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January 4, 2010

Catrice C. Williams
Department of Telecommunications and Energy
Two South Station, fourth floor
Boston, Massachusetts 02110

Re: Verizon Service Quality in Western Massachusetts, D.T.C. 09-1

Dear Secretary Williams:

Enclosed please find the Office of the Attorney General's Responses to the Department's Second Set of Document and Information Requests in the above referenced matter.

Very truly yours,

Sandra Callahan Merrick

Assistant Attorney General

Enclosure
cc: Service List

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND CABLE

In Re Verizon Service Quality in Western Massachusetts	**D.T.C. 09-1**

CERTIFICATE OF SERVICE

I hereby certify that we have this day served the foregoing document upon each person designated on the official service list compiled by the Secretary in this proceeding, dated at Boston this 4th day of January, 2010.

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Information Request DTC-AG-2-1

Referring to page 12 of the Testimony, does Ms. Baldwin have any specific documentary evidence that shows Verizon has not been maintaining and replacing outside plant for basic telephone service in Western Massachusetts in some communities while pursuing new lines of business elsewhere?

Response

Ms. Baldwin's testimony cites to and includes evidence regarding, among other things, the age of outside plant in Western Massachusetts and the inadequate service quality that consumers in Western Massachusetts claim to receive. Also, testimony submitted by the Town of Egremont and Town of Hancock ("Towns") and by IBEW provides evidence of Verizon's possible neglect of outside plant in Western Massachusetts, which could be at least in part the cause of consumers' concerns about inadequate service quality. Verizon's pursuit of new lines of business is well-publicized and evidenced by Verizon's marketing of wireless and FiOS services. The linkage between the two,[1] that is, the neglect of outside plant in Western Massachusetts and the pursuit of new businesses, is reasonable considering that Verizon Massachusetts may have limited resources – monies and effort expended in one area of its business necessarily are not available for another area of its business.

[1] Ms. Baldwin states specifically on page 12 of her pre-filed testimony that Verizon "may not be maintaining and replacing outside plant that provides basic local telephone service in some communities while it pursues new lines of business elsewhere."

Information Request DTC-AG-2-2

Referring to pages 23 and 24 of the Testimony, identify the number of lines in the "Baypath" district that are located in eastern Massachusetts *(i.e.,* the Eastern LATA).

Response

The Attorney General is not aware of an estimate (or a way to derive an estimate) of the quantity of lines in the "Baypath" district that are located in eastern Massachusetts (i.e., the Eastern LATA). Exhibit SMB-1 to Ms. Baldwin's direct testimony lists the wire centers associated with the "Springfield" portion of the Baypath district (i.e., those in Western Massachusetts) and also separately lists the wire centers associated with the "Marlboro" portion of the Baypath district (i.e., those in Eastern Massachusetts). Exhibit SMB-C-4 (Proprietary Attachment AG-VZ 3-8) includes the number of lines by wire center, but only for those wire centers in Western Massachusetts. However, Verizon likely would possess the requested information.

Information Request DTC-AG-2-3

Referring to pages 25 through 35 of the Testimony, does Ms. Baldwin know how Verizon's average installation interval, initial and repeat trouble reports per 100 lines, and out-of-service intervals, for both residential and business customers between 2005 and 2008, compare with other ILECs that report ARMIS data?

Response

The following discussion provides a comparison of selected FCC ARMIS service quality metrics for Verizon in Massachusetts with AT&T in Connecticut, AT&T in Illinois, and Qwest in Washington as well as at the holding company level for AT&T, Verizon, Qwest and Frontier. All data is sourced from FCC Report 43-05, the ARMIS Service Quality Report, Table II. Installation and Service Intervals (Local Service). Ms. Baldwin actively participated in proceedings in Connecticut and Illinois and is generally familiar with the service quality provided by AT&T in those states. She is also participating in state proceedings regarding the sale of parts of Verizon's local exchange business to Frontier and has reviewed service quality data in that capacity. This response also includes state specific data for Qwest, because the comparison should include a Qwest-served state and Qwest at the holding company level for the sake of benchmarking.

Residential Customers

Average Installation Interval (in days)

- Average installation interval for residential customers in Massachusetts tripled between 2005 and 2008.
- Residential customers in Massachusetts wait three times as long as those in Connecticut, and also wait longer (by about 25%) than those in Illinois.
- AT&T's timeliness of installing residential service in Connecticut has been improving, since 2005; Verizon's service in Massachusetts has been deteriorating.

Company	2005 Residence: Total	2006 Residence: Total	2007 Residence: Total	2008 Residence: Total
AT&T Connecticut	1.0	1.1	0.8	0.7
AT&T Illinois	1.4	1.7	1.9	1.9
Verizon Massachusetts	0.8	1.1	1.7	2.4
Qwest Washington	0.1	0.0	0.0	0.0

A note in the ARMIS reporting states regarding Qwest: "When displayed with an additional decimal place, the result is 0.03."

Annual Initial Out of Service Reports per 100 Lines

- Annual Initial Out of Service Reports per 100 Lines are consistently higher for Massachusetts residential customers than for Connecticut residential customers.
- Massachusetts Initial Out of Service Reports are slowly increasing.

Company	2005 Residence: Total	2006 Residence: Total	2007 Residence: Total	2008 Residence: Total
AT&T Connecticut	13.8	14.2	13.7	16.1
AT&T Illinois	13.6	15.2	17.0	19.6
Verizon Massachusetts	16.3	16.3	14.5	16.6
Qwest Washington	7.9	9.6	8.2	7.9

Initial Out of Service Interval (in hours)

- Out of Service Intervals for Massachusetts residential customers are twice as high as those for Qwest Washington residential customers.

Company	2005 Residence: Total	2006 Residence: Total	2007 Residence: Total	2008 Residence: Total
AT&T Connecticut	30.6	34.4	22.2	34.9
AT&T Illinois	14.5	17.6	18.5	22.0
Verizon Massachusetts	41.4	50.4	32.5	34.1
Qwest Washington	17.7	23.2	17.1	17.2

Annual Repeat Out of Service Trouble Reports per 100 Lines

- Massachusetts residential customers consistently have more Repeat Out of Service troubles than residential customers in Connecticut, Illinois (except for 2008), and Washington.

Company	2005 Residence: Total	2006 Residence: Total	2007 Residence: Total	2008 Residence: Total
AT&T Connecticut	2.2	1.8	1.6	2.2
AT&T Illinois	1.9	2.2	2.2	2.8
Verizon Massachusetts	3.2	3.3	2.4	2.5
Qwest Washington	1.2	1.5	1.3	1.1

Repeat Out of Service Interval (in hours)

- Repeat Out of Service Intervals for Massachusetts residential customers are generally higher than for customers in other Connecticut, Illinois, and Washington.

Company	2005 Residence: Total	2006 Residence: Total	2007 Residence: Total	2008 Residence: Total
AT&T Connecticut	29.5	33.6	22.8	35.4
AT&T Illinois	15.7	17.6	19.4	23.0
Verizon Massachusetts	40.9	41.7	32.8	34.4
Qwest Washington	19.6	22.5	19.2	18.2

Business Customers

Average Installation Interval (in days)

- Installations for Massachusetts business customers are requiring more time.

Company	2005 Business: Total	2006 Business: Total	2007 Business: Total	2008 Business: Total
AT&T Connecticut	3.8	2.9	3.1	3.4
AT&T Illinois	1.3	1.5	1.9	1.8
Verizon Massachusetts	1.5	1.7	1.6	2.0
Qwest Washington	1.0	0.4	0.2	0.2

Annual Initial Out of Service Reports per 100 Lines

- Massachusetts business customers generally have more Out of Service reports per 100 Lines than do business customers in Connecticut, Illinois, and Washington.

Company	2005 Business: Total	2006 Business: Total	2007 Business: Total	2008 Business: Total
AT&T Connecticut	4.5	4.5	4.4	5.1
AT&T Illinois	3.9	4.2	4.8	5.8
Verizon Massachusetts	5.7	5.7	5.2	5.6
Qwest Washington	4.0	4.2	3.5	3.2

Initial Out of Service Interval (in hours)

Company	2005 Business: Total	2006 Business: Total	2007 Business: Total	2008 Business: Total
AT&T Connecticut	23.6	18.1	17.7	28.3
AT&T Illinois	11.9	14.9	15.8	18.9
Verizon Massachusetts	16.6	15.3	16.0	17.8
Qwest Washington	14.5	15.9	14.7	15.0

Annual Repeat Out of Service Trouble Reports per 100 Lines

Company	2005 Business: Total	2006 Business: Total	2007 Business: Total	2008 Business: Total
AT&T Connecticut	0.7	0.5	0.5	0.6
AT&T Illinois	0.5	0.5	0.6	0.7
Verizon Massachusetts	0.9	0.9	0.7	0.7
Qwest Washington	0.6	0.7	0.5	0.5

Repeat Out of Service Interval (in hours)

Company	2005 Business: Total	2006 Business: Total	2007 Business: Total	2008 Business: Total
AT&T Connecticut	23.8	19.1	18.6	27.8
AT&T Illinois	13.0	15.3	16.4	19.6
Verizon Massachusetts	17.4	16.5	17.3	19.2
Qwest Washington	15.9	17.2	16.5	16.3

Comparison of ARMIS metrics for Major ILEC Holding Companies

Residential Customers

Average Installation Interval (in days)

Holding Company	2008 Total
AT&T	1.1
Frontier	5.5
Qwest	0.0
Verizon	1.7

Annual Initial Out of Service Reports per 100 Lines

	2008
Holding Company	**Total**
AT&T	18.8
Frontier	24.0
Qwest	10.1
Verizon	16.5

Initial Out of Service Interval (in hours)

	2008
Holding Company	**Total**
AT&T	28.6
Frontier	24.3
Qwest	18.2
Verizon	38.9

Annual Repeat Out of Service Trouble Reports per 100 Lines

	2008
Holding Company	**Total**
AT&T	2.4
Frontier	4.2
Qwest	1.9
Verizon	2.6

Repeat Out of Service Interval (in hours)

Holding Company	2008 Total
AT&T	29.3
Frontier	27.2
Qwest	20.0
Verizon	58.9

Business Customers

Average Installation Interval (in days)

Holding Company	2008 Total
AT&T	1.6
Frontier	5.9
Qwest	0.4
Verizon	1.9

Annual Initial Out of Service Reports per 100 Lines

Holding Company	2008 Total
AT&T	6.0
Frontier	12.5
Qwest	4.4
Verizon	5.7

Initial Out of Service Interval (in hours)

Holding Company	2008 Total
AT&T	19.9
Frontier	21.1
Qwest	14.8
Verizon	18.6

Annual Repeat Out of Service Trouble Reports per 100 Lines

Holding Company	2008 Total
AT&T	0.6
Frontier	1.7
Qwest	0.8
Verizon	0.8

Repeat Out of Service Interval (in hours)

Holding Company	2008 Total
AT&T	20.5
Frontier	22.9
Qwest	16.1
Verizon	27.0

Information Request DTC-AG-2-4

Referring to page 27 of the Testimony in which Ms. Baldwin states that non-MSA customers are geographically isolated and may live in areas in Western Massachusetts, is it possible to determine what proportion of these non-MSA customers are in Western Massachusetts? If yes, what proportion of Western Massachusetts customers are non-MSA customers?

Response

Ms. Baldwin does not possess the data necessary to provide such a calculation. Because Verizon submits these data to the FCC, Verizon may be able to provide the requested information.

Information Request DTC-AG-2-5

Referring to page 27 of the Testimony, please state if it is Ms. Baldwin's contention that the conclusions drawn from non-MSA data are applicable to the entire Western Massachusetts region? If yes, is her contention based on any analysis which shows that customers in Western Massachusetts and non-MSA customers are similar at a statistically-significant level? Has Ms. Baldwin or the Attorney General conducted any analysis demonstrating the level of correlation between customers in Western Massachusetts and non-MSA customers?

Response

Western Massachusetts includes urban areas such as Springfield as well as rural areas. For this reason, in Ms. Baldwin's opinion, conclusions drawn from non-MSA areas likely are applicable to the rural portions of Western Massachusetts, but not to the entire western region. Neither Ms. Baldwin nor the Attorney General have conducted any analysis demonstrating the level of correlation between customers in Western Massachusetts and non-MSA customers. See also response to DTC-AG-2-4.

Information Request DTC-AG-2-6

Referring to page 29 of the Testimony, what does Ms. Baldwin consider to be a reasonable interval for installations for residential and business customers?

Response

Ms. Baldwin requires additional information in order to prepare a recommendation on this metric. See also response to DTC-AG-2-3, which shows the average intervals that other companies can achieve. In Ms. Baldwin's view the *average* installation interval should be measured separately for residential and for business customers. Among the information that Ms. Baldwin considers relevant to the development of a reasonable metric would be the percentage of installation requests that require Verizon to travel to the customer's site, the way in which Verizon measures the installation interval, data about the volumes of installation requests, and a description of the installation tasks (and associated times necessary to complete such tasks). Based on Ms. Baldwin's understanding of consumer complaints and based on her analysis of trouble reports and troubles cleared, it is her understanding that the major area of service quality inadequacy in Western Massachusetts concerns the repair of lines (as opposed to the installation of lines). Ms. Baldwin also recognizes, however, that an unwelcome consequence of Verizon devoting more capital and staffing resources to the maintenance and repair of lines could be delays in installation of lines, and therefore, in Ms. Baldwin's view, it continues to be essential to monitor the timeliness of the installation of dial tone lines. Based on its experience in the field, IBEW may also have relevant information.

Information Request DTC-AG-2-7

Referring to page 35 of the Testimony in which Ms. Baldwin states that, based on ARMIS data, it is unlikely Verizon's service quality in Western Massachusetts between 2001 and 2008 was better than it was in Eastern Massachusetts, explain how Ms. Baldwin reached her conclusion and what analytical framework she followed to draw conclusions specific to Western Massachusetts from statewide ARMIS data.

Response

Ms. Baldwin states in pertinent part:

> Although the ARMIS data that I analyzed corresponds with Verizon's operations throughout Massachusetts, I am unaware of any information to suggest that, based on ARMIS data, Verizon's service quality in Western Massachusetts between 2001 and 2008 was better than it was in Eastern Massachusetts, and, indeed, my analysis of data submitted in this proceeding as well as my comparison of MSA and non-MSA data suggest that such a situation was unlikely.
>
> Attorney General's Pre-Filed Testimony, pp. 26-28 (November 9, 2009).

First, Ms. Baldwin recognizes that because the vast majority of lines in Massachusetts are located in Eastern Massachusetts, the level of service quality that is measured on a statewide *average* basis likely masks the specific level offered in Western Massachusetts. Therefore, all else being equal, service quality in Western Massachusetts could be above or below that offered in Eastern Massachusetts and yet such performance could be masked by statewide averages. That being said, the comprehensive data analysis included in Ms. Baldwin's testimony and exhibits to her testimony clearly demonstrate that consumers in Western Massachusetts are not receiving adequate service quality. Indeed, as she stated in her testimony, Ms. Baldwin is "unaware of any information to suggest that, based on ARMIS data, Verizon's service quality in Western Massachusetts between 2001 and 2008 was better than it was in Eastern Massachusetts."

Information Request DTC-AG-2-8

Referring to page 40 of the Testimony in which Ms. Baldwin calculated the out of service troubles that were fixed within 24 hours in Western Massachusetts, state whether she made the same calculation for Eastern Massachusetts and the entire state. If yes, explain how the figures for Western Massachusetts compare with: (i) Eastern Massachusetts; and (ii) the entire state.

Response

Ms. Baldwin did not conduct such an analysis. Also, in any instances (i.e., for any metrics) where Western Massachusetts service quality is reasonably comparable to that offered in Eastern Massachusetts, but throughout the state the quality is inadequate, such comparability does not justify the inadequate service quality that Western Massachusetts consumers receive. As Ms. Baldwin demonstrates in her testimony (see, e.g., pages 82-84 of the confidential version), and as the testimony of the Towns also demonstrates, consumers in Western Massachusetts appear to suffer specific harm from poor service quality.

Information Request DTC-AG-2-9

Referring to pages 46 through 50 of the Testimony regarding Verizon's overall repair allegedly being slow for both out-of-service and service-affecting troubles, state whether Ms. Baldwin conducted a similar analysis on a regional basis for Western Massachusetts and how Western Massachusetts compares with Eastern Massachusetts on these metrics.

Response

Ms. Baldwin did not conduct such an analysis. See also response to DTC-AG-2-8.

Information Request DTC-AG-2-10

Referring to pages 38 through 39 and 71 of the Testimony, does Ms. Baldwin believe that, even if consumers do not complain or suffer harm for out-of-service conditions, Verizon should still be required to meet a reasonable standard for out-of-service troubles because consumers pay for reliable service through their rates? What does Ms. Baldwin consider to be a reasonable standard for out-of-service troubles?

Response

Yes. Measuring harm is a complex undertaking. It is Ms. Baldwin's belief (based on her experience as the Director of the Telecommunications Division for the Department of Public Utilities) that the vast majority of consumers do not complain, and, therefore, complaints often represent the tip of the iceberg as they relate to service quality problems experienced by consumers. Therefore, relying solely on complaints would not result in adequate protection for consumers and does not provide a sufficient measure of harm. Furthermore, when poor service quality becomes the norm, consumers' expectations are lowered and they are less likely to complain.

Because a dial tone links consumers to 9-1-1, and for the other reasons discussed in her direct testimony, and similar to the standard in Illinois, Ms. Baldwin considers a reasonable standard to be clearance of 95% of out-of-service troubles within 24 hours (measured separately for residence and business customers). It is Ms. Baldwin's view that to achieve this standard Verizon may need to (1) invest adequately in its outside plant in order to prevent out-of-service troubles and (2) invest adequately in staffing resources in order to ensure that sufficient number of technicians are available to repair out-of-service lines. In other words, there are steps that can minimize the need for repair and there are steps that can improve the timeliness of repair.

Information Request DTC-AG-2-11

Referring to page 47 of the Testimony in which Ms. Baldwin states that "[ilt may be appropriate for the Department to direct Verizon MA to take the steps necessary to ensure that it has adequate resources to meet seasonal peaks in demand, to protect consumers and communities from inadequate service quality," identify and describe the steps that Ms. Baldwin believes the Department could take.

Response

As a preliminary step, the Department could issue a data request to Verizon asking Verizon to conduct a special study to be completed within, for example, one month in which, among other things Verizon would: (1) compare the resources expended on Cape Cod with the resources expended in Western Massachusetts to meet seasonal demand; (2) compare service quality in Cape Cod with that provided in Western Massachusetts; (3) analyze the seasonality of its performance in Western Massachusetts, along the lines that Ms. Baldwin describes in her direct testimony; and (4) identify Verizon's specific plans for meeting seasonal demand. As another step, the Department could hold a technical session seeking recommendations from all parties as to how Verizon might improve its seasonal performance in Western Massachusetts.

Information Request DTC-AG-2-12

Referring to pages 49 and 50 of the Testimony, explain why Ms. Baldwin believes that evaluating Verizon's performance on a rolling average basis is not a reasonable measure of service quality as it tends to even out peaks and valleys related to weather and other factors outside of Verizon's control.

Response

See the Attorney General's response to DTC-AG-1-5, which recommends modifying the existing Service Quality Plan so that Verizon MA is required to meet metrics on a month-to-month basis instead of a rolling average basis. As stated in DTC-AG-1-5:

> A rolling average is used to even out extremes and fluctuations in data and to illustrate broad trends. However, the standard metrics in the SQI are supposed to be minimum standards and should always be met except in extraordinary circumstances. The Retail Service Quality Plan already contains an exceptions and waiver process (See Part E of the Plan) that accounts for "periods of emergency, catastrophe, natural disaster, severe storms, or other events beyond Verizon MA's control."

Therefore, a rolling average is not required to "even out peaks and valleys related to weather and other factors outside of Verizon's control."

Information Request DTC-AG-2-13

Referring to page 50 of the Testimony, explain in detail what Ms. Baldwin means when she states that Verizon is able to "strategically 'patch' the rolling average, allowing it to 'squeak past' the standards every month."

Response

The statement simply observes that Verizon MA is able to actually fail to meet a given metric in a month without suffering any consequences. It is possible for Verizon MA to ensure that it meets overall rolling average targets by providing service quality above a particular metric to "smooth over" substandard performance in other months in order to avoid paying a penalty. See also DTC-AG-2-12 and DTC-AG-1-5.

Information Request DTC-AG-2-14

Referring to page 60 of the Testimony, explain in detail what Ms. Baldwin means when she states that staffing levels can affect service quality and indicate if the Department has the authority to require Verizon to increase its staffing to respond to service quality issues.

Response

All else being equal, the deployment of more technicians should lead to more timely repair of basic local exchange service. As part of its general supervisory authority, it seems entirely reasonable for the Department to explore the impact of staffing on the level of service quality that consumers in Western Massachusetts receive. Understanding the cause of the poor service quality may assist the Department in fulfilling its general supervisory authority.

Information Request DTC-AG-2-15

Referring to page 62 of the Testimony, explain in detail what Ms. Baldwin means when she states that "[tlhe age of the plant may bear on Verizon MA's service quality."

Response

The intent of the referenced testimony is to raise the possibility that some of the service quality problems that consumers are experiencing in Western Massachusetts could be related to the condition of the outside plant, which in turn could be related to the age of the outside plant. See also response to DTC-AG-2-1.

Information Request DTC-AG-2-16

Referring to pages 63 through 67 of the Testimony regarding the age of Verizon's infrastructure in Western Massachusetts, has Ms. Baldwin compared these figures with that for the rest of Massachusetts? State whether Ms. Baldwin can reasonably conclude that the infrastructure in Western Massachusetts is older and in more need for repair or replacement than other regions in Massachusetts. Also state whether Ms. Baldwin is aware of any widely-accepted industry standards for replacement of old plant and infrastructure and, if yes, provide those standards.

Response

No. Ms. Baldwin has not compared the age of the outside plant in Western Massachusetts with the age of Verizon's infrastructure in the rest of Massachusetts. Ms. Baldwin is not familiar with industry standards for replacement of outside plant and infrastructure.

Information Request DTC-AG-2-17

Referring to page 64 of the Testimony, for the year 2009, state the length of copper that Verizon plans to replace in Eastern Massachusetts and its percentage of total statewide copper.

Response

The Attorney General does not have the information necessary to respond to this information request.

Information Request DTC-AG-2-18

Referring to page 69 of the Testimony, does Ms. Baldwin have empirical or other documentary evidence to support her statement that "'[all else being equal, upgrading copper plant in rural areas may not be as cost effective as it would be in suburban or urban areas."

Response

Ms. Baldwin does not have empirical or other documentary evidence, however, based on her work in other regulatory proceedings analyzing cable costs (for example, in her analysis of universal service high cost models), it is her understanding that as the capacity of a cable increases, the unit cost decreases (for example, the unit cost of a cable pair when provided over a 500-pair cable is less than the unit cost of a cable pair when provided over a 25-pair cable). Also, common sense suggests that in urban areas, where costs can be recovered from relatively more customers than in rural areas, upgrades may be more cost-effective. Finally, the cost of replacing outside plant in sparsely populated areas necessarily involves longer distances for cable placement and deployment.

Information Request DTC-AG-2-19

Referring to pages 76 and 77 of the Testimony in which Ms. Baldwin recommends the use of customer credits to address service quality problems, can Ms. Baldwin provide empirical evidence that individual customer credits have any impact on the improvement of a company's service quality?

Response

See response to DTC-AG 2-3. In the most recent year for which ARMIS data are available (2008), the average residential initial out-of-service intervals in Illinois and Massachusetts were 22.0 hours and 34.1 hours, respectively. Consumer credits are available in Illinois and not in Massachusetts. In the same year (2008), the average residential repeat out-of-service intervals in Illinois and Massachusetts were 23.0 hours and 34.4 hours respectively. In addition to having customer credits, Illinois also has much higher standards than does Massachusetts for clearing troubles.

Information Request DTC-AG-2-20

Referring to page 87 of the Testimony in which Ms. Baldwin recommends a "comprehensive audit," explain in detail what she believes should be the scope of the audit.

Response

In response to IBEW-AG-9-8 and in explanation as to how an audit can lead to quality of service improvements in Western Massachusetts, Ms. Baldwin responded:

> A network infrastructure audit could include cataloging and analyzing the age and condition of Verizon's infrastructure in Western Massachusetts. Service quality problems could be mapped to the infrastructure where they occur (including the entire path from the customer's telephone to the central office serving that customer), and the result would be examined to identify the underlying causes of these problems. Service outages reported to the Department and to the FCC could be examined. The maintenance and replacement of outside plant could be compared to any industry standards that may exist. The audit could also examine those specific communities and addresses that are associated with consumer complaints. The audit could identify specific areas that merit particular attention. Ms. Baldwin will further develop her recommendation as is appropriate, based on the evidence provided in this proceeding.

Further, the scope should include capital investment, maintenance requirements, staffing requirement, management support, vehicles, and anything else necessary to meet 95% clearance of OOS in 24 hours and 85% of SA in 48 hours, as measured separately for residential and for business customers. An Audit should distinguish between resources necessary as a one-time effort to raise service quality to Department-established standards from those resources needed on an ongoing basis to maintain that new, improved level of service quality. An audit could also separately identify resources to meet several different objectives. For example, an audit could separately identify the resources and steps necessary to achieve each of the following four different scenarios (which correspond with four different levels of service quality):

1. Clearing 95% of out-of-service within 24 hours and clearing 85% of service affecting troubles within 48 hours
2. Clearing 90% of out-of-service troubles within 24 hours and clearing 85% of service affecting troubles within 48 hours;
3. Meeting all existing Department standards; and
4. Meeting all existing Department targets.