers give for not being happy with the repair service -- installation service?

A. [SORDILLO] Business office contact is number one. Number two is billing. And number three is rep knowledge, representative knowledge. The very first one is getting into a live customer contact. Tr. Vol. 4, p. 719.

The data that Verizon submits to the Department corroborates Verizon's testimony. Exhibit SMB-9 to Ms. Baldwin's Direct Testimony, shows that for the 12 months spanning October 2008 through September 2009, Verizon never scored more than one point for Residence Service Level. In the monthly report submitted for the twelve months spanning March 2009 through February 2010, Verizon similarly never scored more than one point for this metric.

Furthermore, Verizon's performance relative to business customers has been declining. For the 11 months spanning October 2008 through August 2009, Verizon earned two points each month for the Business Service Level, yet between September 2009 and February 2010, Verizon never earned more than one point. (In the monthly quality of service reproduced as Exhibit SMB-9 to Ms. Baldwin's Direct Testimony, August 2009 is shown as earning 1 point and in the February 2010 Quality of Service Report, August 2009 is shown as earning 2 points.)

The current standard is 60% for residence and for business and the current target is 75% for residence and for business. As defined in Attachment C to Verizon's "PCP", the residence metric "measures the percentage of calls to the residence business office (CSSC – Consumer Sales and Solutions Center) that are answered within 20 seconds" and the business metric "measures the percentage of calls to the business office (BSC – Business Solutions Center) that are answered within 20 seconds." This suggests that the residence service level and business service level metrics may merit particular focus, with the penalty being assessed for missing one or more measures each month rather than for 3 and more misses each month.

Financial Consequences

The HSQI appears to utilize the current plan's combination of an SQI threshold and standard miss criteria to assess financial penalties (see e.g., footnotes 4, 5, and 6). The use of both a standard and target level for metrics suggests that the Department HSQI includes the calculation of an SQI based on one point for each standard that is met and two points for each target that is met for each metric. The SQI threshold level would require adjustments given the addition of metrics and the application of the SQI to different regions (i.e. statewide, region-wide, central office). Currently, the threshold level of 33 points is based on 7 metrics calculated for three different SBUs (for a total of 42 possible points) and 5 metrics calculated at the statewide level (for a total of 10 possible points).

As Ms. Baldwin noted during the hearings (Tr. Vol. 2, p. 325), assessing penalties at the central office level based on the amount of that central offices' revenues may not provide the required incentives for Verizon to improve service quality particularly in rural wire centers where wire center revenue is negligible compared to overall Verizon revenue.

The proposal to have the penalty triggered for missing one or more measure each month is an improvement relative to the mechanics of the existing plan. Ms. Baldwin recommends however that a penalty apply if Verizon misses the network trouble report rate, whether measured at the statewide, or local (central office) level for 3 or more

months within a consecutive six-month period.

In addition, the Department should give serious consideration as to whether 1% of retail revenues (on an annual basis), even on a statewide or region-wide basis is of a sufficient magnitude to provide the incentive for Verizon MA to address service quality issues. If the penalty is not large enough, Verizon MA may simply view the penalty as a cost of doing business. The following discussion and Attachment C provide more detail about service quality penalties in other New England states of which Ms. Baldwin is aware.

Discussion of Determining a Reasonable Magnitude for a Service Quality Penalty

As Evidentiary Exhibit 17 (Update to Table 7 in Baldwin Rebuttal) shows, lines in Western Massachusetts account for approximately 12% of all lines in Massachusetts. Applying this percentage to Verizon's statewide revenues of \$1.163 billion for 2008 (see Verizon response to AG-VZ 3-6) yields approximately \$140 million in revenues in Western Massachusetts.

This may overstate the portion of revenues attributable to Western Massachusetts, however, if fewer of its customers purchase discretionary and bundled offerings than do their Eastern Massachusetts counterparts. Verizon's Service Quality Plan penalty is assessed at the end of a calendar year and is calculated as one-twelfth of one percent of total annual retail revenue for each month that Verizon Massachusetts failed to either obtain 33 SQI points or meet the "Standard Miss" threshold (for a total possible penalty of 1% of revenues). Extrapolating the magnitude of the SQI penalty to Western Massachusetts, on an annual basis, one percent of revenues or approximately \$1.4 million could be considered a reasonable *minimum* quantity to put "at risk" for the purposed of financial accountability.

However, in Ms. Baldwin's view, this magnitude is too low and not necessarily likely to cause Verizon to offer adequate service quality. Furthermore, expressed on a per-line basis, it is much lower than the level that FairPoint (the successor company to Verizon) confronts in the rural states of Vermont, Maine, and New Hampshire. For example, using 2007 access line data from the FCC's ARMIS database (the most recent year available), and the maximum annual penalties permitted by the state regulators, one can calculate a per-access line maximum penalty for each of these four states. Table 1 shows the comparison.

Table 1³

State	Total Billable Access Lines -- 2007	Maximum Annual Penalty	Per-Access Line Penalty
Massachusetts	2,591,105	\$11.63 million	\$4.49
New Hampshire	483,806	\$12.5 million	\$25.84
Maine	457,669	\$12.5 million	\$27.31
Vermont	274,112	\$10.516 million	\$38.36

(The per-line penalty estimate is likely lower than the actual per-line penalty because as the number of access lines served by Verizon (and now FairPoint in the other New England states) has fallen, the maximum penalty has remained constant (in the other three states).)

Ms. Baldwin recommends that the Department set a maximum penalty closer to the penalty FairPoint faces in the three New England states on a per-line basis, that is, approximately \$6.7 million based on a per-line penalty of \$25.

Table 2⁴

State	Total Intrastate Operating Revenues -- 2007	Maximum Annual Penalty	Penalty as % of Revenues
Massachusetts	1.29 billion	\$11.63 million	1%
Maine	286.88 million	\$12.5 million	4%
New Hampshire	236.27 million	\$12.5 million	5%
Vermont	138.1 million	\$10.516 million	8%

If the Department chose to adopt a maximum penalty closer to the penalty FairPoint faces in the three New England states as a percentage of intrastate revenues, a reasonable estimate for a statewide cap for Massachusetts, based on 5% of total intrastate operating revenues would be approximately \$60 million. Also, 12% of that amount, or approximately \$7 million would represent a reasonable penalty cap for Western Massachusetts.

Finally, Attachment D shows the importance of assessing whether particular wire centers repeatedly receive poor service quality. Ms. Baldwin understands that in a small town, a few troubles can lead to a high rate. However, an SQI should capture instances of repeatedly high trouble rates.

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³ Source: Total billable access lines are for year-end 2007. FCC, ARMIS Report 43-01, Row 2150. Massachusetts maximum penalty amount based on 1% of 2008 intrastate regulated revenues (\$1.163 billion). Verizon MA response to AG-VZ 3-6.

⁴ Source: Total intrastate operating revenues are for year-end 2007. FCC, ARMIS Report 43-01, Row 1090. Massachusetts maximum penalty amount based on 1% of 2008 intrastate regulated revenues (\$1.163 billion). Verizon MA response to AG-VZ 3-6.

Hypothetical Service Quality Plan for Western Massachusetts.

	Statewide		For each Central Office
Measure ³	Penalty ¹ assessed for missing one or more measures each month	Penalty ¹ assessed for 3 and more misses each month	Penalty assessed for one or more miss each month ²
Maintenance Items			
Network Trouble Report Rate	X		
Percent Out-of-Service Over 24 Hours Hrs – Res ⁴	X		X
Percent Service Affecting Over 48 Hours – Res ⁵	X		X
Percent Out-of-Service Over 24 Hours Hrs – Bus	X		X
Percent Service Affecting Over 48 Hours – Bus	X		X
Percent Repeat Troubles (per 100 <i>initial</i> Trouble Reports within 60 days) ⁶			X
Installation Items			
% Missed Appt for Company Reasons			
Total Customers		X	
Residence Customers		X	
Company Facilities		X	
% Installation Trbl Reports		X	
Service Response Items			
DA Average Speed of Answer		X	
Toll & Assist Average Speed of Answer		X	
Repair Resolution Center Average Speed of Answer		X	
Residence Service Level		X	
Business Service Level		X	
<p><i>Note: X indicates when a measure is used to determine Standard Miss criteria</i></p> <p>¹ Penalties at a Statewide level will be one-twelfth of one percent of total annual statewide retail revenue for each month of the year in which the plan's requirements were not met..</p> <p>² Penalties at a Central Office level will be one-twelfth of one percent of total annual retail revenue for that particular Central office for each month of the year in which the plan's requirements were not met.</p> <p>³ All measures will be calculated for the month and will no longer be a rolling average of the previous 12 months.</p> <p>⁴ Thresholds for “Percent Out-of-Service Over 24 Hours Hrs”; Standard 20%, Target – 10%</p> <p>⁵ Thresholds for “Percent Service Affecting Over 48 Hours Hrs”; Standard 20%, Target – 10%</p> <p>⁶ Thresholds for “Percent Repeat Troubles””; Standard 20%, Target – 10%</p>			