

NTCA 2005 BROADBAND/INTERNET AVAILABILITY SURVEY REPORT

September 2005

DISCLAIMER: Data from the survey has been presented as reported.

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EXECUTIVE SUMMARY

For the last seven years, the National Telecommunications Cooperative Association (NTCA) has conducted its annual Broadband/Internet Availability Survey to gauge the deployment rates of advanced services by its member companies.¹ In the summer of 2005, NTCA sent an electronic survey form to each of the companies in NTCA's membership database; 161 members (29%) responded.

Ninety-six percent of the 2005 survey respondents offer broadband to some part of their customer base, up from 92% in the 2004 survey and a dramatic increase from the 58% of the 2000 survey respondents who offered broadband. Respondents indicated that they use a variety of technologies to provide broadband to their customers: 99% of those who offer broadband utilize digital subscriber line (DSL); 19% unlicensed wireless; 12% fiber to the home (FTTH) or fiber to the curb (FTTC); 10% cable modem; and 9% licensed wireless. Only 29% of respondents to the 1999 survey offered DSL service, and none offered wireless broadband.

Fifty-six kilobits per second (kbps) service is available to 100% of respondents' customers. Seventy-four percent can receive 200 to 500 kbps service; 72% 1 megabit per second (Mbps) (up sharply from 57% a year ago); and 31% 3 Mbps. On average, 21% of respondents' customers subscribe to 56 kbps service; 12% subscribe to 200 kbps to 500 kbps service; 5% to 1 Mbps; and 4% to 3 Mbps offerings. While the dial up take rate is unchanged from last year, subscribership to all levels of broadband service is up dramatically.

Eighty-five percent of survey respondents indicated they face competition in the provision of advanced services from at least one other service provider, up from 76% a year ago. This continues a long-term trend of increasing competition, as only 66% of respondents to the 2003 survey indicated they faced competition and only 43% in the 1999 survey. Current competitors include national ISPs, satellite broadband providers, cable companies and electric utilities. Respondents are taking numerous marketing steps to increase broadband take rates, including price promotions, bundling of services, free hardware and free software. More than one-third of respondents find it difficult to compete with price promotions offered by competitors.

Sixty-two percent of those respondents with a short-term fiber deployment strategy plan to offer fiber to the node to more than 75% of their customers by year-end 2005, while

¹ Following the completion of the 2001 survey in December 2001, it was decided that subsequent Broadband/Internet Availability Surveys would be conducted in the first half of the year in order to capture year-end data. Consequently, no survey was conducted and no survey report published in calendar year 2002.

83% plan to offer fiber to the home to 25% of their customer over the same time frame. Cost is the most significant barrier to wide deployment of fiber, followed by regulatory uncertainty, long loops, low customer demand, and obtaining cost-effective equipment. Throughout the history of the survey, low demand has been a declining concern, while deployment cost has steadily grown.

Four percent of respondents currently offer voice over Internet protocol (VoIP) service, up dramatically from less than 1% last year. Fifty-seven percent face competitors who do so, versus 42% a year ago. Seventy-one percent of respondents have plans to offer VoIP themselves in the foreseeable future. Five percent have providers offering, or planning to offer broadband over power lines (BPL) within their service area. Forty-two percent of respondents offer video service to their customers. Fifty percent are utilizing hybrid fiber coax (HFC) to provide video, and 46% DSL.

Eighty-six percent of survey respondents classified the process of obtaining financing for broadband projects as fairly to moderately easy, up dramatically from 68% a year ago.

INTRODUCTION

In the summer of 2005, the National Telecommunications Cooperative Association (NTCA) surveyed its members on their activities in the areas of providing broadband services and Internet availability to their members/customers. NTCA is a national association of approximately 560 local exchange carriers in 44 states that provide service primarily in rural areas. All NTCA members are small carriers that are “rural telephone companies” as defined in the Telecommunications Act of 1996 (“Act”). While some offer local exchange service to as few as 44 lines and a small handful to 90,000 or more, nearly 50% of NTCA members serve between 1,000 and 5,000 lines. Population density in most member service areas is in the 1 to 5 customers per square mile range. Approximately half of NTCA’s members are organized as cooperatives and the other half are commercial companies.

This latest broadband survey is a follow-up to similar surveys conducted in recent years by NTCA, and seeks to build upon the results of those surveys². This year’s survey asked about technologies used to provide broadband service, broadband availability and subscription rates, prices charged, quantity and type of competition, broadband marketing efforts, fiber deployment, emerging technologies, finance and availability of capital, and also provided an opportunity for respondents to provide and specific comments they wished to share.

OVERVIEW OF SURVEY

The 2005 NTCA Broadband/Internet Availability Survey was conducted online. Member companies were provided with a URL through which they could access the survey. Every effort was made to minimize the reporting burden on the survey respondents.

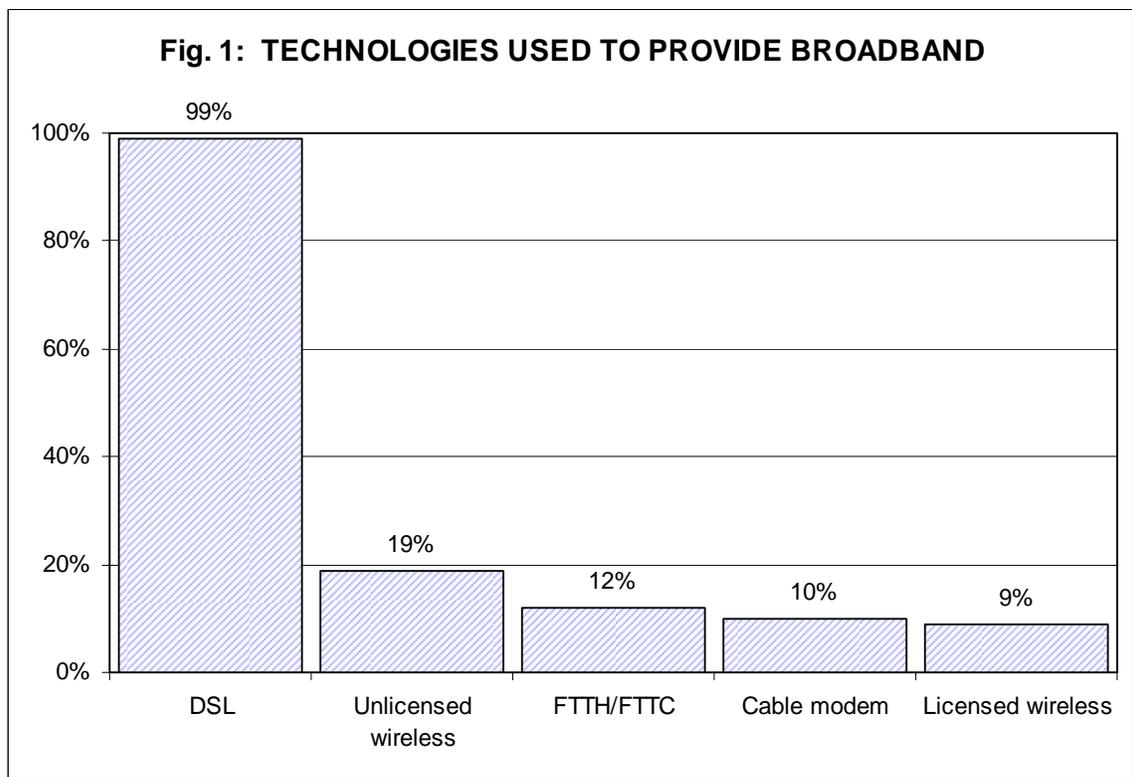
The survey itself was organized into eight sections. The first section was comprised of general questions about the respondent’s current operations and future plans. The second section dealt with competition and marketing; the third, fiber deployment; the fourth, voice over Internet protocol (VoIP); the fifth, broadband over power lines (BPL); the sixth, video; the seventh; finance/availability of capital; and the eighth, an opportunity for respondents to offer any miscellaneous thoughts.

² Copies of this and previous NTCA survey reports may be downloaded from the NTCA website, www.ntca.org.

SURVEY RESULTS

The survey URL was distributed via email and fax to all of the member companies in NTCA’s database. The messages contained instructions for online access to the survey. Responses were received from 161 member companies, a 29% response rate³.

The average survey respondent serves 6,388 residential and 1,777 business lines; a few large companies skew these numbers upward, hence the median respondent serves 3,586 residential and 818 business lines. Ninety-six percent of survey respondents offer broadband⁴ service to some part of their customer base. Those respondents who provide broadband indicated that they use a variety of technologies to serve their customers: 99% utilize digital subscriber line (DSL); 19% unlicensed wireless; 12% fiber to the home (FTTH) or fiber to the curb (FTTC); 10% cable modem; and 9% licensed wireless.⁵ (See Figure 1.)



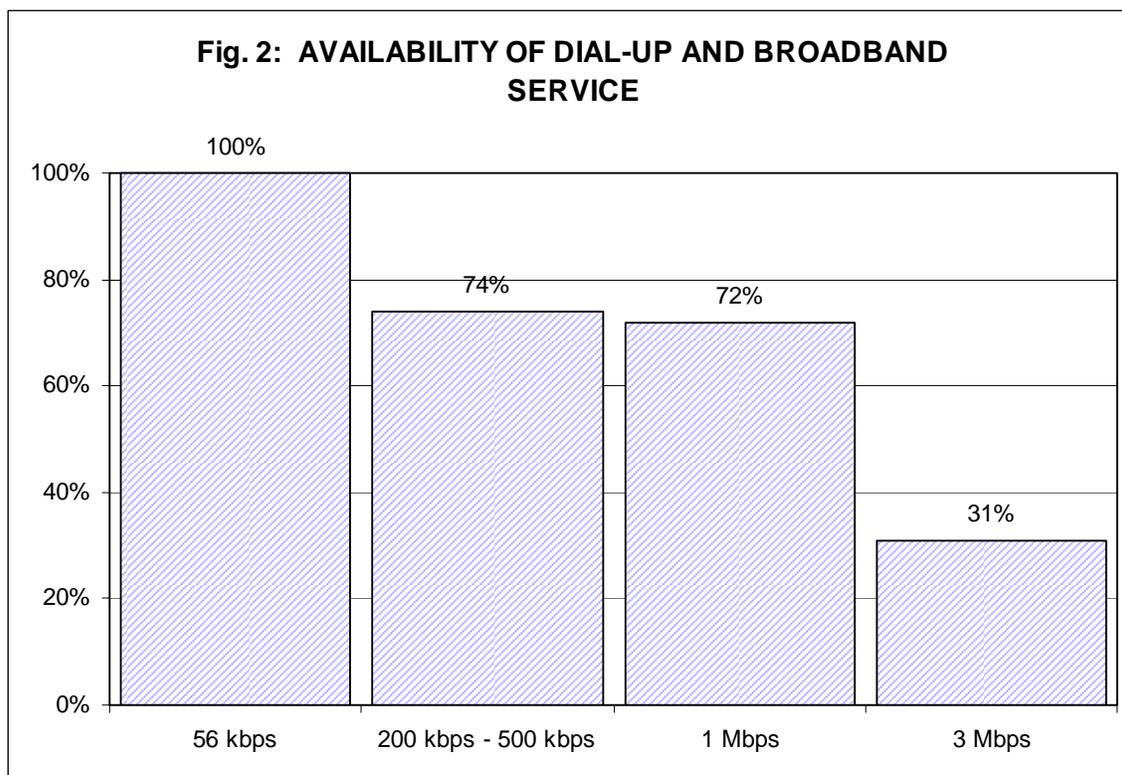
³ Based on the sample size, results of this survey can be assumed to be accurate to within $\pm 7\%$ at the 95% confidence level.

⁴ For the purpose of this survey, broadband is defined as throughput of 200 kilobits per second (kbps) in one direction.

⁵ Percentages sum to greater than 100% as some respondents utilize more than one technology to serve their customers.

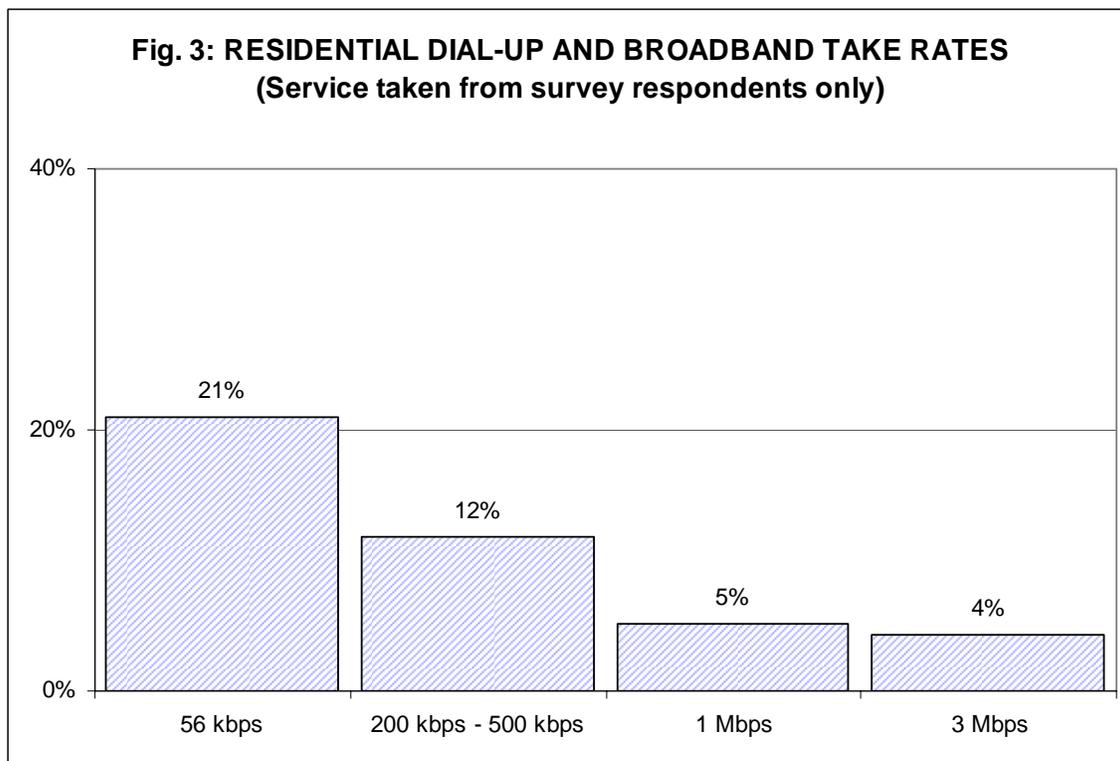
More than three-quarters (81%) of the survey respondents are utilizing fiber fed nodes to extend the reach of DSL. Thirty-six percent indicated that the average distance from the digital loop carrier (DLC) to the end user was 18 thousand feet (kft) or greater; 34% between 15 and 18 kft; 23% between 9 and 15 kft; and 7% 9 kft or less.

Fifty-six kilobits per second (kbps) service is available 100% of respondents' customers. Seventy-four percent can subscribe to 200 kbps to 500 kbps service; 72% to 1 megabit per second (Mbps); and 31% 3 Mbps. (See Figure 2.)



On average, 21% of respondents' residential customers subscribe to their 56 kbps service; 12% subscribes to 200 kbps to 500 kbps service; 5% subscribes to 1 Mbps service, and 4% to 3 Mbps service.⁶ (See Figure 3.) Average prices charged range from \$17.95 to \$21.95 per month for unlimited dial-up service, to \$23.95 to \$39.95 for cable modem service, \$29.95 to \$39.95 per month for DSL service, and \$34.95 to \$49.95 for wireless broadband service.

⁶ It should be noted that actual rural broadband subscription rates may be significantly higher than the numbers shown here, as survey respondents are joined by a wide variety of competitors in the provision of broadband services within their service area.



Twenty-five percent of survey respondents currently utilize wireless broadband as a means of supplementing DSL—in other words, they utilize wireless technology as a means of reaching unserved broadband customers in areas where DSL deployment is not technically feasible. An additional 41% indicated they are considering doing so.

Survey respondents have come to view the provision of broadband as a crucial part of their operations. Eighty percent consider broadband deployment very important for their company’s bottom line, while 17% consider it somewhat important. With respect to respondents’ standing in the community as the telecommunications provider of choice, 93% consider broadband deployment very important and 6% somewhat important.

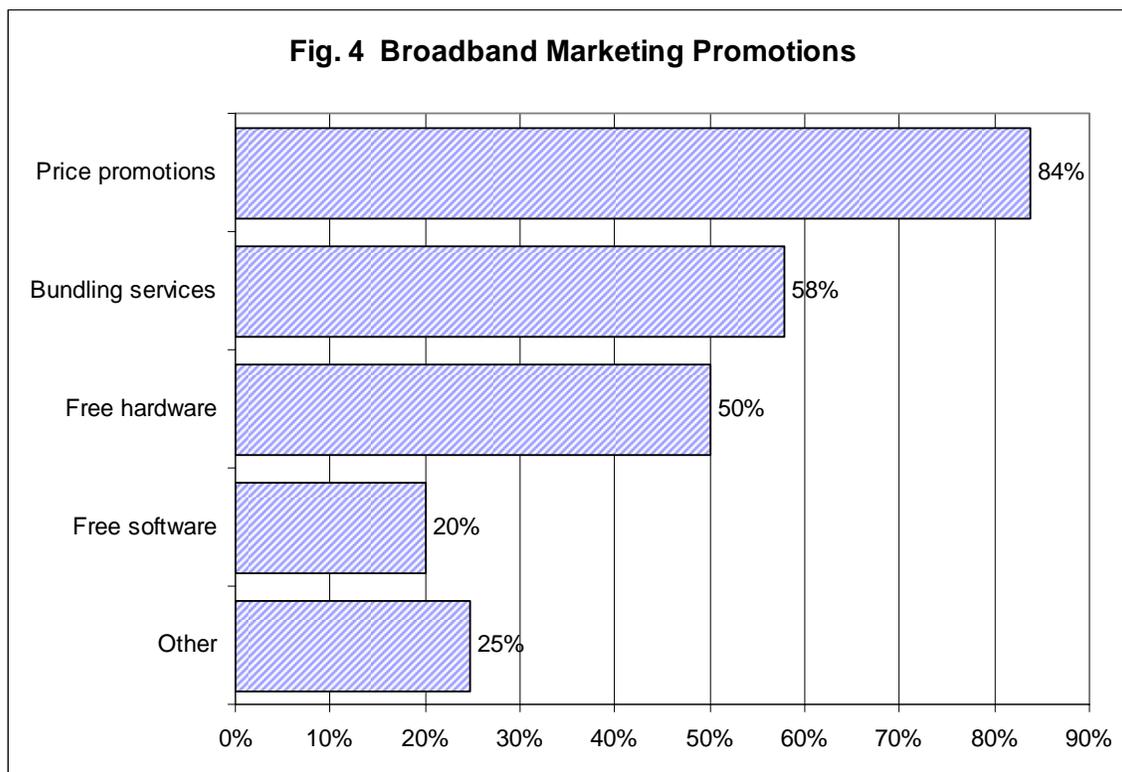
Competition/Marketing

Competition in broadband is becoming more prevalent and more varied: 85% of survey respondents indicated that they face competition from at least one other service provider for at least some of their customers (up from 76% in the 2004 survey.) The typical respondent competes with five national Internet service providers (ISPs), two satellite broadband providers, one cable company and one electric utility. Other competitors mentioned include local ISPs, neighboring cooperatives and entrepreneurs. Fifty-nine percent of those respondents facing competition indicated that their competitors were

serving only the cities and towns in their service areas, while 41% said that competitors were serving customers throughout their service area.

The prospect of cable companies developing the capability to offer voice service is causing respondents some discomfort. The majority—52%—is very concerned, while 25% are somewhat concerned.

Rural ILECs are taking numerous steps in the marketing arena to increase broadband take rates. Eighty-four percent of survey respondents' companies are offering price promotions (up from 63% a year ago); 58% are bundling services (up from 43%); 50% are offering free hardware (up from 42%); 20% offer free software (down from 21%), and 25% are offering other promotions, such as free customer premises equipment (CPE) installation.⁷ (See Figure 4.) Thirty-five percent of respondents find it difficult to compete with price promotions offered by competitors (up from 26% last year); while 26% struggle to match competitors' service bundling (up from 17%). Overall, 32% consider their marketing efforts to be very successful, while 65% consider them moderately successful.

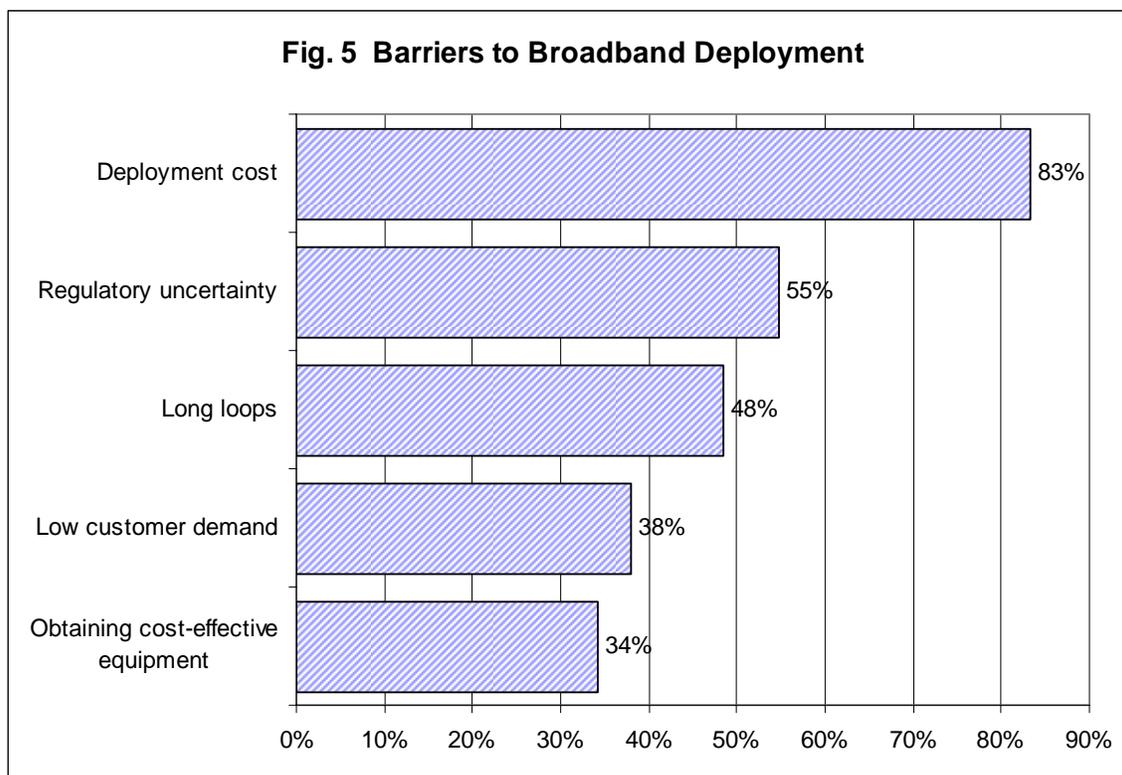


⁷ Totals exceed 100% as respondents' companies may be offering more than one marketing promotion.

Fiber Deployment

Survey respondents indicated that their companies have some plans to deploy fiber to the curb (FTTC) and fiber to the home (FTTH) to some customers, but these plans are extremely limited. While 62% of survey respondents with a short-term fiber deployment strategy expect to offer fiber to the node to more than 75% of their customers by the end of 2005, 69% plan to provide FTTC and 83% plan to offer FTTH to 25% of their customers. In the longer term, 69% of respondents plan to offer fiber to the node to more than 75% of their customers by year-end 2007; 12% and 6%, respectively, plan to offer FTTC or FTTH to that same percentage of their customers.

The cost of fiber deployment was identified as a significant barrier to widespread deployment by 83% of survey respondents. Regulatory uncertainty was the number two barrier, at 55%, followed by long loops (48%), low customer demand (38%), and obtaining cost-effective equipment (34%).⁸ (See Figure 5.)



⁸ Totals exceed 100% as respondents were allowed to select more than one barrier.

Sixty percent of survey respondents see modest to significant benefits to fiber deployment versus the cost of deployment; 84% expect to see modest to significant benefits versus the cost of deployment three years from now.

Voice Over Internet Protocol (VoIP)

Four percent of survey respondents currently offer voice over Internet protocol (VoIP) service to their customers, up from less than 1% one year ago. Fifty-seven percent face competitors in their service area who do so, up from 42%. Seventy-one percent of respondents have plans to offer VoIP service in the foreseeable future. This “if you can’t beat ‘em, join ‘em” mentality is evidenced in the fact that forty percent of respondents perceive VoIP to pose a significant threat to their current operations (down from 64% last year), while 46% perceive VoIP as a moderate threat (up from 28%).

Broadband Over Power Lines (BPL)

Five percent of survey respondents have providers offering, or planning to offer, broadband over power lines (BPL) service within their service area, up from 4% last year. Ten percent perceive BPL to pose a serious threat to their operations (down from 22% last year), while 43% perceive BPL as a moderate threat (nearly unchanged from last year’s 42%).

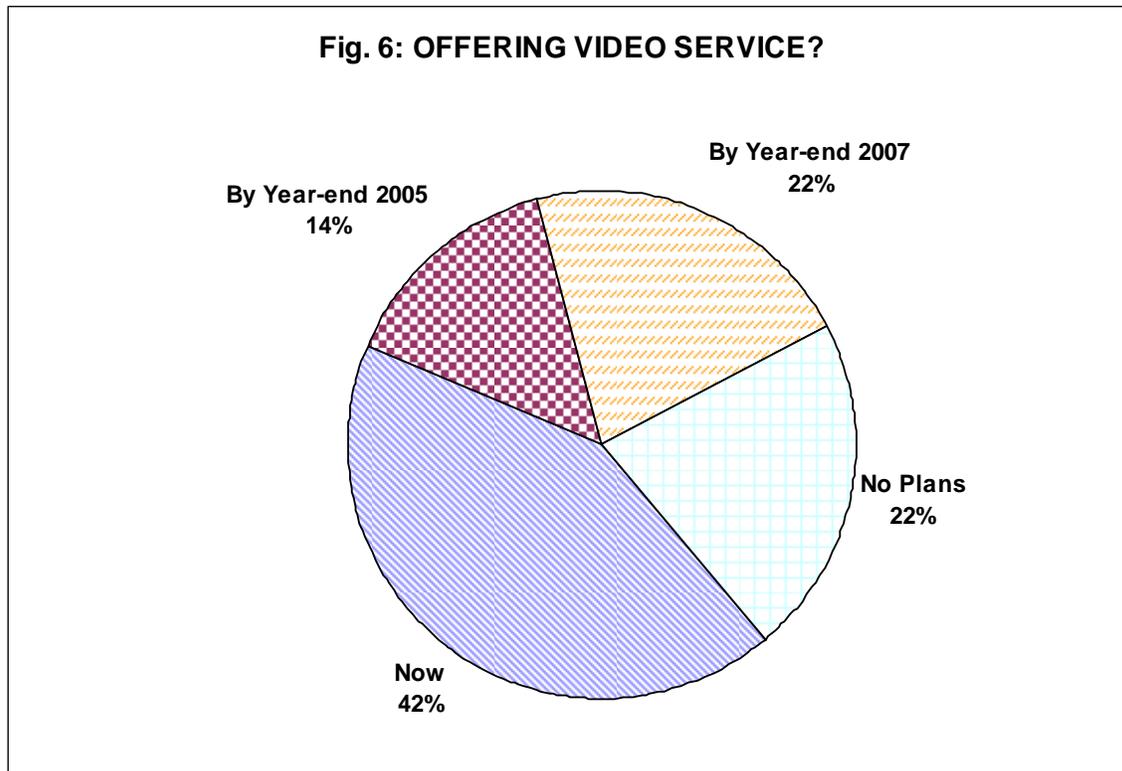
Video

Forty-two percent of survey respondents offer video service to their customers. Ninety-four percent of those offer video under a cable franchise, while 6% offer video as an Open Video System (OVS) pursuant to Part 76, Subpart S of the Telecommunications Act of 1996. Fifty percent are utilizing hybrid fiber coax (HFC) to offer video service, and 46% DSL.

Of those respondents not currently offering video, 26% (14% of all respondents) plan to do so by year-end 2005, and 37% (22% of all respondents) expect to do so by year-end 2007. Thirty-seven percent (22% of all respondents) currently have no plans to offer video service. Fifty-five percent plan to offer video service under a cable franchise, and 30% as an OVS. (See Figure 6.)

Finance/Availability of Capital

Eighty-six percent of survey respondents classified the process of obtaining financing for broadband projects as fairly to moderately easy, up from 68% in 2004.



Miscellaneous

Survey respondents were asked what specific actions—on the part of the FCC, state regulators, etc.—would enable an accelerated pace of broadband deployment in the respondents service area. Their responses are presented in Appendix A of this report.

CONCLUSIONS

Broadband take rates show tremendous growth. In the 2005 survey, 12% of responding companies' customers subscribe to 200-500 kbps service, 5% to 1 Mbps service, and 4% to 3 Mbps service. These numbers compare to 8%, 2% and 2%, respectively, from the 2004 survey. Respondent company investment in broadband is finally beginning to pay dividends (broadband availability has dramatically exceeded take rates throughout the years NTCA has conducted this survey.)

Competition is widespread, varied, and growing. Eighty-five percent of respondents to the 2005 survey reported competition from at least one other broadband provider, up from 76% a year ago. This competition takes varying forms: national ISPs, satellite providers, cable companies, electric utilities, local ISPs, neighboring cooperatives and entrepreneurs. Survival in this competitive environment will hinge upon the ability to differentiate one's service offerings from those of the competitors.

Voice over Internet protocol (VoIP) will become a crucial service offering in the near future. While only four percent of survey respondents currently offer VoIP service, 71% have plans to do so in the immediate future. Such a widespread rollout is, in part, necessitated by the fact that 57% of respondents face competitors who currently offer VoIP service (up from 42% a year ago.) If customers demand a service, and competitors are willing to provide it, incumbents have little choice but to provide it or risk losing market share.

Price competition is becoming the next battleground. Traditionally, small rural carriers have differentiated themselves from their competitors on a customer service basis. Survey results, however, reveal that 84% of respondents are offering price promotions in an effort to increase broadband take rates—up from 63% last year. Such competition is hardly painless, however, as 35% find it difficult to compete with larger nationwide carriers on the basis of price, versus 26% last year. Price competition will place renewed importance on efficiency as a means of offsetting shrinking margins.

APPENDIX A

Q: What specific action(s) on the part of the FCC would enable you to accelerate the pace of broadband deployment in your service area?

We need to gain cost recovery through USF.

Competitive protection: Allowing other vendors to easily offer less expensive services to our customers limits our ability to expand service to hard to reach regions. Thus, rural customers suffer.

We need the assurance of ability to recover investment.

We need assurance there will be adequate revenue streams if access charges are reduced or eliminated. Equal treatment for different technologies that offer voice, video and data is a necessity. Trying to compete with state and municipal networks is hopeless if they can subsidize systems from revenue from other utilities or through taxes on their constituents. It is an extreme problem if they control right-of-way.

We need Network Access revenues and USF to remain available and stable.

Regulatory parity

We need regulatory certainty and intercarrier compensation certainty.

Guarantee USF and access settlements would remain at the same or near current levels for a period long enough to make the investment pay for itself. There are not enough customers to be able to afford the service without support.

We need some assurance of cost recovery.

Make broadband Internet a USF supported service.

Keep lowering the NECA DSL and Video rates

Require competitors to serve all customers, including rural area and not just the towns

Firm up RoR and USF

Maintain existing regulated telephone stream

Level the playing field, open up access to all types of toll, and deregulate DSL.

Long-term sustainability of USF

Viable solution for telcos on access reform

Without the assurance of regulators that stable access charges and USF will continue, I do not foresee our company deploying broadband over fiber or copper. However, we are looking at wireless through our deregulated subsidiary.

Compensation on investment

We need partial protection of our customer base i.e. no ETC status to wireless carriers at our embedded cost to justify the increased investment and to be able to secure financing.

Increase settlement on DSL lines.

Total deregulation and/or a level playing field for all participants. We all live or die by the same rules.

I would sustain the current level of support of cost recovery for facilities used for broadband as well as USF. Lowering the tariff rates for broadband services would also help to make the service more competitive.

Processing wireless license applications more efficiently.

Get bandwidth to rural areas ASAP at cheap rates like they are in metro areas. This is the main hindrance in getting low-cost, high-speed broadband Internet services to our customers. Lower cost of service to customer by reducing mandated fees and taxes, e.g. Excise Tax.

Statewide or national cable franchises would speed up other rural ILECs' video deployments, and could save company and customers money.

Ability to continue to provide broadband under NECA tariff

For small companies, making broadband a part of USF would be beneficial. Even though we offer broadband to 100% of our customer base, it is a costly service, and in order for rural customers to be able to afford it, the price needs to come down. Making it a part of universal service would assist in that endeavor.

Accelerated RUS approval

Cost recovery and regulation by FCC and NECA could play a big part in deployment. The FCC could impact rebroadcasting and contracts with satellite providers. It may be a stumbling block. Streaming video on the net will impact this as well.

NECA Pool Stability

The need to provide lifeline service on fiber is a large impediment.

Broadband should be a part of universal service.

Intercarrier Compensation Stability

There should be some method of cost recovery for broadband service.

Subsidies and continue USF support.

Regulatory certainty and USF for broadband.

Identical IP services should be regulated equally. Cable companies should not be given an unfair advantage over telephone companies when it comes to regulation of next generation IP type services.

Support cost of transport (satellite) to Internet backbone. Encourage additional satellite deployment.

Help to increase demand. We have built a network that can supply broadband services but now, we need more subscribers to realize the benefits of subscribing. To date we have an approximate 11% take rate for DSL services, but we have the ability to turn up thousands of customers. In the movie "Field of Dreams," Kevin Costner was motivated by a saying, "If you build it, they will come." You could also help by easing restrictions so that prices could be dropped and a profit could still be made. We make very little money off of DSL because most people object to the monthly fee. Two things need to happen: end the uncertainty of access reform, and make regulations provider/technology neutral.

Obviously, we need to know what the future for USF and inter-carrier compensation will be. We will have built-out seven exchanges with fiber-fed DLC's by mid-2006 using cash flow and RUS funds. RUS has approved funds to finish building out the remaining six exchanges, but we need to know what our revenue will look like before committing.

Fix RUS

We are currently in the NECA DSL tariff and it limits us to offering a maximum of 1500 by 512 Kilobit/second DSL Internet service. Our competitors offer 5000 by 768 Kilobit/second service and we would like to be competitive.

FTTP/FTTH support from the state commission, particularly concerning local power

Deployment of wireless broadband strategies such as 700 MHz would be easier to do if these types of offerings could be included in the NECA pools.

Stability of the revenue streams

Include broadband in USF support

Adopting a universal service type directive, providing support dollars for broadband in high cost, low density areas.

RUS has committed several communities in our service area to a wireless company through a broadband loan. Now, we are unable to obtain financing to serve these areas. We're not sure when or if the wireless company will build into these communities.

Secure USF and eliminate franchise authorities

We need to have regulatory and support funding certainty before we can make the decision to invest heavily in the fiber to the premise infrastructure we believe will be the premier broadband network required for future services.

Making Broadband eligible or a part of USF.

More grant money

Maintain title II classification of DSL service

Continue to permit rate of return on investment.

Only 1 ETC USF eligible carrier in rural areas, continued regulation of DSL/Broadband (e.g. investment/expenses recoverable via NECA pool)

Additional grant opportunities for rural expansion

Long term support stability that can't be taken away at the whim of politically connected (motivated and powerful) greedy competitors, legislators and regulators.

Regulatory uncertainty