

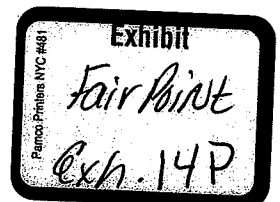
**STATE OF NEW HAMPSHIRE
BEFORE THE
PUBLIC UTILITIES COMMISSION**

DT 07-011

**JOINT PETITION BY VERIZON NEW ENGLAND, INC., ET AL.
AND FAIRPOINT COMMUNICATIONS, INC.
TRANSFER OF NEW HAMPSHIRE ASSETS OF
VERIZON NEW ENGLAND, INC. ET AL.**

**JOINT REBUTTAL TESTIMONY OF MICHAEL BROWN,
MICHAEL HARRINGTON AND JOHN SMEE
ON BEHALF OF
FAIRPOINT COMMUNICATIONS, INC.**

SEPTEMBER 10, 2007



Summary: Mr. Brown, Mr. Harrington, and Mr. Smee respond to the recommendations and pre-filed testimony of the New Hampshire Public Utilities Commission Staff (Staff) and other Intervenors, and address FairPoint Communications, Inc.'s (FairPoint) overall network deployment plan, including FairPoint's plan to expand the deployment of broadband in New Hampshire. These witnesses also discuss other issues related to the Verizon network.

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Mr. Brown sponsors the following Exhibit:

Exhibit B/H/S-1: New Hampshire Broadband Plan Summary, Budget Estimate
(Confidential)

Note: This Confidential Exhibit is not attached to this testimony, which is otherwise a non-confidential document. The Confidential Exhibit separately will be distributed to Intervenors in accordance with the applicable Protective Agreement in Docket DT 07-011 (this Docket).

1

INTRODUCTION

2 **Q.** Please state your names and business addresses.

3 **A.** (By Mr. Harrington) My name is Michael Harrington. My business address is 30
4 East Main Street, Westfield, New York.

5 (By Mr. Brown) My name is Michael S. Brown. My business address is 105
6 Second Street, Southeast, Yelm, Washington.

7 (By Mr. Smee) My name is John F. Smee. My business address is 155 Gannett
8 Drive, Portland, Maine.

9 **Q.** Mr. Harrington, are you the same Michael Harrington who filed testimony
10 previously in this proceeding?

11 **A.** (By Mr. Harrington) Yes, I am.

12 **Q.** Mr. Brown, by whom are you employed and in what capacity?

13 **A.** (By Mr. Brown) I am employed by FairPoint Communications, and I am the
14 Vice-President of Access Network Engineering.

15 **Q.** Please describe your background and qualifications.

16 **A.** (By Mr. Brown) I have been employed in the telecommunications industry for
17 twenty-seven years and was appointed to my present position with FairPoint in

1 October of 2006. Prior to accepting my position as Vice President, I was the
2 Director of Engineering for the Western and Southeast Regions of FairPoint. I
3 joined FairPoint in July, 2000 when FairPoint acquired YCOM Networks located
4 in Yelm, Washington. My present duties include broadband and video network
5 design throughout FairPoint. Prior to joining YCOM Networks I was employed
6 by ALLTEL in its southeast region located in Lexington, South Carolina. At
7 ALLTEL, I was Area Manager for Engineering and Construction. My
8 responsibilities included network design and construction, including responsibility
9 for the Capital Program.

10 **Q.** What are your current responsibilities with FairPoint?

11 **A.** (By Mr. Brown) I am the overall project lead for engineering and operations for
12 the merger which is before the New Hampshire Public Utilities Commission (the
13 Commission). My responsibilities prior to closing include integration of the
14 existing Verizon engineering and operations employees, establishment of a new
15 Network Operations Center and a new Repair Center and the design and
16 implementation of FairPoint's broadband initiative for the Northern New England
17 properties being transferred to FairPoint by Verizon. Following the closing, I will
18 continue to have responsibility for the design and implementation of the
19 broadband build-out initiative and will work with the engineering and operations
20 teams on the Capital Program. My overall objectives are to strengthen the core

1 network and expand the broadband network to provide advanced data services to
2 all of Northern New England.

3 Q. Mr. Smee, by whom are you employed and in what capacity?

4 A. (By Mr. Smee) I am employed by FairPoint as the Director of Operations.

5 Q. Mr. Smee, please describe your background and experience.

6 A. (By Mr. Smee) I have worked for a little over twenty-eight years within the
7 telecommunications industry, including seventeen years at NYNEX and other
8 predecessors of Verizon and three years at Pacific Telephone. For the past eight
9 years I worked in the competitive local exchange business for a company called
10 Choice One Communications (Choice One), working in a variety of different
11 functions in the network organization central office, central office surveillance,
12 the network operations center (the NOC), outside plant installation and
13 maintenance, budgeting and financial support and quality-of-service. At Choice
14 One, I was involved in all aspects of the business, from startup of the business
15 through the network build, and then maintenance, installation and repair of the
16 network, including surveillance, dispatch and sales engineering support.

17 Q. And what are your current duties with FairPoint?

18 A. (By Mr. Smee) During the period prior to the closing of the proposed merger, I
19 am responsible for the network operations component of pre-merger activities,
20 which means preparing for the transition and managing the effort to bring over the

1 outside plant function which includes installation, maintenance and construction.

2 I am also preparing for the transition of central office work, and the central office
3 equipment installation function. Additionally I am working to manage the
4 transition of the centralized NOC, which includes such functions as: network
5 surveillance, technical support, repair and provisioning. Also, in non-network
6 areas, I will participate in the supply chain organization work, which is
7 responsible for sourcing, delivery, and return/disposal of the elements of hardware
8 and other items required to run the network and the business, along with fleet
9 management and facilities management. After the merger closing, I will be
10 responsible for the central office operations, central office equipment installation
11 function, as well as the regional center, which will provide repair, surveillance,
12 technical support and provisioning and dispatch.

13 **Q.** Do your pre-merger duties include the joint ownership, operation and
14 maintenance of outside plant facilities?

15 **A.** (By Mr. Smee) Yes. I am engaged in the preparation activities pre-merger, to
16 prepare for taking over the operation and maintenance of outside plant activities,
17 including preparing to take on the joint ownership arrangements currently in place
18 at Verizon today.

19 **Q.** What is the purpose of your testimony?

20 **A.** (By the panel) Our panel addresses FairPoint's overall network deployment plan,
21 including FairPoint's plan to expand the deployment of broadband in New

1 Hampshire and provide high quality service. Our panel also addresses other
2 issues related to the Verizon network.

3 **REVIEW OF CURRENT NETWORK CONDITION**

4 **Q.** Has FairPoint undertaken a review of Verizon's existing network facilities in New
5 Hampshire?

6 **A.** (By Mr. Brown) Yes. I will first address the broadband-specific portion of that
7 review. Verizon today provides digital subscriber line (DSL) services using
8 primarily Alcatel-Lucent ASAM technology. Using this technology and an ATM
9 switch located in Manchester, New Hampshire, Verizon (as of July 2007) offered
10 DSL services to approximately sixty-one percent (61%) percent of the access
11 lines served.

12 **Q.** Please describe in general the nature of the technology by which Verizon provides
13 broadband service to residents of the State of New Hampshire.

14 **A.** (By Mr. Brown) The present technology that Verizon uses is asynchronous
15 transfer mode (ATM) over a synchronous optical network (SONET). The
16 technology employed is common in the industry and FairPoint uses similar
17 technology within some of its existing service areas.

18 **Q.** Mr. Harrington, could you please describe your understanding of the current
19 network in New Hampshire?

1 A. (By Mr. Harrington) Yes. We have reviewed descriptions of the central office
2 facilities and have conducted site visits of sample offices. We have also reviewed
3 diagrammatic representations of interoffice copper and fiber facilities, and state-
4 level representations of the various gauges and lengths of 26-gauge, 24-gauge and
5 22-gauge copper cable.

6 Q. What review of outside plant facilities did FairPoint conduct?

7 A. (By Mr. Brown) In the State of New Hampshire we sent out teams that consisted
8 of outside plant engineers and technicians that had a good, solid working
9 knowledge of outside plant facilities. They visited the facilities and did a visual
10 inspection. We sent them out to review the following details: 1) lashing wire
11 breaking or broken at locations; 2) mid-span closures because that normally
12 indicates bad cable sections; 3) multiple cables on the same strand because that
13 normally causes maintenance challenges; 4) extended closures, because that can
14 indicate deteriorating cable at terminals; 5) rotten or deteriorated poles; 6) fiber
15 slack not properly framed or insufficient slack loops; 7) the need for heavy tree
16 trimming; and 8) pole transfer work. We went to four (4) separate sites in the
17 State of New Hampshire - Concord, Dover, Hanover and Newmarket - and took a
18 look at those routes. We did find locations which require additional maintenance.
19 Overall, the results of the inspection were very typical of many of the prior
20 FairPoint acquisitions. A majority of the cable was determined to be in good
21 shape, although some cable is in need of maintenance. In some places we found

1 cable that should be targeted for replacement. The majority of the work to be
2 completed after closing, however, requires only continued simple maintenance.

3 **Q.** What due diligence was performed with regard to central office plant?

4 **A.** (By Mr. Harrington) In December of 2006, two of my team members and I
5 conducted a central office tour across the three-state region. The team visited ten
6 (10) central office sites. Four (4) of those sites were in the State of New
7 Hampshire, as noted above. The team observed stringent security that was in
8 place at all the central office locations, the use of key cards or hard keys, for both
9 exterior, as well as most of the interior doors. We observed Verizon personnel
10 challenging the Verizon escort, which I found to be quite appropriate. One of the
11 key areas we reviewed were the power plants. The team observed the
12 environmental conditions that were present in all of the offices visited, checking
13 the relative ambient temperature and cleanliness of the power rooms, battery
14 condition (including looking for any warped plates, and checking water levels in
15 their batteries, and lug and strap corrosion), and ensuring that DC rectifiers were
16 not operating in excess of 80 percent of the rated capacity. We also had the
17 opportunity to observe AC emergency generators to check the visual condition,
18 make sure the engine blocks were warm, and that heater plugs were installed and
19 operational.

20 We inspected telecommunications equipment rooms. Our inspection of the
21 equipment rooms allowed us to assess the relative condition of the HVAC system

1 and the relative ambient temperature within which equipment operated. We
2 checked this not just in the open equipment areas, but also walking down the
3 aisles where there could be hot spots. Switching equipment environmental
4 conditions were acceptable and the HVAC system for the areas containing the
5 switches was deemed acceptable. DSL equipment environmental conditions were
6 acceptable. With respect to the transport and the transmission equipment rooms,
7 there were certain cases where the temperatures seemed a little on the high side.
8 In those cases, however, there were fans in place to circulate the air. Air
9 movement is critical in such cases. In addition, we saw evidence of air-ducting
10 work in the overhead that was being undertaken to resolve those temperature
11 related issues.

12 We also checked for the presence of BITS clocks for purposes of reliable network
13 synchronization.

14 We also assessed the general level of cleanliness, which is a key indicator of
15 activity levels present in the equipment rooms. The central office switching
16 rooms generally were dark, indicative of low levels of human traffic, which, in an
17 equipment room, means less dirt and maintenance activity. That can correlate
18 directly to what may or may not be required in terms of preventive maintenance
19 work and activities. Equipment shelf covers were in place and we did not observe
20 any unusual visual alarm indicators, which means the equipment was not being

1 worked on at that time, and were alarm free. Collocation cages were secure, clean
2 and, generally, orderly.

3 The building conditions were acceptable. Main distribution frames were very
4 neat and clean. There was no evidence of stray wire clippings, which can create
5 problems. The equipment labeling was consistent and complete for purposes of
6 bar coding and inventory systems. The STPs were located in separate rooms,
7 with strict controlled access to these rooms. Lastly, the team observed DACs and
8 special access test equipment shelves in each visited office.

9 In general, we did not observe anything seriously out of order in New Hampshire
10 and certainly feel that the level of inspection for each one of the switch sites and
11 from within the central offices that we reviewed was indicative of the balance.
12 After that visual inspection tour, which covered a period of three (3) days across
13 the three (3) states, we felt comfortable with the condition of the inside plant
14 equipment that was going to be transferred to FairPoint.

15 Q. What switch types did you observe in New Hampshire?

16 A. (By Mr. Harrington) In New Hampshire, all of the switches are Alcatel-Lucent 5
17 ESS, Nortel DMS-100/200, Nortel DMS-10, and Nortel CS2000 digital switching
18 or soft switch equipment. The STP is a Nortel product. Our four (4) site visual
19 inspections in New Hampshire included three (3) 5ESS switches, one (1) DMS-10
20 switch, one (1) CS2000 soft switch and one (1) Nortel STP. The Nortel CS2000
21 soft switch, located in Concord, New Hampshire, also supports voice services

1 deployed over the Verizon FTTH network deployed in Southern New Hampshire.

2 The remaining three sites inspected contained a single switching type in each.

3 Q. In your opinion, will FairPoint be receiving the network assets that it needs to
4 operate the business effectively and provide high-quality service to the people of
5 New Hampshire?

6 A. (By Mr. Harrington) Yes. I do believe that we will receive a network with which
7 we will be able to provide high quality communication services.

8 (By Mr. Brown) And I concur in that assessment.

9 **NETWORK QUALITY OF SERVICE ISSUES**

10 Q. Are there any areas of service quality which you have already determined can be
11 effectively addressed through the systems and processes that FairPoint plans to
12 implement? If so, please explain.

13 A. (By Mr. Smee) Yes. FairPoint will take several actions with regard to installation
14 appointments not met, repair appointments not met, trouble reports per hundred
15 access lines, repeat trouble reports and, most significantly, the percent of
16 residential troubles not cleared within twenty-four hours. FairPoint will take
17 several actions to improve performance. First, FairPoint will ensure that
18 scheduling of repair dispatches is properly prioritized, including extending hours
19 of dispatch as necessary. Second, and most fundamentally, FairPoint will ensure
20 the retention of adequate technician staff to handle the volume of trouble reports

1 and installation requirements. At this time we will add at least ten (10) outside
2 plant installation and maintenance technicians in New Hampshire to the FairPoint
3 work force. FairPoint also plans to commit the resources to equip and train those
4 technicians. We are working with the local wire center and garage level reporting
5 to identify specifically which garage locations will require the additional
6 headcount in order to achieve the service levels on the 24 hour clearance
7 measurement for residential customers, while maintaining the others at target or
8 better.

9 Underlying the speed of trouble clearance is the trouble report rate itself. While
10 clearing troubles in a timely fashion is a measure of service quality, FairPoint
11 plans to address the number of troubles overall. As FairPoint drives down the
12 number of trouble reports, not only does service improve to those customers
13 whose service is not now being impaired, FairPoint then can make the technicians
14 more readily available to meet our 24 hour repair, along with installation and
15 repair appointment commitments.

16 As a result of FairPoint's initial and ongoing due diligence work, FairPoint is
17 confident that the network infrastructure in New Hampshire is fundamentally
18 sound. We have reviewed wire center level data on customer trouble reports rates
19 including specifically the Code 4 report rates. This more detailed view confirms
20 the FairPoint initial assessments of the state of the infrastructure in New

1 Hampshire. The vast majority of customers and wire centers in New Hampshire
2 are delivering service with trouble report rates at or better than target levels.

3 Q. Do any wire centers require continued maintenance?

4 A. (By Mr. Smee) Yes. As we had expected, the report rates for some wire centers
5 indicate a need for proactive maintenance and outside plant refurbishment or
6 replacement. FairPoint plans to target the particular wire centers that are
7 contributing the most trouble reports. The wire centers that require initial focus
8 (i.e, those with routine, persistent trouble report rates above the target level)
9 represent approximately fourteen percent (14%) of the total wire centers in New
10 Hampshire. All but a few of these wire centers serve fewer than two thousand
11 five hundred (2,500) access lines each. Another set of wire centers -
12 approximately an additional ten percent (10%) of the wire centers - have
13 generated report rates which vary from on target to missing target, from month to
14 month, with little apparent pattern. These wire centers require more detailed
15 analysis to determine if further infrastructure improvements are required. Again,
16 these wire centers are predominantly smaller ones serving fewer than three
17 thousand (3,000) access lines. In my experience, confirmed by the New
18 Hampshire wire center specific report rate data, trouble reports tend to be
19 concentrated more in the second and third quarters of the year. Therefore,
20 FairPoint's plan will be to maximize the efficiency of our quality of service
21 efforts by focusing the work of technicians and centralized support on proactive

1 maintenance and analysis (particularly on cable plant and digital loop carrier
2 facilities) in the first and fourth quarters, and on trouble calls during the second
3 and third quarters.

4 In addition, at present, FairPoint is working to identify the garage locations,
5 serving the wire centers in need, where the additional technicians would be best
6 placed to effect this effort. The effort to reduce trouble report rates in the targeted
7 wire centers will rely primarily upon the proactive analysis efforts, together with
8 the design and build efforts of the outside plant engineers and construction teams
9 who will implement the infrastructure upgrades required. While these
10 replacement efforts are not low cost, the efforts are (as expected) confined to a
11 small subset of the total number of the wire centers, nearly all of which are lower
12 line count locations. Consequently, the total cost of this work fits within the
13 capital spending plan FairPoint has developed for New Hampshire.

14 **JOINT POLE ISSUES**

15 **Q.** Mr. Smee, do your responsibilities include joint pole matters?

16 **A.** (By Mr. Smee) Yes. FairPoint representatives have been in contact with electric
17 utilities and other interested parties to address emergency response times, tree-
18 trimming costs, inspections, installation times, double-pole issues, and related
19 matters.

20 **Q.** Can you describe FairPoint's approach generally to emergency response?

1 A. (By Mr. Smee) FairPoint will work with local electric utility companies to agree
2 on procedures that will permit both FairPoint and the utility companies to respond
3 speedily to emergency pole-replacement situations. We will work with the local
4 utilities to seek arrangements for the utilities to either assist us and/or work with
5 the FairPoint teams, including the outside plant construction work forces, to
6 determine if there are alternate ways of deployment to ensure that the work is
7 done in a timely fashion.

8 FairPoint will also review outside plant workforce levels. To the extent that
9 issues have arisen, we will look at whether the problem derives from a shortage of
10 labor force or just management and dispatch issues. If the problem derives from a
11 shortage of labor force and the addition of labor will be part of the solution, then
12 that is something we will examine and move forward with.

13 Q. Will you also be dealing with state and local governmental agencies that are
14 involved in highway construction, relocations and related matters?

15 A. (By Mr. Smee) Yes. I am the person who will coordinate our work to ensure
16 timely completion of any facilities and pole-related work in response to notices of
17 highway construction, necessary relations and related matters. I am in the process
18 of understanding the current notification system, the expectations, and in the
19 event of delays will determine the root cause of any claimed problems. Problems,
20 for example, could relate to work scheduling or dispatch, or a head-count.

1 Whatever the solution that is required to resolve the problem is the solution we
2 will employ. There may be a mixture of two (2) or three (3) different solutions.

3 **Q.** Does FairPoint have a philosophy on timing for installation of facilities for new
4 construction?

5 **A.** (By Mr. Smee) Our goal for installation of facilities for new construction is to be
6 able to serve in a timely fashion the community and serve the developers of new
7 office parks or home developments. We plan to make commitments that are
8 reasonable and achievable, which again will involve understanding whether the
9 issues are management, dispatch, work-flow issue, or a head-count and
10 unavailability related. Either way, FairPoint will apply the appropriate resources.

11 **Q.** Has FairPoint undertaken any measures to allay the concerns expressed by the
12 utility Intervenors in this Docket?

13 **A.** (By Mr. Smee) Yes. As noted above, FairPoint representatives have met with
14 representatives of the electric utilities. FairPoint will agree to establish a system
15 intended to lead to dialogue and informal dispute resolution with the various
16 utilities. FairPoint will commit to appointing a joint pole coordinator to address
17 the various concerns which have arisen in New Hampshire related to utility poles
18 and the maintenance thereof. In addition, FairPoint understands that the utility
19 companies and the various municipalities in this Docket have a concern with
20 double poles. FairPoint will commit to remove double poles within forty-eight
21 (48) months of the merger closing. This time frame is necessary to allow

1 FairPoint to accurately identify the poles at issue and begin the removal process.

2 It must be remembered that at least one utility Intervenor estimated the back log
3 of dual poles to be in the range of five thousand (5,000) poles and another
4 Intervenor estimated the figure to be in the range of seven thousand (7,000) poles.
5 If true, the removal of these double poles will take time.

6 Q. Let me ask you to address several other concerns and requests for conditions of
7 approval as presented by several Intervenors. First, please address the request that
8 FairPoint be required to reserve space on poles for "governmental purposes".

9 A. (By Mr. Smee) It appears the Intervenors who requested this "agreement" or
10 proposed condition of approval did not define what should be a governmental
11 purpose. FairPoint does not believe the Commission ought to impose a condition
12 which in any way would allow the municipalities, administrative agencies or other
13 governmental agency to compete with FairPoint on a non-commercial basis. As
14 such, FairPoint proposes that municipalities (and other governmental entities or
15 agencies) be bound by the following definition of "Governmental Services" for
16 purposes of pole attachments:

17 "Governmental Services" means and refers to those non-commercial and non-
18 retail communication based services delivered by the municipality or
19 governmental entity at issue to individuals employed by said governmental entity
20 or its administrative agencies. The communication based services are limited to

1 non-fee based purposes of inter-connecting governmental administrative facilities,
2 emergency management systems, and public safety systems.

3 Q. Several of the Intervenors suggested a condition of approval be imposed which
4 requires FairPoint to implement a “stand-by system” in multiple locations in order
5 to address emergencies and further requested that FairPoint be required to respond
6 to all emergencies within an average of one (1) hour. Please respond to these
7 requests for conditions of approval.

8 A. (By Mr. Smee) FairPoint does not agree with these requested conditions of
9 approval. As a first matter, FairPoint will be bound by the terms of the collective
10 bargaining agreements in place between Verizon and the unions representing
11 Verizon’s unionized workforce. FairPoint therefore can not “implement”
12 procedures absent a review of the applicable collective bargaining agreement and
13 absent consultation and agreement with union leaders.

14 Second, FairPoint is willing to work proactively to resolve the concerns.
15 FairPoint and the electric utility Intervenors should maintain notification
16 procedures to ensure early communication between each other during pole
17 emergency situations. The utility with responsibility for the maintenance area
18 involved should notify other attaching carriers affected by any emergency
19 incident.

20 FairPoint proposes a transition period of twelve (12) months following the merger
21 closing. During that period, FairPoint will evaluate possible alternatives to meet

1 the same average response time as the electric utility Intervenors, including,
2 without limitation, the addition of new employees, the negotiation of stand-by
3 arrangements with employees represented under a collective bargaining
4 agreement, the possible use of contractors or the implementation of changes in
5 inter-company practices. FairPoint then would be willing to implement the
6 appropriate course of action with the objective of enabling FairPoint, within
7 twenty-four (24) months of the merger closing, to meet the same average response
8 time to emergencies in its maintenance area as the target average emergency
9 response time for the electric utility Intervenors (respectively) in their
10 maintenance area.

11 Q. Is FairPoint willing to install all jointly owned poles within its maintenance area
12 by the date specified by a specific customer.

13 A. (By Mr. Smee). Not necessarily. FairPoint needs some reasonable lead time and
14 must ensure all necessary governmental and private permits and approvals are in
15 place. FairPoint therefore proposes to schedule joint pole sets to be
16 accomplished, on average, not later than the date the customer has requested the
17 installation to be completed, which shall be no shorter than fifteen (15) days for
18 small jobs (not more than 3 pole sets) or no shorter than thirty (30) days for large
19 jobs *after the date* on which all pre-payments have been made and all necessary
20 property rights and governmental permits have been obtained and provided to
21 FairPoint.

1 Q. As you know, several electric utility Intervenors have expressed concerns with
2 respect to tree trimming and pole maintenance related issues. How do you
3 respond to these concerns?

4 A. (By Mr. Smee) FairPoint is willing to honor and abide by all Verizon/electric
5 utility Inter-Company Operating Procedures (IOPs) and Joint Ownership
6 Agreements (JOAs) in place effective as of the merger closing. FairPoint
7 recognizes the concerns expressed in these proceedings with respect to these
8 issues and agrees to work cooperatively with the electric utility companies.
9 However, I do not believe that the Commission should impose any conditions of
10 approval on FairPoint related to these issues. FairPoint has initiated an extensive
11 dialogue with representatives of the electric utility Intervenors concerning the
12 IOPs, JOAs, among other issues. FairPoint should be provided with the
13 opportunity to work cooperatively with these Intervenors and not have conditions
14 of approval imposed through this Docket.

15 Q. At least one Intervenor suggested that FairPoint needs to develop a license
16 administration "group" and maintain all of Verizon's current pole attachment
17 conditions, forms, charges and administrative procedures. Do you agree with this
18 suggestion?

19 A. (By Mr. Smee) In general, yes. FairPoint does plan to develop a license
20 administration group. In addition, FairPoint has committed to adopting Verizon's
21 charges as implemented effective at the merger closing. As such, the costs and

1 charges related to pole attachments imposed by Verizon at closing will be the
2 costs and charges adopted by FairPoint. With respect to Verizon's pole
3 attachment and other administrative forms, FairPoint will attempt to develop such
4 forms with minimal disruption to outside users. In my opinion, such forms are
5 not overly complicated and FairPoint needs some flexibility to develop forms
6 consistent with the development of the new systems architecture. As such, it is
7 not practical for FairPoint to simply adopt all of Verizon's administrative forms as
8 FairPoint's forms. Such a condition, therefore, should not be imposed by this
9 Commission.

10 **E-911 SERVICE**

11 **Q.** How will FairPoint assure the continued availability of E-911 services in New
12 Hampshire?

13 **A.** (By Mr. Harrington) At this point in time, the State of New Hampshire has
14 contracts with Verizon for the E-911 ALI database, and network switching and
15 transport. As of closing, FairPoint will assume the responsibilities and functions
16 performed by Verizon under these contracts to provide E-911 services. Currently,
17 FairPoint is in the process of reviewing vendor proposals for E-911 ALI database
18 services. FairPoint will provide E-911 voice communications switching and
19 transport from the various Class 5 End Offices through the two (2) E-911 tandems
20 located in the state and to the State of New Hampshire PSAP facilities. It is
21 FairPoint's understanding that the State of New Hampshire has formally notified

1 Verizon of its intent to perform ALI database services and terminate the current
2 Verizon contract for ALI database services.

3 Q. Will E-911 service be provided fully during the transition and afterwards?

4 A. (By Mr. Harrington) Yes. There will be no acquisition related E-911 network
5 call routing changes for any service provider external to Verizon and FairPoint.
6 Assuming the State of New Hampshire has not completed its take-back of ALI
7 database services and depending upon the ALI database vendor selection
8 outcome, service providers may need to communicate ALI database updates to a
9 different system. However, one ALI database vendor alternative under
10 assessment would end in no changes to current ALI database communications.
11 The only change for the properties FairPoint will be acquiring will be that, as of
12 cutover, FairPoint's service order updates will need to be communicated to the
13 ALI database system instead of Verizon's service order updates. Verizon will
14 continue to provide all E-911 services during operations under the Transition
15 Services Agreement (TSA). If the State of New Hampshire has completed its
16 take-back of ALI database services prior to close or cutover, then FairPoint will
17 continue to support E-911 services in terms of network switching and transport.

18 Q. Will FairPoint be acquiring the systems needed to interface with the E-911 system
19 in New Hampshire?

20 A. (By Mr. Harrington) Yes. In conjunction with Capgemini, FairPoint is defining
21 all of the systems and specific systems interfaces (which will be standards-based)

1 required to monitor the network, and to make sure that the network is functioning
2 pursuant to the agreements with the State of New Hampshire. We will also
3 ensure that FairPoint has the appropriate service order interface, such that the ALI
4 database system can process updates. In short: yes, all of this is being completed
5 and it is all part of the overall systems integration effort.

6 SS7/STP NETWORK

7 **Q.** How will FairPoint assure the continued availability of SS7/STP services in New
8 Hampshire?

9 **A.** (By Mr. Harrington) First, FairPoint will be acquiring the Verizon STPs
10 necessary for service in the acquired territories. Second, Verizon reports that all
11 New Hampshire SS7/STP database and trading partner gateway links are
12 connected to the New Hampshire Gateway STPs. As a result, signaling link
13 connectivity to other local exchange carriers and competitive local exchange
14 carriers (CLECs), inter-exchange carriers (IXC) and SS7 signaling trading
15 partners in New Hampshire will remain unchanged with the possible exception of
16 adding new Gateway Links to Verizon STP Gateways in Massachusetts and
17 Rhode Island.

18 Third, FairPoint has contracted with a nationally known SS7 database provider
19 (VeriSign) for E800, LIDB, CNAM and LNP database services. As a result, and
20 because the vendor already has invested in and deployed SLPs supporting these
21 SS7 database services, FairPoint will be able to deploy those various services very

1 rapidly. Further, the SS7 database provider selected by FairPoint is already
2 diversely, Quad Link connected to the New Hampshire Gateway STPs, and the
3 only SS7 signaling network activity required to facilitate the data base contract
4 with VeriSign will be to assess existing Gateway signaling link capacity for
5 potential augmentation.

6 One area that will require change relates to "SS7 point codes" resident in the
7 acquired switching and STP network. Class 5 End Office switches, Access
8 Tandems, STPs, and SS7 network-type databases (Service Control Points or
9 "SCPs") have unique identifiers called point codes. Verizon is expecting a return
10 of the Verizon Network Identifier Point Codes. As a result, and with respect to
11 certain host and standalone switches, FairPoint will be required to obtain new
12 point codes from Telcordia and will need to modify certain translations in the
13 Class 5 End Offices and Tandem switches to be acquired from Verizon. This
14 modification will also require a change in SS7 route sets. This work is not
15 something done routinely, but the work is not particularly difficult. There will be
16 a fair amount of administrative work, coordination and pre-planning that needs to
17 take place, both within the acquired network and with other trading partners that
18 use the current Verizon point codes and Alias codes in their respective route sets.
19 This work will consist primarily of switch and STP translations for parties that
20 use these point codes or Alias codes. These activities will commence after the
21 merger closing and are scheduled to be completed within 12 months of that date.

1 Q. Mr. Harrington, can you provide an example of the impact on another carrier with
2 respect to the return of the Verizon point codes?

3 A. (By Mr. Harrington) Yes. Refer to the other carrier as "CLEC A". Coincident
4 with our installation of new point codes - for example - with respect to the
5 Manchester Tandem switch, new route sets connecting CLEC A to the
6 Manchester Tandem switch would have to be instituted. That is a switch
7 translations effort, not undertaken routinely to this extent, but also not abnormal
8 network activity. In a planned and coordinated manner, CLEC A would change
9 the route sets or modify certain route set parameters to reflect the changed point
10 codes or Alias codes, and then test the changes with FairPoint.

11 Depending upon the quantity of ISUP trunk groups impacted and the trunk
12 member sizing of the trunk groups interfacing a Verizon tandem switch, FairPoint
13 does not believe the CLECs' translations and testing work effort would require a
14 significant effort by their respective technicians. There are a number of variables
15 that might impact an exact time estimate. FairPoint believes, however, that a
16 typical Class 5 End Office subtending a tandem switch might have five (5) to ten
17 (10) ISUP trunk groups (on average). Such activity is not at all abnormal in terms
18 of ongoing network modifications, switch replacement and trunk group
19 migrations between switches that all interconnected telecommunications carriers
20 are subject to in the normal course of business.

1 **PROVISIONING OF WHOLESALE SERVICES**

2 **Q.** Mr. Lippold has described FairPoint's plans for providing wholesale services.
3 Can you please explain how the provisioning functions that Mr. Lippold has
4 described in his testimony will be established and staffed to assume the functions
5 that Verizon now performs?

6 **A.** (By Mr. Smee) Yes. The provisioning of services for wholesale customers will
7 be performed by employees within the three-state region. We will utilize the
8 existing, Verizon wholesale provisioning team in New Hampshire, which today
9 provides services to not only the three (3) state region, but also to states outside
10 the region. All members of this team are moving over to FairPoint, and FairPoint
11 plans to continue the operation as it is today, post close, but with the focus
12 narrowed to just three (3) Northern New England states. In addition, we are
13 taking on an existing translations team within the three (3) state region that will
14 continue to be charged with that work. Finally there is a dedicated outside plant
15 technician work force for wholesale orders and troubles which will move to us as
16 well. FairPoint will add a local number portability (LNP) administrator. The
17 LNP administrator will be in place and trained prior to close. This overall
18 approach will ensure we have sufficient field technical forces to continue
19 provisioning (and repairing) services as are provided today.

20 **Q.** Please address quality of service standards. For example, will FairPoint agree to
21 adopt existing standards?

1 A. (By Mr. Smee) Yes. FairPoint will adopt and will be bound by existing quality
2 of service standards as set forth in Commission Docket 96-220; *New England*
3 *Telephone and Telegraph Company/NYNEX*. For purposes of clarity, I am
4 advised by counsel that the standards may be found in the Commission Reports at
5 82 NH PUC 35 (January 1997). However, FairPoint proposes to be measured
6 against these standards starting on that date which is two (2) years after cutover.

7 Q. Why should the quality of service standards be imposed and measured two (2)
8 years after the cutover?

9 A. (By Mr. Smee) There are several reasons why the quality of service standards
10 should not be imposed upon FairPoint and measured until two (2) years after the
11 cutover to the new FairPoint systems architecture. First, FairPoint will be
12 operating effective at the closing of the merger transaction on Verizon's systems.
13 Prior to cutover, FairPoint will be training the Verizon based workforce on the
14 new FairPoint systems. In addition, FairPoint will be working with Capgemini to
15 ensure the FairPoint systems are working as intended and working towards
16 issuing the Notice of Readiness. It will not be possible commence the work
17 necessary to bring the Verizon network operations up to the standards cited above
18 until the Verizon network operating on the new FairPoint systems.

19 Second, after cutover, FairPoint needs some period of time to ensure the systems
20 are operating as contemplated and all cutover based issues (if any) are resolved.

21 Any newly hired FairPoint employees must be trained, especially the new I&M

1 technicians. To the extent the Commission believes issues exist with respect to
2 compliance with current quality of service standards, FairPoint does not believe it
3 should be subject to penalties immediately after the merger closing. The
4 Commission should allow FairPoint a period of time to bring the network
5 operations up to the current standards. FairPoint believes that a reasonable period
6 of time is two (2) years post-cutover.

7 **BROADBAND DEPLOYMENT PLAN**

8 **Q.** Mr. Brown, has FairPoint obtained the information needed to develop FairPoint's
9 plan for deployment of broadband in New Hampshire?

10 **A.** (By Mr. Brown) Yes. Verizon provided an equipment list of the relevant existing
11 network elements. We have been able to determine from that list whether or not a
12 digital loop carrier is fiber-fed or copper-fed. Verizon also provided an
13 interoffice facility map that shows the interconnectivity between central offices.
14 In addition, Verizon has allowed FairPoint to access outside plant drawings and
15 cable record information. From this information, we were able to determine:

16 **Inter-office Facilities:**

- 17 a. Fiber availability
18 b. Optical length
19 c. Age of fiber

20 **Outside Plant**

- 21 a. Sizes of fiber (on a sample basis)
22 b. Architecture (point to point or ring)
23 c. Presence of long loops (on a sample basis)

1 Q. Please provide an overview of FairPoint's plan for the deployment of broadband
2 in New Hampshire.

3 A. (By Mr. Brown) At present, Verizon's DSL deployment rate - meaning the
4 percentage of access lines which are broadband qualified - in the State of New
5 Hampshire is approximately sixty-one percent (61%). FairPoint proposes to
6 increase the percentage of broadband qualified lines in the State of New
7 Hampshire to approximately seventy-one percent (71%) within twenty-four (24)
8 months of the closing of the merger. For purposes of providing this information,
9 FairPoint has assumed that (i) Verizon has not added any broadband capacity after
10 July 2007 and (ii) Verizon does not add broadband capacity prior to the merger
11 closing.

12 Q. Please describe FairPoint's broadband plan in more detail.

13 A. (By Mr. Brown) FairPoint's plan is to build an advanced broadband network,
14 using newer technology, using internet protocol (IP) and multi-protocol label
15 switching (MPLS), in a core network that will be capable of 10-gigabit data rates.
16 FairPoint's plan will proceed in three (3) phases, summarized and budgeted as set
17 forth in Confidential Exhibit B/H/S-1, which is being separately distributed to
18 parties in accordance with the applicable Protective Agreement.

19 Q. Please describe the three (3) phases and the basis upon which FairPoint has
20 developed the cost estimates.

1 A. (By Mr. Brown) Phase I consists of building the core network. The goal will be
2 to complete that phase within the first four to six months after the closing. In this
3 phase, FairPoint will install core routers at key locations throughout the state,
4 thereby establishing a backbone core transport network to be able to bring data
5 back to aggregation points or to the internet point of presence (POP). FairPoint
6 proposes to utilize the existing fiber network to link Manchester, Keene, Littleton,
7 Nashua, Hanover, Concord, Dover and Laconia (the Core Network). This
8 transport network provides a solid non-blocking transport fabric that moves data
9 back to that point. It also provides the ability to be able to transport IPTV and
10 provide business-to-business interconnectivity.

11 Q. Please describe Phase II.

12 A. (By Mr. Brown) Phase II will commence toward the end of Phase I and will be
13 executed over a period of approximately 12 months from closing. In Phase II,
14 FairPoint proposes to utilize the existing fiber network to connect central offices
15 to the Core Network (often referred to as the Access Network) and connects such
16 towns as North Stratford, Lancaster, Littleton and West Stewartstown. Phase II
17 consists of two principal parts. First, FairPoint will install MSAN facilities in
18 central offices that presently do not have broadband services. During Phase II,
19 FairPoint will also install MSAN units in existing central offices that have DSL
20 via the existing ATM Network but have digital loop carrier systems (DLCs), that
21 are fiber-fed but do not currently have broadband capability. The effect of this

1 effort is to build the access fabric. Traffic from these offices can then be brought
2 over to the core network that FairPoint will have built in Phase I. Thus, FairPoint
3 will be able to aggregate traffic and bring it to the POP. Phase II adds broadband
4 capability to twenty-two (22) central offices that presently do not have it, serving
5 an additional twelve thousand two hundred eighty-nine (12,289) access lines. An
6 additional forty-seven (47) central offices to which Verizon currently offers
7 broadband also will receive MSAN units. This is necessary to provide
8 connections to the Access Network to digital loop carriers that are served by these
9 offices, but are not broadband enabled.

10 Also during Phase II, FairPoint will install related power upgrades. We expect
11 that power upgrades will be required in some locations, and upgrades in air
12 conditioning systems may also be needed. Some of the racks may need to be
13 upgraded, and we have provided for those upgrades in the budget.

14 **Q.** What will be the effect on broadband availability of the completion of Phase I and
15 Phase II?

16 **A.** (By Mr. Brown) Phase I alone does not add broadband to any customers. Its
17 impact is to build the core network to be able to carry broadband traffic. In Phase
18 II, FairPoint increases the number of broadband qualified lines by twelve
19 thousand two hundred eighty-nine (12,289) access lines over a period of twelve
20 (12) to eighteen (18) months from the date of the merger closing.

21 **Q.** Please describe Phase III.

1 A. (By Mr. Brown) Once FairPoint has installed the core network in Phase I and
2 provided broadband capability to central offices and fiber-fed digital loop carrier
3 systems in Phase II, we will begin to put these same MSAN units into these DLC
4 sites. In addition, some fiber splicing will need to take place because FairPoint
5 will use (presently) dark fibers to provide the service to the remaining DLC sites.
6 Phase III will begin at approximately the same time as Phase II. Thus, the phases
7 run in parallel. The completion of Phase III is expected to take between 12 to 24
8 months after closing of the merger. I know this is a wide time frame, but there are
9 many network elements that are involved. Consequently, there will be a
10 substantial amount of installation activity. Therefore, Phase III will proceed in
11 parallel with Phase II but will complete at a later date because of the greater
12 number of network elements involved.

13 In Phase III, FairPoint will install MSANs in one hundred thirty (130) new digital
14 loop carrier cabinets that presently do not have broadband service and bring them
15 into the broadband network. FairPoint will achieve a total of approximately fifty
16 seven thousand eight hundred (57,800) additional access lines that will be
17 broadband addressable at the end of this phase.

18 Q. What does this program mean, in terms of overall broadband deployment to the
19 people of New Hampshire?

20 A. (By Mr. Brown) The FairPoint plan will be focusing on rural offices as well as
21 the larger New Hampshire offices. Thus, with the incremental expenditures,

1 FairPoint will be reaching many more communities than presently served. Upon
2 completion of the proposed FairPoint broadband build out, an additional one
3 hundred thirty (130) RT locations (above the number to which Verizon already
4 provides broadband) will gain broadband access and an additional twenty-two
5 (22) central offices (above the number Verizon already furnishes with broadband)
6 will gain broadband access. This means that an additional one hundred fifty-two
7 (152) communities in the State of New Hampshire will have access to DSL
8 broadband service that have no such access at this time. This total effort will be a
9 major benefit to the State of New Hampshire.

10 Q. What will be the resulting DSL addressability?

11 A. (By Mr. Brown) Using the FairPoint definition of addressability, the percentage
12 of DSL addressable access lines in New Hampshire following implementation of
13 the FairPoint broadband deployment will be approximately eighty-three percent
14 (83%).

15 Q. FairPoint uses the phrase "DSL addressable". What does FairPoint mean by that
16 term?

17 A. (By Mr. Brown) FairPoint uses that term to mean that a wire center (central
18 office or remote terminal) has been equipped with the capability to offer DSL
19 service, i.e., that it has the requisite digital access multiplexing equipment. This
20 definition does not mean that every access line served by that wire center can be

1 immediately connected to provide DSL service (although the vast majority of
2 lines would have immediate access to DSL).

3 Q. Why is this distinction important to the residents and businesses of New
4 Hampshire?

5 A. FairPoint will make every effort to provide DSL services to customers whose
6 service location is beyond the 18,000 foot DSL qualified line limitation. Although
7 the speed is subject to distance limitations FairPoint has been successful at
8 providing DSL service by additional line conditioning. Any access lines
9 determined to require additional conditioning will be addressed on an individual
10 case basis using the following criteria:

- 11 1. FairPoint will investigate whether bridge taps can be removed to
12 eliminate unnecessary loops.
- 13 2. FairPoint will investigate whether load coils can be removed due to
14 previous remote terminal installations.
- 15 3. FairPoint will investigate whether existing load coils can be removed
16 and new "Smart Coils" can be installed.
- 17 4. FairPoint will investigate whether a line-powered small pole mounted
18 DSLAM can be installed.

1 5. FairPoint will investigate whether a new multi-service access node
2 (MSAN) location should be established to serve the area.

3 **Q.** Please describe how your cost estimates for this program were developed.

4 **A.** (By Mr. Brown) We examined the number of access lines that were in each of the
5 central offices. We estimated penetration rates, which told us the number of
6 expected DSL ports required. We calculated how many network elements would
7 be required to meet that demand, and factored in installation and engineering. We
8 also calculated the cost of the routers in the core network.

9 FairPoint utilized the same process with the DLCs. Based on past experience,
10 FairPoint also added estimated expenditures for power, air conditioning and
11 racking upgrades. FairPoint used an average cost from past experience to
12 estimate the amount of fiber splicing and cabinet upgrades that would be needed
13 in order to retrofit these outside plant cabinets for the new MSAN units.

14 **Q.** When FairPoint deploys broadband in accordance with the plan, what level of
15 bandwidth will this program provide?

16 **A.** (By Mr. Brown) If you look at the actual band width to the customer, FairPoint
17 intends to mirror the existing 1.5 and 3-megabit offerings that Verizon has today.
18 However, FairPoint's plan contemplates the use of ADSL 2+. Therefore,
19 FairPoint will be able to increase bandwidth in the future to between six to ten
20 megabits, depending on loop length. From DLC to central office, the back-haul

1 transport will be 1 Gigabit. The access (central office to central office) and core
2 infrastructure (router to router) will be at the 10-Gigabit bandwidth level.

3 Q. Does the architecture that FairPoint plans to utilize differ from what Verizon uses
4 today?

5 A. (By Mr. Brown) Yes. Verizon presently uses an industry standard ATM over
6 SONET type of delivery mechanism. This delivery mechanism is a star-type
7 architecture, which means that all these network elements have to come back to a
8 single point where traffic is aggregated. This network, similar to all LEC
9 networks, was designed for voice services and is reliable and effective. The
10 FairPoint network will not use ATM and SONET, which are separate pieces of
11 equipment. The core of the FairPoint network will be MPLS. In the access
12 fabric, the FairPoint network will be Ethernet-based. Therefore, each network
13 element along a route is able to share the 10 gigabits of bandwidth, allowing for
14 much more efficient use of the available band width. This network is designed to
15 have the same failover capability and reliability as the traditional ATM over
16 SONET network, but is designed for data delivery instead of voice services.

17 Moreover, since data is not required to come back to a single aggregation point, if
18 there are different locations along the network, such as businesses or schools, for
19 example, FairPoint will be able to build local area network (LAN) connectivity
20 between multiple points along the network without having to bring all the traffic
21 back to an aggregation point. Suppose that a school district in Littleton requests

1 connectivity between four different schools. With the architecture today, the
2 traffic must be brought to Manchester, connected and sent back. With the
3 planned FairPoint architecture, the traffic can remain within network and will not
4 need to be brought to the aggregation point in Manchester. Thus, the FairPoint
5 architecture will result in a much more efficient use of bandwidth.

6 Another benefit relates to television across Internet protocol (IPTV), which uses
7 IP multi-cast. IP multi-cast is a protocol that allows a single source of signal to be
8 delivered to multiple points. The video signal is generated at the Head End and
9 then placed on the network. The MSAN units that we use can duplicate that data
10 packet instead of having to request a separate data packet from the source. With
11 this capability, the bandwidth usage can be maximized.

12 With the FairPoint architecture, every network element along that Ethernet ring
13 will have multi-cast capabilities. For example, if TV is being broadcast from
14 Manchester, once that channel hits that network -- it is around three and a half
15 megabits -- every network element along that path can duplicate the broadcast and
16 send it on to the customer. As an example, Super Bowl Sunday will be a low
17 bandwidth usage day, even though many more people are watching television,
18 because the network is multi-casting that programming. A single packet stream is
19 sent across the network and copied resulting in lower bandwidth usage. This
20 same multi-cast capability also allows for an educational center, such as the

1 University of New Hampshire, to broadcast a lesson from Durham to multiple
2 locations on the network with minimal impact on the bandwidth of the network.

3 I would also like to add that this type of architecture, using the MSAN units, will
4 provide FairPoint with the ability to offer multiple services. For example, the
5 equipment that Verizon uses today strictly offers ADSL. The equipment that
6 FairPoint will employ can accommodate ADSL2+, but also VDSL2 or very high
7 bit-rate DSL. It can also offer bonded ADSL2+, taking two ADSL circuits and
8 bonding them together to increase bandwidth. This equipment will also
9 accommodate fiber to the home.

10 Q. How does this architecture compare with the architecture used by the existing
11 FairPoint companies in New Hampshire?

12 A. (By Mr. Brown) FairPoint has deployed this proposed architecture elsewhere but
13 not in the New England properties to date. FairPoint was an early adopter of DSL
14 technology in New England and, as a result, much of that technology is of an
15 earlier vintage. The existing FairPoint architecture in New Hampshire is similar
16 to the existing Verizon network. It is a star ATM-over-SONET type network.

17 FairPoint has deployed this network architecture in several of its properties
18 including Chatham, New York, Port St. Joe, Florida, Yelm, Washington,
19 Ellensburg, Washington, Peculiar, Missouri, and Platt City, Missouri. IPTV
20 services are presently offered in Yelm, Washington, and are under development in
21 Missouri across the IP/Ethernet based network. These services include 145 plus

1 channels of Video, 45 channels of Music and Video on Demand. FTTH has been
2 deployed from this same platform in several new Greenfield subdivisions located
3 in the States of Washington, Florida and Missouri using both GPON and Active
4 Ethernet.

5 Q. Why does the FairPoint broadband build-out proposal not involve building fiber
6 to the premises?

7 A. (By Mr. Brown) The initial broadband roll-out concentrates on getting the
8 necessary equipment in place to support the bandwidth requirements for all
9 methods of delivering broadband to the consumer. In addition, we have
10 concentrated on reaching customers that presently are using dial up service for
11 internet access. That way more customers will be able to obtain access to
12 broadband services right away. The proposed platform lays a foundation for
13 future methods of delivering broadband including FTTH. While the initial
14 broadband plan does not include FTTH, this network design provides the ability
15 to use FTTH in future expansions. FairPoint has begun deploying FTTH in
16 several of existing locations using this network equipment and architecture. The
17 present FTTH builds are primarily in new subdivisions, new multiple family
18 dwellings and new office complexes. FairPoint does not presently have large
19 scale FTTH overbuilds planned for New Hampshire primarily due to the
20 economics and associated length of deployment of FTTH technology, particularly
21 in the more rural areas of the State. FairPoint's approach is to build a broadband

1 network to reach as many customers presently without access to any broadband
2 services as quickly as possible, and at the same time have the infrastructure in
3 place to provide for future services including FTTH. FairPoint also will continue
4 to support existing FTTH deployments made by Verizon.

5 Q. Mr. Brown, do you agree with the Staff's suggestion that FairPoint be required to
6 extend its broadband build out plan to ninety-five percent (95%) of New
7 Hampshire customers?

8 A. No - not as stated by Staff's consultants. FairPoint understands and generally
9 supports the goal of expanded broadband service for the State of New Hampshire.
10 FairPoint believes, however, it would be more reasonable to work with other
11 providers (such as wireless, for example) to attain this goal. Each provider would
12 not have to bear the financial burden alone of meeting a 95% broadband
13 capability at the customer level to meet the goal. The network proposed by
14 FairPoint uses standards based Ethernet protocol which allows for seamless
15 interconnections with other broadband service providers.

16 In addition, the technological solution for the expansion of broadband to un-
17 served areas of New Hampshire should be determined by balancing the highest
18 level of service with the lowest cost. FairPoint's position is further set forth in the
19 pre-filed rebuttal testimony of Dr. Douglas C. Sicker filed in this Docket.

20 Q. What is FairPoint's intention with regard to the pricing of broadband services?

1 A. (By Mr. Brown) The pricing will mirror the pricing offered by Verizon today.

2 Q. The Staff's consultants have questioned whether FairPoint has obtained the
3 necessary records to prepare a well founded broadband plan for the State of New
4 Hampshire. Can you please address this concern?

5 A. (By Mr. Brown) Certainly. My understanding is that the Staff had several
6 suggestions concerning information FairPoint must consider in terms of drafting a
7 well founded broadband plan for New Hampshire. I would summarize the issues
8 and respond as follows:

9 • whether sufficient spare fiber capacity in the interoffice transport network exists
10 to support the plan – FairPoint has been provided access to this data in the
11 Verizon Portland (Maine) Engineering Data Room.

12 • whether sufficient spare fiber capacity to each of the fiber-fed remote digital
13 loop carrier cabinets identified within the plan exists to support the plan –
14 FairPoint has been provided access to this data in the Portland Engineering Data
15 Room. While FairPoint was not able to verify actual usage, FairPoint was able to
16 identify the fiber cross sections. Based upon what was visibly fed by the fiber,
17 FairPoint has a high level of comfort that fiber constraints will be extremely
18 minimal.

19 • whether there is sufficient space in each of the remote DLC cabinets for the
20 installation of the equipment required to support DSL service – FairPoint was

1 provided a database that included some cabinet sizes. This list was not exhaustive
2 but did provide a solid cross section. Based on past experience and knowledge of
3 the cabinets and equipment shown to reside in the cabinet, FairPoint made an
4 informed engineering decision on where to budget new subtended cabinets.

5 • which DLC sites are copper fed and which are served by integrated, rather than
6 universal subscriber loop carrier systems. – FairPoint has been provided with this
7 information in the RT database provided by Verizon.

8 • If the copper distribution lines connecting the remote DLC cabinets to the
9 customers' premises will be capable of supporting DSL service. – One of the
10 features of ADSL2+ is the ability to withstand some copper disturbances
11 including bridge-taps. If the copper circuit presently provides voice services, is
12 non-loaded, and the total loop length is less than eighteen thousand (18,000) feet,
13 then the circuit will support ADSL2+ at the data rates presently offered.

14 • whether equipment rack space is available in the central offices for the
15 installation of the DSL equipment – I note this issue normally is associated with
16 final engineering and not budgetary engineering and planning. Based upon the
17 due diligence to date, however, sufficient budgetary funds were set aside in the
18 State of New Hampshire to provide for additional racking and power system
19 upgrades.

20 • If sufficient power is available in the central office to support the new
21 equipment - I note this issue normally is associated with final engineering and not

1 budgetary engineering and planning. Sufficient budgetary funds were set aside in
2 the State of New Hampshire to provide for additional racking and power system
3 upgrades. With this in mind, the MSAN systems FairPoint references specify a
4 normal power draw of approximately 3 AMPS DC power per 48 lines of ADSL2+
5 service and also only 3 AMPS DC power for the associated transport equipment.
6 This is not a high power draw and, therefore, the impact on DC power plants is
7 forecasted to be minimal. The MPLS routers will have a sufficient power draw to
8 warrant possible power upgrades and these are included in the budget line
9 outlined above. This involves only 8 locations so the total impact to the project
10 is forecasted to be minimal.

11 While there may be some additional concerns, I note additional work would be
12 performed as part of the final engineering process and not as part of the process
13 for budgetary engineering and planning.

14 Q. Does a technology solution exist that allows a line to support DSL service at
15 acceptable throughput levels when a load coil is present on the line?

16 A. (By Mr. Brown) Yes. FairPoint has used products from Charles Industries,
17 including Smart Coil Technology and Adrenaline, to address this issue. These
18 products allow FairPoint to provide the Starter Package presently offered by
19 Verizon (768 Kbps downstream) at a distance of up to twenty-two thousand
20 (22,000) feet.

1 Q. What is your confidence level with regard to the broadband build-out cost that
2 you're projecting?

3 A. (By Mr. Brown) My confidence level is very high. We have taken into
4 consideration many of the factors that FairPoint has encountered in the past
5 because we have done this type of network before. We have as much experience
6 in rural broadband addressability as other carriers in the industry. We have built
7 in some contingencies in the event that we do not have the anticipated access to
8 dark fibers. We plan to use wave-division multiplexing equipment if dark fibers
9 are not available. This contingency would allow us to glean additional capacity
10 from a fiber route that is currently full. We have added in dollars for necessary
11 fiber splicing. We have added in extra dollars for retrofitting digital carrier
12 cabinets. We also added in dollars for retrofitting central office locations. In
13 short, we have built in the contingencies that we feel are necessary to build
14 FairPoint's business as contemplated in these proceedings.

15 Q. Will this contemplated build-out require retraining of existing Verizon
16 employees?

17 A. (By Mr. Brown) Yes, it will. FairPoint has factored the necessary funds into the
18 budget in order to perform that training.

19 Q. How long is the training contemplated to take?

1 A. (By Mr. Brown) The normal training -- the basic training all the way through to
2 the advanced training -- is three weeks per employee.

3 Q. Have you reviewed the workforce requirements that will be associated with
4 FairPoint's broadband deployment plan?

5 A. (By Mr. Brown) We have started that analysis. I am identifying the number of
6 crews that will be necessary to go out and begin this work. Presently in the State
7 of New Hampshire, I estimate that around three crews of two people will be
8 required to be able to do the installation work. I also will need three crews to do
9 the outside plant construction and necessary fiber splicing. That will be a separate
10 project.

11 Q. Based on your analysis, will FairPoint have the requisite work force to be able to
12 accomplish this project?

13 A. (By Mr. Brown) Yes. We have analyzed the central office equipment installers
14 that Verizon has today. Once they are trained, we will look at their workload. If
15 it is necessary, then in accordance with the terms of the applicable collective
16 bargaining agreements, we will consider whether to augment the staff with
17 additional full-time employees for a temporary period. Once the initial install is
18 complete, we do have the work force in place to maintain it.

19 Q. Can you train those temporary union employees in a timely manner for this
20 project?

1 A. (By Mr. Brown) Yes. Absolutely. It would be the same training program that
2 basically would take place with the imbedded employees. So it would be a three-
3 week training course.

4 Q. How do your projected capital expenditures for broadband deployment compare
5 on a historical basis with Verizon's capital expenditures?

6 A. (By Mr. Brown) The next generation MSAN equipment that FairPoint is
7 proposing uses IP/Ethernet protocols. All computers "speak" IP/Ethernet
8 language, and we are taking that Ethernet and using it throughout the network.
9 Existing DSL technologies take that IP/Ethernet language and place it in ATM
10 cells then pack those cells into a SONET payload via the SONET equipment
11 which was designed for voice traffic. Each one of these steps requires additional
12 equipment. FairPoint "flat-lines" that process. Instead of converting from
13 Ethernet to ATM to SONET and then going to the other end and doing that in
14 reverse, converting from SONET to ATM back to Ethernet, FairPoint retains
15 Ethernet from end to end, which is a much more cost-effective way of building
16 and requires fewer network elements.

17 Q. In public hearings and press articles, the unions have characterized the acquisition
18 of these properties by FairPoint as a choice that customers have between staying
19 with Verizon and receiving fiber-to-the-home versus being FairPoint customers
20 and having an obsolete broadband technology. Can you comment on that
21 characterization of the choice?

1 A. (By Mr. Brown) I can. FairPoint's network design supports DSL, fiber-to-the-
2 home and other technologies. FairPoint will have fiber connectivity to every
3 central office and many remote terminals, therefore, when the customer
4 applications require fiber connectivity, we will be in a good position in the very
5 near future to provide it. The fiber-to-the-home approach being promoted by the
6 unions would be very expensive and time consuming.

7 Q. Does the choice of technology for the FairPoint broadband build-out offer any
8 positive impacts on operating expense?

9 A. (By Mr. Brown) The choice offers a substantial positive impact. As I outlined
10 earlier, the network protocol stack -- taking the Ethernet to the ATM to the
11 SONET infrastructure -- requires network elements in place to be able to perform
12 properly. FairPoint's network will eliminate two of those network elements,
13 which will result in operational savings. In addition, where FairPoint has built
14 this type of network architecture in other territories we have found it to be cost-
15 effective and to require less maintenance once installed. Also, the existing ATM
16 switches and DSLAMs associated with legacy DSL networks have annual
17 maintenance fees associated with them. To date, FairPoint has not incurred
18 maintenance fees associated with the new next generation MSAN equipment
19 being proposed.

1 Q. It has been suggested by the Staff's consultants that FairPoint must perform
2 additional due diligence to be sure its budget figures are accurate with respect to
3 the broadband build out.

4 A. (By Mr. Brown) I understand the concerns expressed by Staff and its consultants.
5 However, FairPoint's due diligence has been extensive. FairPoint is not entering
6 into the transactions contemplated by the Joint Petition filed in this Docket with a
7 lack of knowledge concerning the existing network in New Hampshire.
8 FairPoint's due diligence analysis of the network has been very thorough in my
9 opinion.

10 FairPoint has been able to obtain sufficient information to build a budgetary
11 Broadband design. Customary engineering project design dictates the following
12 steps are normally followed on a project of this scope:

- 13 a. Determine conceptual Design – (complete)
- 14 b. Determine Feasibility – (complete)
- 15 c. Determine Budgetary Pricing – (complete)
- 16 d. Finalize Design and Project Scope – (complete)
- 17 e. Write up project specific Request for Proposal for equipment selection -
18 (complete)
- 19 f. True up budget – (on schedule)
- 20 g. Finalize Budget and present Design and Scope for approval - (on
21 schedule)
- 22 h. Prepare Final Engineering Work Orders – (on schedule)

23 FairPoint has been provided access to the information required to build the budget
24 and keep the project on schedule.

1

CONCLUSION

2 **Q.** Will FairPoint's plans for development of the network generally, and specifically
3 deployment of broadband, benefit the people of the state of New Hampshire?

4 **A.** (By Mr. Harrington and Mr. Smee) Absolutely.

5 (By Mr. Brown) Yes. FairPoint plans to build a broadband network to afford
6 availability into the next generation of broadband services instead of retaining
7 services at the existing technology, and to expand broadband to a greater
8 percentage of New Hampshire households in a shorter period. This will be a great
9 benefit for all of New Hampshire.

10 **Q.** Does that conclude your testimony?

11 **A.** (By the panel) Yes, it does. Thank you.

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Exhibit BHS-1