

**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 Intervenor, 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 Intervenor 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 Intervenor 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 Intervenor concerning the  
12 IOPs, JOAs, among other issues. FairPoint should be provided with the  
13 opportunity to work cooperatively with these Intervenor 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.

**PROVISIONING OF WHOLESALE SERVICES**

1

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 1. 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.