

D.T.E. 99-77

Investigation of the Department of Telecommunications and Energy, on its own motion, pursuant to G.L. c. 159, ' 16, into the practices, equipment, appliances and service of Verizon-Massachusetts in the Towns of Athol, Petersham, Phillipston, Royalston and Franklin County.

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I. INTRODUCTION

A. PROCEDURAL HISTORY

On July 28, 1999, the Board of Selectmen of the Town of Athol, Massachusetts, filed a petition (AAthol Petition[®]) with the Department of Telecommunications and Energy (ADepartment[®]) requesting an investigation pursuant to G.L. c. 159, ' 16 into the practices, equipment, appliances and service of Verizon New England, Inc. d/b/a Verizon-Massachusetts (AVerizon[®] or ACompany[®]).⁽¹⁾ The Town of Athol asserted that Verizon's local switching station was inadequate to provide certain services desired by business and residential customers, including Caller Identification (ACaller ID[®]), T1 services, Integrated Services Digital Network (AISDN[®]), and Digital Subscriber Lines (ADSL[®]). The Department docketed the matter as D.T.E. 99-77.

After notice duly issued, the Department conducted a public hearing⁽²⁾ and procedural conference in Athol on October 13, 1999. Verizon customers and elected officials testified at the hearing. Citizens and selectmen from neighboring towns, including Phillipston, Royalston, Orange, Warwick, and New Salem, voiced similar complaints about Verizon's service and sought to intervene in the proceeding.

On January 6, 2000, the Department issued an Order, on its own motion, to expand the scope of the investigation to include the five towns that sought intervention at the public hearing. Order to Expand Investigation, D.T.E. 99-77 (January 6, 2000). The Department also issued a new public notice in the investigation to permit intervention by other communities in the North Quabbin region of Massachusetts that expressed similar complaints about the quality of Verizon's service. Notice of Investigation, D.T.E. 99-77

(January 6, 2000). In response to the public notice, several towns individually requested intervention, and the Franklin Regional Council of Governments (AFRCOG[®]) petitioned for intervention on behalf of all 26 towns in Franklin County.⁽³⁾

On March 8, 2000, the Department granted intervenor status to the Franklin County towns and the Town of Petersham. The investigation thus came to involve 30 towns altogether (ATowns[®] or APetitioners[®]): Athol, Phillipston, Royalston, Petersham, and the Franklin County towns of Ashfield, Bernardston, Buckland, Charlemont, Colrain, Conway, Deerfield, Erving, Gill, Greenfield, Hawley, Heath, Leverett, Leyden, Monroe, Montague, New Salem, Northfield, Orange, Rowe, Shelburne, Shutesbury, Sunderland, Warwick, Wendell and Whately.

The Department also invited written comments in its original public notice of the Athol hearing. Written comments were submitted by the FRCOG; U.S. Representative John W. Olver (First District, Massachusetts); State Senator Stephen Brewer (Worcester, Hampden, Hampshire and Franklin Districts); State Representative Stephen Kulik (First Franklin District); State Representative John F. Merrigan (Second Franklin District); the Town select boards of Athol, Deerfield, Warwick, Orange, New Salem and Wendell; the Millers River Community Development Corporation; and a number of citizens and business owners from Athol, Orange and Warwick. The FRCOG, Senator Brewer and the Towns of Orange, Warwick, Wendell, Deerfield and New Salem also submitted reply comments on Verizon's responses to the Department's information requests.⁽⁴⁾ In addition to the public hearing testimony, the evidentiary record consists of Verizon's responses to information requests.⁽⁵⁾

B. ISSUES

The Athol Petition alleges the Apractices, equipment, appliances and services[®] of Verizon to be Aunjust, unreasonable, improper and inadequate[®] in violation of G.L. c. 159, ' 16. Specifically, Athol and the intervening Towns stated the following concerns: (1) that Verizon's existing telecommunications infrastructure is Aunreliable,[®] that service quality is generally poor, and that there have been specific incidents of outages (FRCOG Petition at 1;

Tr. at 13, 60-63); (2) that Verizon's Aantiquated[®] central office switching stations (ACOs[®]) are Aincapable of providing services necessary for [conducting] business in this telecommunications age,[®] i.e., high-speed data services in general and specifically ISDN, T1 services, DSL and Caller ID with Name (Athol Petition; Tr. at 40); and (3) that Verizon is discriminating against the Towns in deployment of equipment and services, putting the region at an unfair economic and educational disadvantage, and requiring local customers to pay disproportionately high prices to access telecommunications services available at lower cost elsewhere in the state (Athol Petition; FRCOG Petition at 1; Tr. at 13, 40, 45). The Town of Athol⁽⁶⁾ alleges that, by failing to make investments to provide telecommunications equipment and services that Verizon provides to other communities in Massachusetts, Verizon is Awillfully discriminating[®] against local residents

and Asubject[ing] them to undue and unreasonable prejudice and disadvantage,® in violation of G.L. c. 159, ' 1⁽⁷⁾ and 47 U.S.C. ' 202⁽⁸⁾ (Athol Petition).

In this Order, the Department addresses the Towns= concerns as follows: (1) Section IV addresses quality of Verizon=s telephone service in the region; and (2) Section V addresses Verizon=s telecommunications infrastructure, including provision of switch technology, desired service features,⁽⁹⁾ and high-speed⁽¹⁰⁾ and advanced telecommunications services⁽¹¹⁾ to the Towns.

II. STANDARD OF REVIEW

The Department=s standard to determine the adequacy of the Company=s service to its customers is set forth in G.L. c. 159, ' 16, which states in pertinent part:

If the [D]epartment is of the opinion, after a hearing ... that the regulations, practices, equipment, appliances or service of any common carrier are unjust, unreasonable, unsafe, improper or inadequate, the [D]epartment shall determine the just, reasonable, safe, adequate, and proper regulations and practices thereafter to be in force and to be observed, and the equipment, appliances and service thereafter to be used, and shall fix and prescribe the same by order to be served upon every common carrier to be bound thereby

Before making such order, the [D]epartment shall consider the relative importance and necessity of the changes in any specific regulations, practices, equipment and appliances proposed to be included therein and of any other changes which may be brought to its attention in the course of the hearing, the financial ability of the carrier to comply with the requirements of the order, and the effect of the carrier=s compliance therewith upon its financial ability to make such other changes, if any, as may be deemed by the [D]epartment of equal or greater importance and necessity in the performance of the service which the carrier has professed to render to the public.

Thus, the Department must first determine whether the Company=s practices, equipment, or service to the Towns do not meet the statutory requirement, and then consider the cost of any remedy and its impact on the Company=s financial ability to provide service to

the public. See New England Telephone and Telegraph Company, D.P.U. 89-300, at 289-90 (1990) (ANET); Mission Hill, D.P.U. 96-30, at 2-3 (1997).

III. BACKGROUND ON CENTRAL OFFICE SWITCHING EQUIPMENT

The Town of Athol and intervenors allege that the antiquated switching station or CO servicing Athol, and Verizon's inadequate equipment, appliances and services are responsible for poor quality telephone service and preclude access, or at least affordable access, to certain service features and functions and to high-speed telecommunications services (Athol Petition; Tr. at 13-15, 40-46).

At the time it filed its petition, the Town of Athol was served by a DMS-10 type switch at the town's central office switching station.⁽¹²⁾ In June 2000, as Verizon had projected at the public hearing, the DMS-10 switch that was the subject of the town's original complaint was replaced by a DMS-100 switch (Exh. DTE 3-4; Tr. at 18). Services available from the new switch include locally-served⁽¹³⁾ ISDN (basic rate or AISDN-BRI, and primary rate or AISDN-PRI), Caller ID with Number and Name, and Call Answering (voice mail) services (Exhs. DTE 1-3, 3-4). Verizon made DSL service available in the Athol exchange in March 2000 (Exh. DTE 1-3).

The intervening towns, meanwhile, are served by various types of switches at several different central office locations. A listing of CO switching stations serving the towns involved in this proceeding is detailed in the attached Table 1 (See Exh. DTE 3-1, Supp.). Except for two DMS-10 host switches in the Towns of Orange and South Deerfield, the host or remote switches serving the remaining Towns provide the same services as the DMS-100 switch in Athol (Exh. DTE 1-4).

IV. SERVICE QUALITY

A. Overview of Service Quality Standards

The Department has previously set service quality standards for the Company in its Orders in NET and D.P.U. 94-50 (1995) (Price Cap Order). Verizon operates under price cap regulation. See Price Cap Order, D.P.U. 94-50. The price cap plan includes a Service Quality Index (ASQI) that provides the Company with an incentive to maintain service quality, or face substantial financial penalties.⁽¹⁴⁾ Id. at 229-238. The Department requires that the Company file monthly service quality reports. Id. at 237 n.135. The Department directed that, in the monthly reports,⁽¹⁵⁾ the Company report major service outages to the Department. Id. The Company defined a major service outage⁽¹⁶⁾ in Mission Hill as any single or multiple cable failure (toll, trunk or exchange) that results in 200 or more pairs⁽¹⁷⁾ out of service. Mission Hill, D.P.U. 96-30, at 15. The Department also ordered that the Company revise its tariff to comply with its practice of providing bill credits to residential customers after a service outage lasting 24 or more hours. Mission Hill, D.P.U. 96-30-A, at 16.

The Company records the number of customer trouble reports per hundred lines (ARPHL⁽¹⁸⁾) to provide meaningful comparisons for the various COs in Massachusetts. NET, D.P.U. 89-300, at 297. The Wire Center Report included in Verizon's monthly service quality report shows the RPHL for each CO in Massachusetts. Id. at 299. The current threshold⁽¹⁹⁾ for the Customer Trouble Report Rate is 4.0 RPHL. The types of troubles reflected in the Wire Center Report include transmission problems, such as cross-talk and slow dial tone. Id. at 321. As of December 2000, the Company had met or exceeded statewide SQI benchmarks established in the Price Cap Order for 64 consecutive months. Verizon-Massachusetts Quality of Service Report December 2000, January 29, 2001, at 1.

B. Service Quality Issues

1. General Complaints

The Petitioners complain of generally poor, unreliable telephone service due to what they call inadequate and outdated equipment (FRCOG Petition; Petersham Petition; Tr. at 13, 22, 24, 25, 36, 41, 46, 51-52, 56, 60-63, 95, 96-97). Descriptions of service quality problems included poor Aline quality,[@] faulty connections, and noise and static on the line (Northfield Petition; Buckland Petition). The Petitioners further complain of unsatisfactory responses from Verizon in remedying service problems, including delays in promised upgrades. Company responses that the problems were not due to Verizon's lines, and failure to give credits or adjustments for service problems (Tr. at 25, 27-28, 34, 60-63, 70, 82).

Verizon stated that any information on specific customer bill adjustments is not readily available, but that the Company's standard procedure is to automatically credit customers' accounts if they experience a service outage lasting more than 24 hours (Exh. DTE 1-8). See also Mission Hill, D.P.U. 96-30-A, at 16. Verizon indicated that it had not received or sent correspondence regarding service quality issues affecting the Towns of Royalston, Petersham, Ashfield, Bernardston, Buckland, Charlemont, Colrain, Conway, Deerfield, Erving, Gill, Hawley, Heath, Leverett, Leyden, Montague, Monroe, New Salem, Northfield, Rowe, Shelburne, Shutesbury, Sunderland, Wendell, or Whately (Exhs. DTE 1-5, 3-6(c)).

The Company provided copies of its November 1999 responses to particular service quality complaints in Warwick and Phillipston (Exh. DTE 1-5). In their comments subsequent to Verizon's information request responses, the Petitioners make no further mention of service quality issues (see Comment Letters).

2. Specific Complaints

a. Greenfield Area

In petitions to intervene in this proceeding, the Towns of Ashfield, Buckland, Colrain and Montague mentioned a specific eight-hour service outage. Verizon reported that the outage, affecting Ashfield, Bernardston, Buckland, Claremont, Colrain, Millers Falls, Montague, Northfield, Shelburne Falls and Turners Falls, on November 8, 1999, was due to the severance of a fiber optic cable that connected the Greenfield host switch to several remote switches (Exh. DTE 2-5). Customers served by the remote switches were not completely without service, because they could call within their own exchanges (id.). The cable was cut at 2:20 p.m., November 8, and was repaired by resplicing by 12 a.m., November 9 (id.). Verizon added that it notified state E911 officials about the outage, and, to prevent a similar occurrence, split E911 circuits between two diverse routes (id.). Furthermore, it began laying backup fiber optic cable as an alternate connection for the inter-switch circuits, so that a break in a single cable would no longer cause a service outage (id.).

b. Warwick

Residents and selectmen from the Town of Warwick testified at the hearing to service quality problems affecting local and long distance calls. They described Astatic® problems and a Swiss cheese effect,® in which callers would only hear every other word, or calls would be broken up or cut off, including connections to the Internet (Tr. at 27-28, 34-35, 69-70, 72-74, 83, 91-92). The selectmen expressed concern that the poor connections could affect 911 calls and town hall business (id. at 34-35). The residents indicated that the service quality problems persisted from approximately September 1999 through the time of the hearing in October 1999, particularly affecting evening calls, and that Verizon's response was slow and inadequate (id. at 25, 69-70, 72, 74, 83). Some residents stated that they had not received rebates or credits for service interruptions (id. at 70, 74).

Verizon reported that, in response to complaints at the public hearing from the Town of Warwick, it provided 176 customers a one-month adjustment for service problems caused by electrical interference to its 10-mile cable feed serving those customers (Exh. DTE 1-5). The Company added that it installed special equipment that solved the problems (Exhs. DTE 1-5, 3-5). The Company then compared the six-month period of July to December 1999 to the subsequent six-month period, January through June 2000, and found the number of troubles reported on the affected lines had decreased almost 80 percent after the special equipment was installed (Exh. DTE 3-5). The Company stated that troubles reported in the January through June 2000 period were due to occurrences other than the electrical influences that Verizon indicated were the source of the earlier complaints (id.).

c. Phillipston

Several residents of Phillipston reported at the hearing that they experienced frequent loss of phone service, sometimes for days at a time (Tr. at 29, 49, 78, 81-82, 93). They also stated that the Company gave them free service for certain months due to the

outages (id. at 29, 93). One resident said she had a problem getting a rebate or credit, and that she had been billed for Caller ID and Call Waiting services for a year, when she did not actually have the services (id. at 81-82).

As a result of the Phillipston service issues raised at the hearing, Verizon stated that it investigated and provided 16 customers with a one-month adjustment (Exh. DTE 1-5). The Company reported that the problems were due to sporadic outages on a copper circuit in the digital loop carrier (ADLC®) system connecting Phillipston to the Athol CO (id.; Exh. DTE 2-4). The connection had been placed temporarily while the Company was upgrading loop facilities in the area to fiber optics to accommodate access line growth (Exhs. DTE 1-5, 2-4). Verizon stated that the installation of fiber optic facilities, which was scheduled for completion in April 2000, would also solve the service outage problem for the affected customers (Exhs. DTE 1-5, 2-4).

Regarding the customer who stated that she was billed for services she did not receive, Verizon stated that company records showed that Call Waiting and Caller ID appeared on the customer's bill and were regularly paid (Exh. DTE 1-7). The Company's monthly bills include a notice that customers should contact the Verizon business office if they question any of the charges on their bill (Exh. DTE 1-8). The Company had no records of the customer reporting a problem with the services, and subsequent to the hearing, Verizon confirmed with the customer that the features were working (Exh. DTE 1-7). The Company added that, as a goodwill adjustment, it credited her account with the equivalent of one year's worth of Caller ID service (id.). Verizon stated that it was not aware of any circumstances in which any customer paid for a service the customer was not provided (Exh. DTE 1-8). Verizon noted that it verifies provisioning of services to the extent possible, but some services, such as Caller ID, require customer-provided equipment to operate, and Verizon can only verify that the proper software features within the switch are in place (id.).

C. Analysis and Findings

Under the price cap plan, the Department has established specific service quality standards that Verizon must meet. These service quality measurements and standards were developed after careful and comprehensive review, with input from Verizon, the Massachusetts Attorney General, and other telephone companies. Therefore, in addition to reviewing the evidence submitted by the petitioning communities and members of the public, we will also evaluate the Company's service in these 30 communities pursuant to our service quality standards and reports.

The Department has previously stated that telephone service is inappropriate if some parts of the state receive different levels of service quality than other parts of the state. NET, D.P.U. 89-300, at 381. We do not find that to be the case with regard to the petitioner Towns. The Towns' evidence to support their allegations of poor service quality in the region consisted of descriptions of certain incidents of outages or service interruptions. These incidents demonstrate that there were service quality problems and

that these problems were disruptive to Verizon's customers, but the evidence indicates that the problems, while serious for the affected customers, were limited in scope and duration and do not establish that there was a generalized, continuing service quality problem. Next, we turn to the monthly reports that Verizon is required to submit to the Department for an overview of the service quality in the region.

An examination of the Wire Center Reports for the Marlboro and Springfield Areas⁽²⁰⁾ between the months of January 1999 and June 2000 shows very few incidences of RPHL exceeding the 4.0 threshold for the COs serving the Towns. During that time period, which encompasses the period of service quality complaints from the Towns, only three of the

COs serving the 30 Towns exceeded the 4.0 RPHL threshold: Amherst (5.12 RPHL in January 1999); Charlemont (6.68 RPHL in May 2000); and Petersham (6.73 RPHL in June 2000).⁽²¹⁾ These three incidences of RPHL exceeding the threshold, lasting only one month each, do not coincide with any particular incidents reported in the Towns. None of the Athol area or Franklin County COs was among the ten wire centers with the highest trouble report rate for the time period, and the trouble report rates for the Towns were comparable to those statewide (see Exh. DTE 3-8). Thus, objective service quality reports do not establish that there is an ongoing service quality problem in the Athol and Franklin County region of the state or that service is comparatively worse in the Towns than other areas of the state. We find that Verizon met the overall service quality standards required by NET and the Price Cap Order in the Towns for the time period of this investigation.

The record, particularly the October 1999 public hearing testimony, shows that a number of the Towns experienced some specific service quality problems in the form of outages or static that required prompt resolution by Verizon. In response to the complaints raised at the hearing, Verizon took action to resolve the service-related problems and provide bill credits to customers where applicable (see Exhs. DTE 1-5, 1-7, 1-8). The Greenfield service outage was an isolated incident that the Company repaired within eight hours. As a result of the outage, Verizon installed backup cable to prevent a recurrence. Verizon demonstrated that, in response to complaints at the hearing of other sporadic outages, it investigated and remedied electrical interference to cable in Warwick, replaced cable in Phillipston, sent explanatory letters to affected customers, and provided them with bill credits.

The Department has stated that it will find telephone service inadequate where the current services . . . substantially impair the ability of a community to undertake commonly required economic, social and public health and safety functions.@ See Mission Hill, D.P.U. 96-30, at 8; Franklin County/New England Telephone and Telegraph Company, D.P.U. 454, at 17. We find that the approximately one month of serious service problems in Warwick did impair the community and was an unacceptably long period of time for customers to be without adequate telephone service. However, Verizon responded to these problems as soon as they were raised at the public hearing and resolved them by installing special equipment; thus the service is no longer inadequate (Exhs. DTE 1-5, 3-5).

We find that Verizon took reasonable steps to identify the sources and remedy the problems raised by the Petitioners, and that the Company's repair projects and bill credits were an adequate and reasonable response to the customers' quality of service complaints. In their Comment Letters on Verizon's information request responses, the Petitioners make no further complaints about service quality problems or Verizon's responses to the problems raised in the original petitions. Remediation of earlier complaints had already occurred or was underway. As the Towns' Comment Letters were the occasion to voice continued dissatisfaction, there is an inference to be drawn from their failure to raise new, or to renew old, service quality complaints. Verizon's corrective actions have evidently remedied the problems raised by the complainants; and we conclude that the Company's actions collectively ought to, and objectively do so, remedy them. Therefore, we do not find Verizon's service quality to be unjust, unreasonable, unsafe, improper or inadequate under G.L. c. 159, ' 16.

While we do not find that the incidents described amount to a region-wide pattern of poor service, we recognize that the evidentiary record in a proceeding of this scope is insufficiently developed to address every individual customer's specific complaints. Customers whose particular concerns have not been identified separately and resolved in the course of this investigation or who continue to experience service quality problems should contact the Department's Consumer Division, whose processes are suited to resolution of individual complaints.⁽²²⁾ We also direct Verizon periodically to contact the municipal authorities in the petitioner Towns to ensure that discontent over service does not accumulate to this level again but is addressed and resolved before Towns are compelled to invoke G.L. c. 159, ' 16 in order for Verizon to act to correct service problems.⁽²³⁾ In addition, we direct Verizon to supplement its monthly service quality reports with a separate section identifying service quality measures for the 30 communities in this docket, so that the Department will be alerted quickly if the data indicate a recurrence of service problems in these communities. This supplement shall be included in the monthly service quality reports for twelve months following the date of this Order.

V. TELECOMMUNICATIONS INFRASTRUCTURE

A. Towns' Complaints

In addition to expressing concerns about the quality of existing service, the Petitioners assert that Verizon's practices, equipment, appliances and service are inadequate pursuant to G.L. c. 159, ' 16 because Verizon has failed to invest in state-of-the-art telecommunications infrastructure in the region (Athol Petition; FRCOG Petition at 1; Tr. at 13, 40, 45). The Towns contend that the Company's switching stations are not equipped to provide certain service features, ISDN, T1 services and DSL⁽²⁴⁾ (Athol Petition; FRCOG Petition at 1; Deerfield Petition; Montague Petition; Colrain Petition; Petersham Petition; Shutesbury Petition). Other Towns simply contend that Verizon does not offer adequate high-speed data transfer services (Northfield Petition; Leverett Petition; Ashfield Petition; Buckland Petition; Rowe Petition).

The Towns further allege that Verizon has violated G.L. c. 159, ' 1 and 47 U.S.C. ' 202 by discriminating against the region in deployment of equipment and services (Athol Petition; Tr. at 40-46). They contend that while Verizon has not made the investments to provide their communities with the infrastructure necessary for high-speed and advanced services or desired service features and functions, Verizon has offered these services in other parts of the state, creating a digital divide and placing businesses and residents of Athol and the surrounding Towns at a competitive disadvantage (Athol Petition; Bernardston Petition; Montague Petition; Ashfield Petition; Buckland Petition; Shutesbury Petition; Rowe Petition; Tr. at 13, 14, 40, 42, 51, 55, 59, 63, 85, 86-87). Some residents assert that local businesses have struggled or failed and other business are deterred from locating in the area because of inadequate telecommunications services (Athol Petition; Montague Petition; Buckland Petition; Tr. at 56, 65-68, 80, 97-99). The Petitioners also allege that they pay a disproportionately high price and get fewer services for their telecommunications dollar than residents in more populous, metropolitan areas of Massachusetts (FRCOG Petition; Shutesbury Petition; Tr. at 14, 15, 42, 45-47, 51, 53-55, 63, 80).

In its responses to these complaints, Verizon noted its replacement of the Athol DMS-10 switch with a DMS-100 switch. The Company stated that, although it plans an upgrade of the DMS-10 switches in Orange and South Deerfield to add line and trunk capacity, it does not have current plans to convert these two switches to DMS-100 models (Exhs. DTE 2-1, 3-7). The Towns served by these switches⁽²⁵⁾ state in their Comment Letters that Verizon's plan provides inadequate resolution of their communities' complaints and is discriminatory because it denies them services available elsewhere and forces them to pay higher prices for some services, specifically ISDN. See Orange Letter, Deerfield Letter, Warwick Letter, Wendell Letter. The Towns of Orange and Warwick allege that the DMS-10 switches are old, outmoded technology unable to support the services the community and Orange's new industrial park needs. According to the Towns, Verizon's decision:

puts the Town in the position of lacking services to draw in industry and business, and listening to Bell Atlantic saying, 'We will not deliver those services because there is no demand.' Orange won't grow to need new connections when only outdated technology and services are available. If this decision stands, Orange is left as one of four communities (also Wendell, Warwick and New Salem) doomed to poor service, which was the basis for filing our original complaint.

Orange Letter at 1. The Town of Warwick contends that replacement of the Orange DMS-10 switch with a DMS-100 switch is clearly a viable option, and that Verizon's retention of the DMS-10 switches might further put off the affected Towns' access to the telecommunications services they seek. Warwick Letter at 1.

The Towns served by the Orange and South Deerfield COs also contend that upgrading, rather than replacing, the DMS-10 switches means that ISDN subscribers in the Towns, served on a foreign-exchange basis, must continue to pay higher rates than subscribers

who have access to locally-served ISDN. See Orange Letter at 1; Warwick Letter at 1; Wendell Letter at 1. The Town of Wendell argues that A[m]aking the residents and companies in these communities pay more for these services because Bell Atlantic does not want to upgrade their equipment is unjustified and unfair.@ Wendell Letter at 1. The Town of Orange alleges that Verizon's decision not to replace the DMS-10 switch amounts to commercial discrimination because Orange residents, with the lowest per capita income in Franklin County, must pay more for services Aprovided at less cost in wealthier communities.@ Orange Letter at 1-2.

B. Verizon's Response

1. Central Office Switches

At the time it filed its petition, the Town of Athol was served by a DMS-10 switch. While public hearing participants complained of delays in Verizon's promised switch replacement, the Company in fact met the rescheduled conversion date of June 24, 2000⁽²⁶⁾ (Exh. DTE 3-4; Tr. at 18, 41). At the hearing, Verizon's representative stated that the DMS-100 switch would provide the Athol exchange with Aall of the features@ that were lacking according to the Town's petition (Tr. at 19). Services available from the new switch include locally-served ISDN-BRI and ISDN-PRI, Caller ID with Number and Name, and voice mail (Exhs. DTE 1-3, 3-4). The Town of Athol also complained in its petition that Verizon did not provide DSL in the town; however, Verizon began offering DSL service in the Athol exchange in March 2000 (Exh. DTE 1-3). The Company also supplied August 24, 1998 correspondence detailing Aongoing investments in the ... telecommunications system@ in Athol and the municipalities served by the Athol CO, including upgrades of certain loop facilities to fiber optics and plans for the switch replacement (Exh. DTE 1-5). Verizon projected these investments to be in excess of \$3.2 million (id.).

Verizon states that, except for the two DMS-10 host switches in Orange and South Deerfield, the host or remote switches serving the remaining Towns provide the same services as the DMS-100 switch in Athol, and the Company has no plans to replace or upgrade them (Exh. DTE 1-4). The Company states that Athe requested services are currently available@ in the areas served by these switches (id.).

Verizon noted at the public hearing that it began conversion of all its switches in Massachusetts to digital switches in the mid-1980s and completed the conversion in 1997 (Tr. at 19). In the process, 28 DMS-10 switches were installed, including the one in Athol in 1990 (id.). In June 2000, the Athol switch became the second of the DMS-10 switches to be replaced with a DMS-100 switch⁽²⁷⁾ (id.).

Verizon plans to upgrade the Orange and Deerfield DMS-10s, because the line and trunk capacity of those switches is forecast to exhaust in 2001 (Exh. DTE 2-1). Work to expand the switches will begin six to nine months prior to the anticipated exhaust dates, using an upgrade package that was scheduled to be introduced by the manufacturer Nortel in November 2000 (Exhs. DTE 2-1, 3-7(a)). According to Verizon, the upgraded DMS-10s will have double the previous switch capacity;⁽²⁸⁾ however, they will not include service features such as Caller ID with Name or locally-served ISDN (Exh. DTE 3-7(b)). Verizon states that the switches are adequate to meet the telecommunications needs of the communities and are operating at very high quality-of-service levels with minimum levels of call blocking and occurrences of slow dial tone[@] (id.).

2. Service Offerings

Verizon supplied the following information regarding its service offerings in the Towns. Verizon provides ISDN services in the Towns on either a local or virtual (foreign exchange) basis. Local ISDN is provided directly from a customer's serving office to their location, whereas virtual ISDN is served from a different (foreign) CO and travels through Verizon's interoffice facilities (AIOF[@]) network (Exh. DTE 2-3). In Towns served by the DMS-10 switches in Orange and South Deerfield, enhanced data services such as ISDN are available only on a virtual, or foreign exchange, basis (Exhs. DTE 1-4, 2-2). ISDN is also available on a virtual basis in Monroe (Exh. DTE 3-6).

The service features and locally-served ISDN available from the Athol DMS-100 switch are likewise available for Towns served by the DMS-100 switch in Greenfield and its remotes: Leyden, Ashfield, Bernardston, Buckland, Colrain, Gill, Montague, Northfield, Rowe, Charlemont, Erving, Hawley, Heath, Shelburne (Exhs. DTE 1-3, 1-4, 2-2, 3-4, 3-6). ISDN is also available on a local basis in Conway, Leverett and Shutesbury (Exhs. DTE 2-2, 3-6). In addition, Verizon indicated that it offers other high-speed data services such as digital design or DDSII services, Frame Relay, and different types of T1 services (SUPERPATH Service, FLEXPATH Digital PBX Service, and ISDN-PRI) throughout the state (Exhs. DTE 1-6, 2-2).

Verizon stated that the ordering process and available service and feature capabilities are identical for local and virtual ISDN. The price for ISDN-BRI is the same for both local and virtual arrangements. However, the price for virtual ISDN-PRI is higher than local service with the same features and higher for some customers than others because of the need to route the service through the IOF network (Exh. DTE 2-3). This is consistent with Verizon's statewide pricing for T1 services (Exhs. DTE 1-6, 2-3). Pricing for all T1 services is distance-sensitive, with the recurring rate for the service based, in part, upon the overall length of the circuit, including the distance from the customer's location to the local CO and the distance traveled through the IOF network, if any (Exh. DTE 1-6). Where ISDN-PRI is not available from the local CO switch, the cost to the customer includes a charge for IOF mileage from the local CO to the office where the service originates (Exh. DTE 2-3). Customers the same distance from the serving CO are charged the same rate; i.e., a customer located one mile from the Athol office and a customer

located one mile from the Cambridge office are charged an equal price for the same service. Rates may vary based on specific features included with the T1 service (Exh. DTE 1-6).

According to Verizon, it introduced DSL in Massachusetts in March 1999.⁽²⁹⁾ In March 2000, Verizon made DSL service available in Athol, Phillipston and Royalston as well as the Amherst, Greenfield and Montague exchanges (Exhs. DTE 1-3, 1-4, 3-3). In addition, the Company expected to offer DSL service in the Turners Falls exchange (serving the Town of Gill) by the end of 2000 (Exh. DTE 3-3). The Company stated that it had not developed plans for DSL deployment⁽³⁰⁾ beyond the end of 2000, and thus could not provide any plans for the remaining Towns (*id.*). In addition, Verizon noted that DSL services may already be available in some of these communities from competitive local exchange carriers that focus primarily on DSL and ISDN services (Exh. DTE 1-4).

As noted in the FCC's Second Report, DSL is a distance-sensitive technology that works solely over copper phone lines.⁽³¹⁾ Second Report at && 35-40. Verizon's DSL service is currently only available to customers who are served over copper wires and reside within 12,000 to 18,000 feet from their local Verizon serving office. Phase III Order, D.T.E. 98-57, at 7. However, DSL technology is evolving at a fast pace, and distance limitations may soon disappear. *Id.* at 12, 14. Thus, a customer who is not able to receive the service today may be able to receive it in the future as the technology advances.

Regarding promotion of available services, Verizon states that it actively advertises its products and services by means including print and broadcast advertising, billing inserts, press releases, and trade shows (Exh. DTE 3-2). As these efforts are geared for a broad audience, they are not focused on communicating the availability of a product or service within a specific exchange or community, except for certain targeted press releases (*id.*). Customers are encouraged to contact the Verizon business office if they have questions about the availability of certain products or services (*id.*). Verizon reported that its representatives attended a meeting with representatives from Franklin County and committed to providing the meeting sponsors with a list of the high-speed data services currently available in their area (*id.*).

C. Franklin County Initiatives

The FRCOG reported in its newsletter that it hosted a meeting with Representative Stephen Kulik which allowed area businesses to review Verizon's responses to their complaints in this proceeding and hear directly from the Company about plans for infrastructure and service improvements.⁽³²⁾ The FRCOG also held a recent meeting with State Senator Stanley Rosenberg (Hampshire and Franklin Districts) and the Massachusetts Community Network (AMCN®)⁽³³⁾ regarding MCN's plans for delivering high-speed telecommunications services to local municipalities and schools.⁽³⁴⁾ The FRCOG reported that those plans include provisions for businesses located near schools or town centers receiving MCN's services to eventually have the opportunity to purchase those high-speed services.⁽³⁵⁾

Also during the course of this investigation, the FRCOG joined with the Massachusetts Technology Collaborative (AMTC[®]) in a project to expand high-speed telecommunications services in Greater Franklin County. Modeled after Berkshire Connect and Cape Cod

Connect,⁽³⁶⁾ Franklin County Connect aims to bring competitive, affordable telecommunications services to the region, beginning with an inventory of the region's current telecommunications infrastructure and assessment of the short and long term needs for its development and growth.⁽³⁷⁾

In December 2000, Verizon announced its intention to invest \$400,000 to expand and upgrade the telecommunications network in Franklin County.⁽³⁸⁾ The investment involves plans to install more than ten miles of fiber-optic cable from Shelburne Falls, through Buckland, to Ashfield. According to Verizon, the project, to be completed by the end of 2001, will deliver Ahigh quality telephone services along with high-capacity/high-speed voice and data services[®] and Aprovide additional capacity, reliability and survivability in the Verizon network.^{®(39)}

D. Analysis and Findings

The Towns contend that Verizon's practices, equipment, appliances, and services are Aunjust, unreasonable, improper or inadequate[®] because Verizon has not made infrastructure investments to offer desired service features and high-speed services. However, under existing Department policy, Verizon is not required to Aroll out[®] service features, high-speed services, or advanced services to all communities in the state at the same time. See Price Cap Order, D.P.U. 94-50, at 135-139. Since 1985, the Department has consistently promoted the development of competition in all telecommunications markets in Massachusetts. Id. at 105. An inherent feature of competitive markets is that investment will be targeted to demand and financial returns B both of which may, and often do, vary across geographic regions. Also, in a competitive market with rapid changes in technology, such as telecommunications, infrastructure investments are highly speculative.

The Department determined in the Price Cap Order that price cap regulation promoted the Department's telecommunications goals,⁽⁴⁰⁾ in large part because, under a price cap, the risk of investment shifts from ratepayers to shareholders. In the Price Cap Order, the Department noted that, A[i]t is in [the Company's] best interests . . . to modernize its network in such a way as to respond to customer demand at least cost.[®] Id. at 137 n.86. Therefore, the Department determined in the price cap proceeding that it would refrain from regulatory mandates or approvals for Verizon's prospective infrastructure investments. Id. at 137. The Department reasoned in the Price Cap Order that it would not evaluate the prudence of the Company's infrastructure investment and deployment plans because:

particularly in the rapidly evolving telecommunications industry, we do not believe that it would be appropriate for the Department to determine whether a prospective investment is reasonable . . . we are concerned only with promoting through sound regulatory policy the proper investment environment to encourage efficient development, by NYNEX⁽⁴¹⁾ and/or other companies, of an advanced telecommunications network in Massachusetts.

Id. This policy acknowledges that, as new technologies emerge and new providers enter the market, it is market forces, not regulation, that will determine which technologies will be best suited to serve consumers. A competitive market encourages the introduction and exploitation of technological innovations,[@] promotes greater sensitivity to specific customer demands[@] and results in an increase in the diversity of service offerings and options available to telecommunications users.[@] Intra-LATA Competition Order, D.P.U. 1731, at 25.

The price cap plan⁽⁴²⁾ insulates customers from the financial risks of the Company's investment decisions. While Verizon has the discretion to determine when and where it makes infrastructure investments, it cannot recover from ratepayers the costs of imprudent investments. Id. The Department's policy ensures that we do not require Verizon to adopt and deploy, and require consumers to pay for, technology that may not prove to be the most cost-effective, appropriate or advantageous technology.⁽⁴³⁾ It is in keeping with the policies of the FCC and the Telecommunications Act to encourage deployment of advanced telecommunications capability on a reasonable and timely basis[@] by utilizing, in a manner consistent with the public interest, convenience and necessity, price cap regulation, regulatory forbearance, measures that promote competition in the local telecommunications market, or other regulating methods that remove barriers to infrastructure investment.^{@(44)} Therefore, we reiterate our conclusion in the Price Cap Order that we will not make a determination regarding the reasonableness of Verizon's infrastructure investment choices.

Furthermore, the Department's universal service policy requires that a carrier provide affordable access to the basic telecommunications network. See Intra-LATA Competition Order, D.P.U. 1731, at 21. In other words, at this time universal service[@] does not include access to non-basic services, including service features, high-speed services and advanced services. Therefore, we do not find that lack of non-basic services substantially impair[s] the ability of a community to undertake commonly required economic, social and public health and safety functions[@] so as to constitute inadequate service under G.L. c. 159, ' 16. Mission Hill, D.P.U. 96-30, at 8. Nor do we find that lack of non-basic services constitutes discrimination pursuant to G.L. c. 159, ' 1 and 47 U.S.C. ' 202. These statutes do not prohibit discrimination that has a rational basis, but rather, discrimination that is unjust,[@] undue[@] or unreasonable.[@] See, e.g., American Broadcasting Companies, Inc. v. F.C.C., 663 F.2d 133, 138 (D.C. Cir. 1980) (whether discrimination is unjust or unreasonable includes such considerations as cost differentials

and competitive necessity). Just as the FCC notes that its definition of advanced telecommunications capability will change with technology, we note that the concepts of what is commonly required⁴⁴ and what constitutes a basic⁴⁵ service may similarly evolve. See Second Report at ¶ 14. It is important to keep in mind, however, that expanding the definition of universal service to include investment and services where revenues are not sufficient to recover costs has the potential to raise costs for all customers because a regulatory mandate carries with it an obligation to ensure that all costs are recovered.

We find that Verizon's pricing and deployment of equipment and services is rationally linked to the current state of technology, real cost differences, and the competitive telecommunications market. For example, Verizon has demonstrated that ISDN pricing is dependent upon distance from a customer's central office and that DSL deployment is subject to certain technological limitations. Hence, any perceived disadvantage or discrimination is not unjust, undue, or unreasonable within the meaning of the statutes.

1. Existing Services

a. Switching Stations and Service Features

The subject of Athol's initial petition, the allegedly inadequate Athol CO switch, has been replaced with a new DMS-100 switch, providing the service features and functions and locally-served ISDN that residents of Athol, Phillipston, Royalston and Petersham requested. The Athol switch became the second of 28 DMS-10 switches in the state to be converted. Moreover, despite the Towns' arguments that their switches are antiquated,⁴⁶ we do not find the age of the Towns' switches to be dispositive. The pertinent enquiry is whether, the capabilities of the switches provide adequate services. The majority of the intervening Towns are already served by switches equipped to provide the same service features and functions as the new Athol switch. Therefore, we do not find that the region as a whole is disadvantaged by the current switching stations or inability to obtain desired service features from Verizon.

There remain two COs that are not equipped to provide certain service features and ISDN on a local basis, in Orange and South Deerfield.⁽⁴⁵⁾ Verizon reports that these DMS-10 switches operate at a high level of service quality; that ISDN is available on a virtual basis in the area served by these COs; and that the Company plans to upgrade these switches in 2001 to provide additional line and trunk capacity. The Towns served by these switches contend that the upgrade is an inadequate response to their communities' telecommunications needs, and the Comment Letters focused primarily on this particular issue. The record indicates that the DMS-10 switches provide adequate service quality, and that the upgrade will provide some improvements in service. The lack of desired service features and locally-served ISDN may be disadvantageous to these Towns in comparison to other communities in the Commonwealth. However, not all technological features or upgrades can be introduced everywhere on the same schedule. Business judgment and investment decisions play a central role in deployment. The Department regulates but does not manage the Company. See New England Telephone

and Telegraph Co. v. Department of Public Utilities, 360 Mass. 443, 466-468, 483-484, 489 (1971) (interference with exercise of judgment by company business management is beyond Department's regulatory power and authority); Mystic Valley Gas Co. v. Department of Public Utilities, 359 Mass. 420, 428 (1971) (citing New England Telephone & Telegraph Co. v. Department of Public Utilities, 327 Mass. 81, 90 (1951): Aa public regulatory board cannot assume the management of a company and . . . interfere in matters of business detail with the judgment of its officers reached in good faith and within the limits of a reasonable discretion@).

The switch upgrade plan, like any infrastructure improvement plan of the Company, likewise falls within Verizon's business judgment. As stated above, the Department has declined to evaluate such investment decisions, noting that Athe [investment] commitments themselves are not part of the actual alternative regulatory methodology . . . for which the Department must make a determination of reasonableness.@ Price Cap Order,

D.P.U. 94-50, at 136.

b. High-Speed and Advanced Services

The Towns' complaints regarding high-speed services focus primarily on the limited availability of DSL and the pricing of ISDN-PRI. The evidentiary record indicates that ISDN-PRI is available in all of the Towns, although only on a virtual basis in a number of them. The information Verizon provided about its service offerings indicates that DSL is available in some of the Towns,⁽⁴⁶⁾ and that pricing of ISDN services is consistent with Verizon's pricing elsewhere in the state. Under the price cap, Verizon is required to charge geographically averaged rates for all its services; that is, the cost for any service is the same anywhere in the state. See Price Cap Order, D.P.U. 94-50. As Verizon noted, ISDN-PRI prices vary because pricing for such T1 services is distance sensitive, based on the need for service to travel through the IOF network. Services are identical, and, while some customers must pay higher prices due to distance from the CO, the pricing method reasonably discriminates based on cost differences that are a function of distance from the CO, and, in any event, is the same throughout the state. Likewise, availability of DSL is limited by certain factors, such as distance from the central serving office and the need to condition copper lines. As the Company explained, DSL service is independent of switch technology, and thus its availability is not linked to what the Towns characterize as Aantiquated@ switching stations. In addition, DSL is not a service that is state-jurisdictional, i.e., it is offered only through a federal tariff subject to the jurisdiction of the FCC as to rates, terms, and conditions of service. 2. Prospective Services

The Petitioners contend that market forces are insufficient to compel Verizon to make the same infrastructure investments in rural areas such as Athol and Franklin County as it does in more urban areas of the state (Tr. at 45). In its Second Report, the FCC acknowledges that, nationwide and within states, some consumers are inevitably gaining access to advanced telecommunications services before others, as Anew infrastructure

necessarily reaches some customers first and others only substantially later.@ Second Report at & 205. However, the FCC notes that to carry out the Telecommunications Act's mandate⁽⁴⁷⁾ to increase deployment of advanced telecommunications services to all Americans, it will continue to promote competition in the market for these services: A[W]e believe that competition, not regulation, holds the key to stimulating further deployment of advanced telecommunications capability.@ Id. at & 246.

We acknowledge that the current state of technology and the telecommunications market is such that some regions of the state will obtain advanced telecommunications services more quickly than others. The Towns have demonstrated strong desire to obtain improved telecommunications infrastructure and high-speed telecommunications services. However, we have long been committed to a competitive market as the best method to promote deployment of high-speed telecommunications services. Neither Verizon nor any other carrier has an obligation to provide these to any particular community within a stated period or by a specific date. See Price Cap Order, D.P.U. 94-50, at 135-139 (Department will not make determinations regarding prudence of local exchange carrier's infrastructure investment decisions). In a competitive market with rapidly changing technology, mandating particular investments would place the financial risk of these investments with ratepayers, instead of shareholders. Therefore, the Department relies on a policy of allowing the marketplace to dictate a company's investment decisions. Carriers will deploy finite capital in the form of new technologies and services in those areas of the state in which they believe they can make a profit, and then will use those profits to expand the rollout to other parts of the state. Lack of non-basic services does not substantially impair the ability of a community to undertake commonly required economic, social and public health and safety functions so as to constitute inadequate service under G.L. c. 159, ' 16. Mission Hill, D.P.U. 96-30, at 8. See Section V.D. Hence, disadvantage, if it exists, is not necessarily (and here, not in fact) undue or unreasonable discrimination by Verizon. Consequently, we find no violation of G.L. c. 159 ' 1 or 47 U.S.C. ' 202. We find insufficient basis for departure from Department policy to refrain from regulatory oversight of Verizon's business decisions regarding infrastructure investments.

We are concerned, however, with artificial, regulation-induced disincentives for competition in rural areas. The FCC has required that rates for interconnection and unbundled elements, which Verizon's competitors pay in order to compete against Verizon for telephone services, must be geographically deaveraged across at least three geographic zones to account for cost differences.⁽⁴⁸⁾ In Massachusetts, Verizon's network element rates are deaveraged across four geographic zones. See D.P.U. 96-73/74, 96-75, 96-80/81, 96-83, 96-94-Phase IV, at 60-62. On the retail side, however, Verizon charges the same rate for most services across the Commonwealth. For example, the residential dial-tone line rate and local unlimited service rate are the same for every customer in the Commonwealth. It is not surprising then, that facilities-based competition for telephone service will be concentrated in the geographic zones where network element costs are lower than the statewide rate. Because of this potential disincentive for competition in

rural areas, it may be necessary at some point to consider either allowing retail rates to be deaveraged or creating a state universal service fund in order to remove this disincentive.

We are encouraged by information that came to light in the course of this investigation that there are significant efforts underway to bring improved and advanced telecommunications services to the Athol and Franklin County region. As discussed above, Verizon does provide some high-speed services to most of the Towns, and Verizon noted that desired services may also be available from its competitors. See Section V.B.2. Verizon described its 1998-1999 improvements in fiber optic facilities in the Athol area and announced its intention to install fiber optic cable in Shelburne Falls, Buckland and Ashfield⁽⁴⁹⁾ (Exh. DTE 1-5). Like Berkshire County and Cape Cod, other more rural regions of the state where customers voiced concerns about insufficient access to telecommunications services, Franklin County has now joined with the MTC in the Franklin County Connect initiative to improve the region's telecommunications infrastructure.⁽⁵⁰⁾ Franklin County is also working with MCN, which plans to utilize Verizon's services, to bring affordable advanced telecommunications services to schools and municipalities and adjacent businesses.⁽⁵¹⁾

VI. CONCLUSION

Verizon has an obligation to provide its customers with service quality according to the standards set forth in statute as interpreted by NET and the Price Cap Order. As noted above, the record indicates that, in its services to the Petitioners, Verizon has met the service quality standards required by the Department. Any additional service quality problems experienced by individual customers may be brought to the attention of the Department's Consumer Division. The Company's obligation to provide services does not extend to providing service features, high-speed or advanced services, or any services beyond basic telephone service as regulated under the price cap plan. We reiterate our conclusion in the Price Cap Order that we will not make determinations regarding the prudence of Verizon's infrastructure investment decisions. Therefore, we do not find that Verizon's Apractices, equipment, appliances or service@ are Aunjust, unreasonable, unsafe, improper or inadequate@ pursuant to G.L. c. 159, ' 16.

VII. ORDER

Accordingly, after due notice, hearing, and consideration, it is

ORDERED: that the relief requested in the Petition of the Town of Athol and the Petitions to Intervene by the Towns of Petersham, Phillipston, Royalston and all of the Towns of Franklin County, to compel action by Verizon New England Inc. d/b/a Verizon-Massachusetts to correct practices, equipment, appliances and services, is hereby denied;

and it is

FURTHER ORDERED: That Verizon New England, Inc. d/b/a Verizon-Massachusetts provide to the Department, and the Towns of Orange, New Salem, Warwick, Wendell, Deerfield, Sunderland and Whately, a report on the projected exhaust dates of the DMS-10 switches in Orange and South Deerfield and the current status of the switch upgrades planned for the year 2001 by March 31, 2001; and it is

FURTHER ORDERED: That Verizon New England, Inc. d/b/a Verizon-Massachusetts report to the Department by July 31, 2001, its plan for periodically contacting the municipal authorities in the 30 Petitioner Towns; and it is

FURTHER ORDERED: That Verizon New England, Inc. d/b/a Verizon-Massachusetts supplement its monthly service quality reports with a separate section identifying service quality measures for the 30 Petitioner Towns. This supplement shall be included in the monthly service quality reports for twelve months following the date of this Order.

By Order of the Department,

James Connelly, Chairman

W. Robert Keating, Commissioner

Paul B. Vasington, Commissioner

Eugene J. Sullivan, Jr., Commissioner

Deirdre K. Manning, Commissioner

Table 1: Central Switching Office Locations and Types (Exh. DTE 3-1, Supp.)

Town	Switch Type (Host Switch)	Principal Serving CO Location
Athol	DMS-100	Athol
Phillipston	DMS-100	Athol
Royalston	DMS-100	Athol
Petersham	DMS Remote (Athol Host)	Petersham
Greenfield	DMS-100	Greenfield
Leyden	DMS-100	Greenfield

Ashfield	DMS Remote (Greenfield Host)	Ashfield
Bernardston	DMS Remote (Greenfield Host)	Bernardston
Buckland	DMS Remote (Greenfield Host)	Shelburne Falls
Charlemont	DMS Remote (Greenfield Host)	Charlemont
Colrain	DMS Remote (Greenfield Host)	Colrain
Erving	DMS Remote (Greenfield Host)	Miller's Falls (Montague)
Gill	DMS Remote (Greenfield Host)	Turners Falls (Montague)
Hawley	DMS Remote (Greenfield Host)	Charlemont
Heath	DMS Remote (Greenfield Host)	Charlemont
Montague	DMS Remote (Greenfield Host)	Montague
Northfield	DMS Remote (Greenfield Host)	Northfield
Rowe	DMS Remote (Greenfield Host)	Charlemont
Shelburne	DMS Remote (Greenfield Host)	Shelburne Falls
Deerfield	DMS-10	South Deerfield
Sunderland	DMS-10	South Deerfield
Whately	DMS-10	South Deerfield

Orange	DMS-10	Orange
New Salem	DMS-10	Orange
Warwick	DMS-10	Orange
Wendell	DMS-10	Orange
Leverett	5ESS	Amherst (Fearing St.)
Shutesbury	5E Remote (Amherst Host)	Amherst (Prospect St.)
Monroe	5E Remote (Brattleboro, VT Host)	Monroe Bridge, Readsboro, VT
Conway	DMS Remote (Northampton Host)	Conway

Appeal as to matters of law from any final decision, order or ruling of the Commission may be taken to the Supreme Judicial Court by an aggrieved party in interest by the filing of a written petition praying that the Order of the Commission be modified or set aside in whole or in part.

Such petition for appeal shall be filed with the Secretary of the Commission within twenty days after the date of service of the decision, order or ruling of the Commission, or within such further time as the Commission may allow upon request filed prior to the expiration of twenty days after the date of service of said decision, order or ruling. Within ten days after such petition has been filed, the appealing party shall enter the appeal in the Supreme Judicial Court sitting in Suffolk County by filing a copy thereof with the Clerk of said Court. (Sec. 5, Chapter 25, G.L. Ter. Ed., as most recently amended by Chapter 485 of the Acts of 1971).

1. ¹ Subsequent to the Town of Athol's filing its petition, New England Telephone and Telegraph Company d/b/a Bell Atlantic-Massachusetts and GTE Services Corporation merged to form Verizon. References in this Order to Bell Atlantic-Massachusetts shall be understood to mean the entity now operating as Verizon.

2. ² The hearing was held pursuant to G.L. c. 159, ' 24, which provides that the Department shall grant a public hearing upon written complaint of the mayor, selectmen or twenty customers of a city or town relative to the service quality of a company regulated by the Department.

3. ³ References in this Order to any Petition other than the Athol Petition shall be understood to mean the Petition to Intervene of the named town or the FRCOG.

4. ⁴ See Letter from Town of Orange to Department, June 19, 2000 (AOrange Letter); Letter from Senator Stephen M. Brewer to Department, June 21, 2000; Letter from Town of Deerfield to Department, June 21, 2000 (ADeerfield Letter); Letter from Town of Warwick to Department, June 26, 2000 (AWarwick Letter); Letter from Senator Stephen M. Brewer to Department, July 5, 2000; Letter to Department from Town of Wendell, July 11, 2000 (AWendell Letter); Letter from FRCOG to Department, August 4, 2000 (collectively, AComment Letters).

5. ⁵ Verizon responded to 21 information requests from the Department subsequent to the public hearing. The Department, on its own motion, hereby moves the responses to the information requests into evidence.

6. ⁶ This concern was also expressed in Petitions to Intervene from the FRCOG and Towns of Northfield, Deerfield, Bernardston, Petersham, Montague, Leverett, Ashfield, Buckland, Colrain, Shutesbury and Rowe.

7. ⁷ G.L. c. 159, ' 1 states in relevant part: AEvery common carrier of merchandise or other property . . . shall not discriminate against any particular person or subject him to any undue or unreasonable prejudice or disadvantage.@"

8. ⁸ 47 U.S.C. ' 202(a) states:

It shall be unlawful for any common carrier to make any unjust or unreasonable discrimination in charges, practices, classifications, regulations, facilities, or services for or in connection with like communication service, directly or indirectly, by any means or device, or to make or give any undue or unreasonable preference or advantage to any particular person, class of persons, or locality, or to subject any particular person, class of persons, or locality to any undue or unreasonable prejudice or disadvantage.

9. ⁹ In general, Aservice feature refers to special functions that may be provided with,

or added to, the user's basic service. Most telephone switches are capable of providing a variety of features, such as call forwarding and call waiting. Federal Standard

1037C: Glossary of Telecommunications Terms (visited January 2, 2001)

<http://www.its.bldrdoc.gov/fs-1037/>. We use the term to refer to the category of services in the Towns= complaints that includes Caller ID, Call Waiting, Call Answering/Voice Mail, and other such features that can be added to basic service.

10. ¹⁰ We use the term Ahigh-speed@ for the category of services in the Towns= complaints that includes T1, ISDN, and DSL services. See Section V below for a discussion of these services. Verizon also uses the term Aenhanced data services@ in referring to its high-speed offerings.

11. ¹¹ The Federal Communications Commission (AFCC@) currently defines Aadvanced services,@ or Aadvanced telecommunications capability,@ as telecommunications infrastructure capable of delivering a transmission speed in excess of 200 kilobits per second (Akbps@) in both the upstream and downstream directions; high-speed services are those capable of transmission speeds in excess of 200 kbps in one direction. Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, Second Report, CC Docket No. 98-146, FCC 00-290, at && 8, 10 (released August 21, 2000) (ASecond Report@). The FCC notes that its definition of advanced telecommunications capability will evolve over time. Id. at & 14.

12. ¹² The Athol CO serves the Towns of Athol, Phillipston, and Royalston. Petersham is served by a remote switch from the Athol CO and has access to the same services

(Exh. DTE 1-3).

13. ¹³ Verizon provides ISDN on either a local or virtual (foreign exchange) basis. Local ISDN is provided from a customer's nearest CO, whereas virtual ISDN is served from a distant CO when the local CO is not equipped to provide it (Exh. DTE 2-3). See Section V.B, below.

14. ¹⁴ The Price Cap Order set a service quality threshold of 33 points as the overall standard performance. Price Cap Order, D.P.U. 94-50, at 236-237. In addition to the overall service quality measurement, the Company must achieve standard performance for individual service items. Id. at 238.

15. ¹⁵ Sections of the monthly report include monthly actual results for SQI service measurements; a Wire Center Report and maintenance measurement; and a summary of Major Service Outage notifications provided to the Department during the month.

16. ¹⁶ A major extended service outage[@] was defined in Mission Hill as a service interruption affecting at least 200 customers and lasting more than 48 hours. Mission Hill, D.P.U. 96-30-A, at 2 (1998).

17. ¹⁷ Feeder cable, which is comprised of pairs of copper wires, provides the connection between central offices and remote terminal equipment. Mission Hill, D.P.U. 96-30, at 3 n.3.

18. ¹⁸ The RPHL is not the absolute number of reported troubles but rather consists of the percentage of access lines for which troubles were reported. NET, D.P.U. 89-300, at 343 n.177.

19. ¹⁹ A threshold is that level of service that, if not achieved by the Company, shall cause the Company to undertake immediate analysis, corrective action, and report such to the Department in the Company's monthly report [T]hresholds are numerical standards against which the Company's service can be measured.[@] NET, D.P.U. 89-300, at 304.

20. ²⁰ The Marlboro Area includes the Athol, Orange and Petersham COs. The Springfield Area includes the COs in Amherst, Ashfield, Bernardston, Charlemont, Colrain, Conway, Greenfield, Millers Falls (Montague), Montague, Northfield, Shelburne Falls, South Deerfield and Turners Falls (Montague).

21. ²¹ *See Bell Atlantic-Massachusetts Quality of Service Reports for the months January 1999 through June 2000.*

22. ²² *We note that the customers and Towns who made complaints in this proceeding had not contacted the Consumer Division for potential resolution of those complaints.*

23. ²³ *We direct Verizon to report its contact plan to the Department not later than July 31, 2001.*

24. ²⁴ *Under the FCC's definitions in the Second Report, most DSL services and T1 services, including ISDN-PRI, are advanced services; ISDN-BRI is a high-speed service.*

25. ²⁵ *The Orange switch serves Orange, Wendell, Warwick and New Salem. The South Deerfield switch serves Deerfield, Sunderland and Whately. See Table 1.*

26. ²⁶ *Conversion of the Athol switch was at one point scheduled for November 1999 (Exh. DTE 1-5; Tr. at 18).*

27. ²⁷ *The switch in the Town of Palmer was the first (Tr. at 19).*

28. ²⁸ Verizon explains that the limiting factor to the DMS-10 switch is the Peripheral Network Loop (APELP®) that allows for network connections. The DMS-10 upgrade will increase the number of PELPs, allowing for line and trunk growth. Previously, to increase line and trunk connections, DMS-10s were converted to DMS-100s. Going forward, Verizon will utilize the DMS-10 upgrade, which will double the switch capacity. According to Verizon, the primary benefit of converting to a DMS-100, the added capacity for line and trunk connections, will also be met by the new expansion package for the DMS-10® (Exh. DTE 3-7(b)).

29. ²⁹ See Verizon's response to RR-RLI-1 in D.T.E. 98-57-Phase III (September 29, 2000) (Phase III Order®).

30. ³⁰ The Company notes that DSL availability is independent of the switch technology in a customer's local CO (Exhs. DTE 1-3, 1-4).

31. ³¹ The FCC notes that limitations on DSL services currently prevent it from being deployed as a last mile facility to all potential end-users. Second Report at & 38. These limitations include: that fact that DSL service is dependent on the customer's distance from the local CO; incompatibility of DSL with DLC fiber facilities; and the presence on copper wires of devices that improve voice quality but impede DSL service, requiring a carrier to condition the lines by removing the devices while maintaining voice quality. Id. at && 35-40.

32. ³² Greater Franklin County ConnectB Telecommunications Project Update, Franklin Regional Council of Governments Newsletter, September 2000, at 2 (AFRCOG Newsletter®).

33. ³³ Through this initiative, the Commonwealth requested bids for providing T1 services to municipal governments and schools at the same price, regardless of location. The resulting contract cut T1 costs nearly in half and guaranteed access to T1 services for all municipalities and schools in the state. Second Report at & 178. MCN's original service provider was Digital Broadband Communications (ADBC®). Verizon agreed to replace DBC when DBC shut down its operations. Peter J. Howe, State, Verizon Agree to Internet Pact, Boston Globe, December 29, 2000, at C3. MCN provides high-speed internet access to schools and government buildings in 85 Massachusetts communities. Id.

34. ³⁴ FRCOG Newsletter at 2.

35. ³⁵ Id. at 2.

36. ³⁶ Berkshire County and Cape Cod political, business and community leaders approached the MTC in 1997 and 1998 with concerns about their telecommunications services similar to those expressed by the Petitioners in this proceeding: that advanced services were slow to reach those regions of the state, and that high costs and lack of competitive choices put the regions at a disadvantage in economic, cultural and educational development. See Berkshire Connect (visited January 2, 2001)

<http://www.bconnect.org/>. Berkshire Connect attracted several million dollars for construction of new facilities and has been able to purchase advanced services at rates comparable to those in Boston. Second Report at & 178.

37. ³⁷ See MTC Launches Telecom Initiative in Franklin County, August 3, 2000 (available at http://www.mtpc.org/news/press/franklin_aug00.htm). See also Franklin Connect (visited January 2, 2001) <http://www.mtpc.org/cluster/franklin.htm> (Franklin Connect®).

38. ³⁸ See Verizon Deploys Fiber Optics, Electronics, Bringing Additional Voice and Data Capacity to Franklin County, December 4, 2000 (available on Verizon's website at <http://newscenter.verizon.com/proactive/newsroom/release.vtml?id=46609>) (Verizon Deploys Fiber Optics, Electronics®).

39. ³⁹ Id.

40. ⁴⁰ These goals are: economic efficiency, fairness, earnings stability, simplicity, continuity, and universal service. Price Cap Order, D.P.U. 94-50; NET, D.P.U. 89-300 at 11-12; D.P.U. 1731, at 19-21 (1985) (Intra-LATA Competition Order®). The universal service goal focuses on availability of basic services; i.e. ensuring that the rate structure for telecommunications companies enables the vast majority of the state's population to obtain basic telecommunications services. NET, D.P.U. 89-300, at 12.

41. ⁴¹ NYNEX was the predecessor of Verizon and Bell Atlantic-Massachusetts.

42. ⁴² The Department further stated in the Price Cap Order that it strongly disagree[d] with suggestions that the Department adopt regulatory oversight of the Company's infrastructure investments regardless of the form of regulation. Price Cap Order, D.P.U. 94-50, at 137.

43. ⁴³ The FCC's Second Report demonstrates that, with the wide variety of high-speed telecommunications technologies available from local exchange carrier-provided wireline services to cable modem service, terrestrial wireless and satellite service -- different technologies with various capabilities are appropriate in different localities and circumstances. See Second Report. Thus, states' policies encouraging deployment of advanced services should take a technologically neutral approach. See, e.g., Report to the 77th Texas Legislature, Availability of Advanced Services in Rural or High Cost Areas, Public Utility Commission of Texas, at 68 (January 2001).

44. ⁴⁴ The Telecommunications Act of 1996, Pub. L. No. 104-104, ' 706(a), 110 Stat. 153 (1996).

45. ⁴⁵ Verizon's responses indicate that the switch serving the Town of Monroe also is not equipped for locally-served ISDN (Exh. 3-6). That switch is located outside the state of Massachusetts. See Table 1.

46. ⁴⁶ *The evidentiary record indicates that DSL is available in at least: Athol, Phillipston, Royalston, Greenfield, Montague, Leverett and Shutesbury; and it was scheduled to become available in Gill by the end of 2000 (Exhs. DTE 1-3, 1-4, 2-2, 3-3).*

47. ⁴⁷ *The mandate in Section 706 of the Telecommunications Act also includes a directive that the FCC inquire regularly into and report on the progress of advanced telecommunications deployment. Toward that end, the FCC convened a Federal-State Joint Conference on Advanced Telecommunications Services (AJoint Conference®), consisting of federal and state regulators, for the purpose of providing a forum for ongoing dialogue on the topic among the Commission, states and local and regional entities. Second Report at & 5. The Joint Conference has held regional field hearings throughout the country, including one in Lowell, Massachusetts. See id. at & 178; see*

also Transcript of May 22, 2000, Massachusetts Field Hearing (available at <http://www.fcc.gov/jointconference/jc-ma-trans-intro.html>).

48. ⁴⁸ *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, First Report and Order, CC Docket No. 96-98, FCC 96-325, at && 764-765 (released August 8, 1996).*

49. ⁴⁹ *See Verizon Deploys Fiber Optics, Electronics.*

50. ⁵⁰ *See Franklin Connect.*

51. ⁵¹ *See FRCOG Newsletter at 2.*