

**BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, DC 20554**

In the Matter of: ()
A National Broadband Plan for Our Future () GN Docket Nos. 09-47, 09-51, 09-137
()

REPLY COMMENTS BY CONNECTED NATION

**NBP Public Notice # 18 – RELATIONSHIP BETWEEN
BROADBAND AND ECONOMIC OPPORTUNITY**

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INTRODUCTION

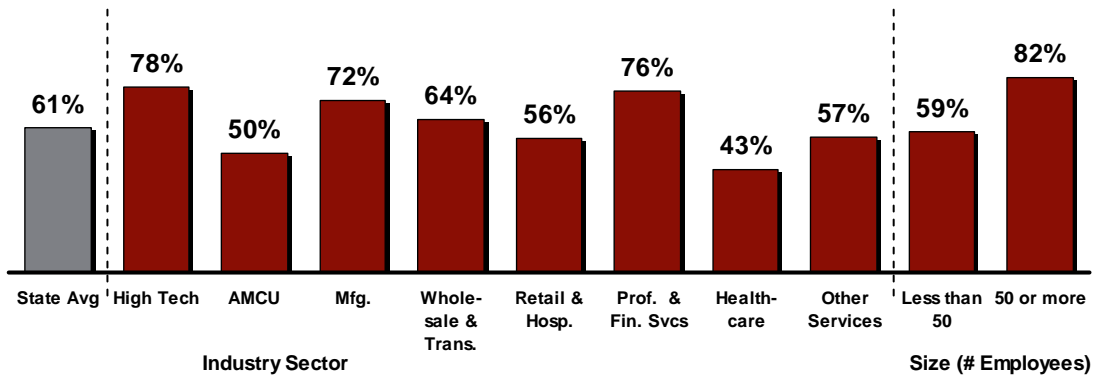
The following reply comments and data are respectfully submitted by Connected Nation in response to the FCC's request for comments on the Relationship between Broadband and Economic Opportunity, NPB Public Notice #18, GN Docket Nos. 09-47, 09-51, 09-137. Connected Nation's comments in this pleading cycle focus on data gathered from survey research conducted by Connected Nation in the states of Ohio and Tennessee in 2009. The data presented here complement other data submitted by Connected Nation in this National Broadband Plan docket. The structure of these reply comments follows the structure of the questions posed in NBP Public Notice #18.

A. RESPONSE TO SECTION II: BUSINESS ADOPTION AND USAGE

Connected Nation's business surveys conducted in the states of Tennessee and Ohio during 2009 provide insights into the level of broadband adoption by businesses, by sector and size. Figure 1 below illustrates adoption patterns across businesses in different sectors. While 61% of all businesses surveyed adopt broadband service, different adoption patterns exist across different sectors. Businesses within the high-tech sector are the most likely to adopt broadband (78%), followed by Professional and Financial Services (76%), the Manufacturing sector (72%), and Wholesale and Transportation (64%). The sectors least likely to subscribe to a broadband connection are Healthcare (43%), Agriculture, Mining, Construction and Utilities (AMCU, 50%), and Retail, Recreation, Food and Lodging (Retail & Hosp, 56%).

Adoption patterns also vary significantly by size of business. While 82% of businesses with more than 50 employees subscribe to broadband, only 59% of those with less than 50 employees do so.

Figure 1. Broadband adoption by business size & sector



Q: Which of the following describes the Internet service your business has?
(n=1,609 TN & OH businesses)

Source: July 2009 Connected Tennessee® and 2009 Connect Ohio® Survey of Businesses

B. RESPONSE TO SECTION II-A-III: WHAT ARE THE KEY AREAS WHERE BUSINESSES ARE UNSERVED AND UNDERSERVED?

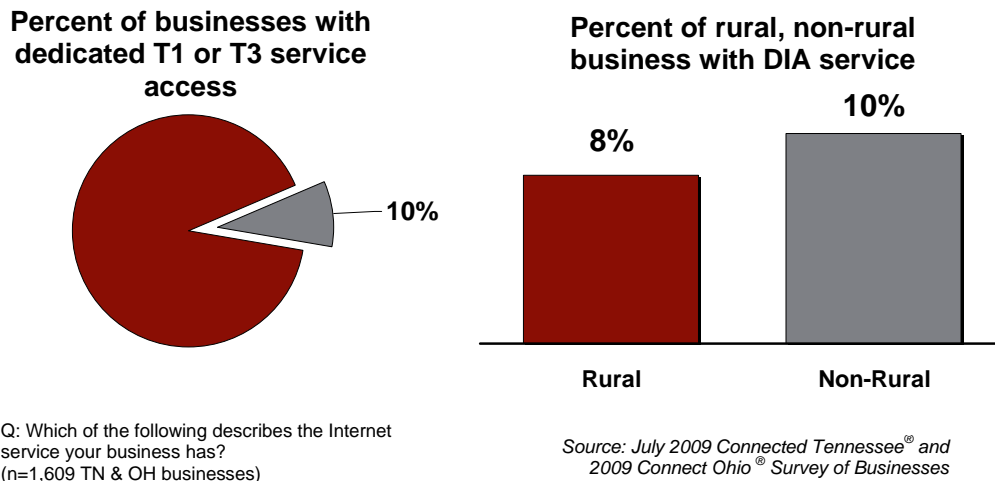
Connected Nation and the American Farm Bureau Federation submitted joint comments in response to this question during the Comment period of this Public Notice. This joint filing offers data regarding the rural, non-rural gap in broadband adoption and barriers to adoption for businesses as well as residential consumers. This joint filing is available at <http://fjallfoss.fcc.gov/ecfs/document/view?id=7020351377>.

C. RESPONSE TO SECTION II-B: WHAT TYPES OF BUSINESSES REQUIRE DEDICATED LINES?

Connected Nation’s data gathered in 2009 in the states of Tennessee and Ohio show that 10% of all businesses have dedicated T1 and T3 service access. Dedicated Internet

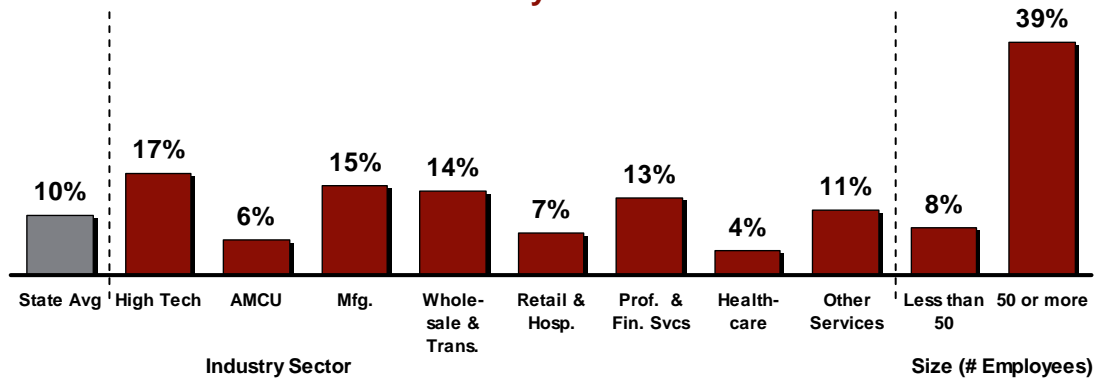
Access (DIA) line uptake varies across rural and non-rural businesses. While 10% of non-rural businesses report having a DIA line, 8% of rural businesses do so (Figure 2).

Figure 2. Dedicated Internet access (DIA)



The data reveals significant differences in DIA subscriptions when broken down by sector and size (Figure 3). While 39% of businesses with more than 50 employees subscribe to a DIA, only 8% of those with less than 50 employees do so. Across sectors the data reveals that the High-Tech sector is most likely to subscribe to a DIA (17%), followed by the Manufacturing sector (15%), Wholesale and Transportation (14%), and Professional and Financial Services (13%). The sectors least likely to have a DIA connection in Ohio and Tennessee in 2009 are Healthcare (4%), Agriculture, Mining, Construction and Utilities (AMCU, 6%), and Retail, Recreation, Food and Lodging (Retail & Hosp, 7%).

Figure 3. Percentage of businesses with dedicated Internet access service by sector and size



Q: Which of the following describes the Internet service your business has?
(n=1,609 TN & OH businesses)

Source: July 2009 Connected Tennessee® and 2009 Connect Ohio® Survey of Businesses

D. RESPONSE TO SECTIONS II-B-III & IV: HOW DO REQUIREMENTS DIFFER BASED ON SIZE AND INDUSTRY?

For broadband adoption patterns across various sectors and by size of business, see data under Section A, above. Figure 4 below reports data of average download speeds of broadband connection by sector and size among businesses that report to know their approximate contracted bandwidth.

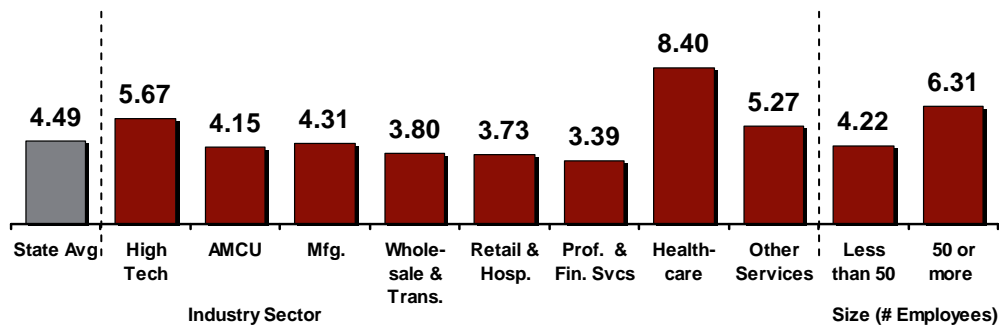
The average reported download speeds among all businesses is 4.49 Mbps. The data reveals some interesting patterns among sector differences. The sector that reports the highest download speeds on average is Healthcare, at 8.40 Mbps. This contrasts with adoption patterns for this sector reported in Figure 1 above, where the Healthcare sector has the lowest level of broadband adoption. While an estimated 61% of all businesses in Ohio and Tennessee subscribe to broadband, healthcare providers do so at a rate of only 43%. These data suggest that there may be large healthcare providers that contract high

capacity broadband connections, coexisting alongside small and less tech-savvy healthcare providers who are lagging behind in broadband adoption.

The High-Tech sector also reports high bandwidth on average at 5.67 Mbps, followed by Other Services (5.27 Mbps); the Manufacturing sector (4.31Mbps); and Agriculture, Mining, Construction and Utilities sectors (4.15 Mbps). Interestingly, the sector reporting the lowest average download speeds is Professional and Financial Services at 3.39 Mbps.

Average speeds also vary significantly by size of business. The average download speed for businesses with more than 50 employees is 6.31 Mbps, while businesses with less than 50 employees report an average download speed of 4.22 Mbps.

Figure 4. Average download speed by sector and size (among businesses that know their approximate bandwidth)



Q: To the best of your knowledge, what is the approximate bandwidth provided by your Internet service provider? (n= 573 TN & OH businesses with a broadband connection)

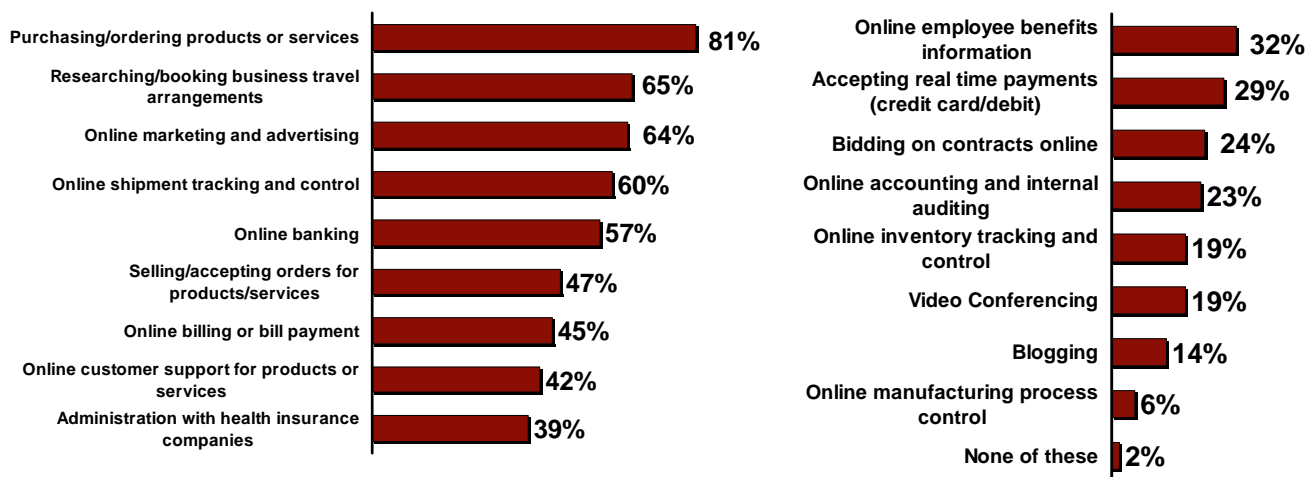
Source: July 2009 Connected Tennessee® and 2009 Connect Ohio® Survey of Businesses

E. RESPONSE TO SECTION II-C-I: HOW DO ADVANCED IT APPLICATIONS CONTRIBUTE TO PRODUCTIVITY? WHAT APPLICATIONS ARE CRITICAL?

Figure 5 below reports data on Internet application usage among businesses with a broadband connection in Tennessee and Ohio during 2009. Among business

respondents, 81% reported that they used online services to purchase or order products or services, making it the most often used Internet application; 65% report using the Internet for research and booking business travel; 64% for online marketing and advertising; 60% for online shipment tracking and control; and 57% for online banking. Among the least likely applications used by businesses are online manufacturing process control (6%); blogging (14%); video conferencing and online inventory tracking and control (both reportedly used by 19% of respondents).

Figure 5. Internet application usage among businesses with broadband



Q: Which of the following does your business currently use?
(n= 1,096 TN & OH businesses with a broadband connection)

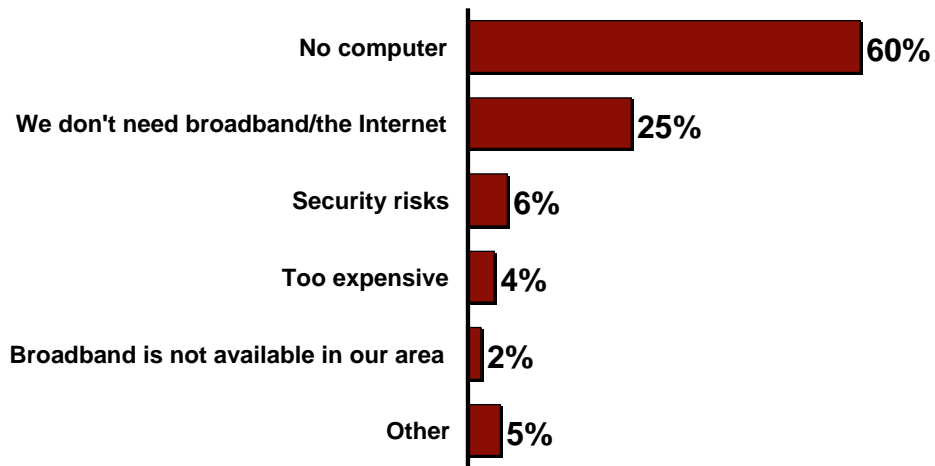
Source: July 2009 Connected Tennessee[®] and 2009 Connect Ohio[®] Survey of Businesses

For a comparison of online application usage patterns across rural and non-rural businesses see Joint Comments to this Public Notice by the American Farm Bureau Federation and Connected Nation available at <http://fjallfoss.fcc.gov/ecfs/document/view?id=7020351377>.

F. RESPONSE TO SECTION II-C-V: BARRIERS TO BROADBAND ADOPTION

Figure 6 reports the key barriers to broadband service adoption for the 39% of surveyed businesses who do not have a broadband connection. A total of 60% of these non-adopting businesses report that the top barrier to adoption of broadband services is a lack of computer ownership, while 25% of non-adopters claim that they don't need broadband or the Internet; 6% site security risks as a barrier to adoption; 4% report that the service is too expensive; and 2% report that not having broadband available in their area is a barrier to adoption.

Figure 6. Among businesses with no broadband service*



Q: Why doesn't your organization subscribe to broadband service?
(n= 477 TN & OH businesses with no Internet or broadband service)

*Percentages do not add up to 100% because businesses could give multiple responses.

Source: July 2009 Connected Tennessee® and 2009 Connect Ohio® Survey of Businesses

G. RESPONSE TO SECTION II-C-VI: WHAT APPLICATIONS ARE NECESSARY TO ENABLE TELEWORK?

For discussion of the broadband trends among teleworkers see Connected Nation's filing in this docket under Public Notice # 7, Section I, available at

<http://fjallfoss.fcc.gov/ecfs/document/view?id=7020347165>.

H. RESPONSE TO SECTION II-D-I: WHAT ARE THE PARTICULAR BROADBAND NEEDS OF SMALL BUSINESSES? DO THESE BUSINESSES REQUIRE A DIFFERENT LEVEL OF CONNECTIVITY OR APPLICATION USAGE THAN MEDIUM OR LARGE ENTERPRISES?

Please see data of business adoption patterns by sector and size presented above in Sections A, C and D.

I. RESPONSE TO SECTION II-D-IV: WHAT ARE THE UNIQUE NEEDS OF BUSINESS THAT ARE PRIMARILY OWNED AND CONTROLLED BY WOMEN?

In Connected Nation’s residential surveys of broadband usage in Tennessee and Ohio, data collected pertaining to home-based business ownership shed light into varying patterns of usage and adoption by male and female home-based business owners. Figure 7 shows that 5% of all adults surveyed report being home business owners. Of these, 62% are male and 38% are female.

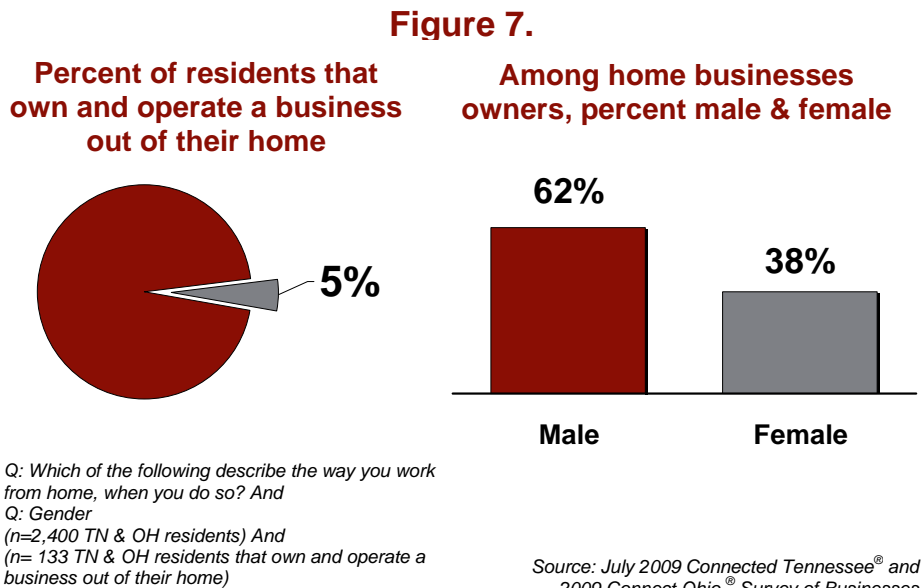
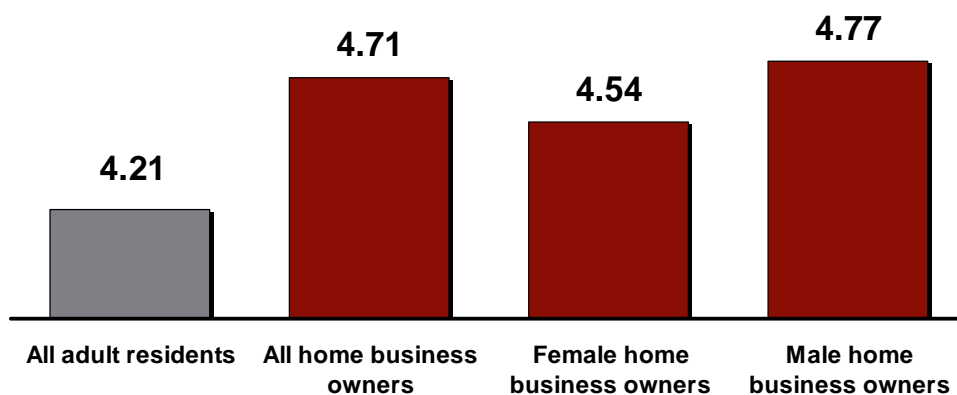


Figure 8 below reports the average reported download speeds for home connections among all adults surveyed (4.21 Mbps) and all home business owners surveyed (4.71

Mbps). Not surprisingly, home business owners report having faster connections. Male home business owners appear to have faster connections (4.77 Mbps) than female home business owners (4.54 Mbps). This gap may be due to differences in the typical type of business conducted by males and females in the home or it may be due to cultural patterns. The survey data is inconclusive.

Figure 8. Average download speed among home business owners (Mbps)

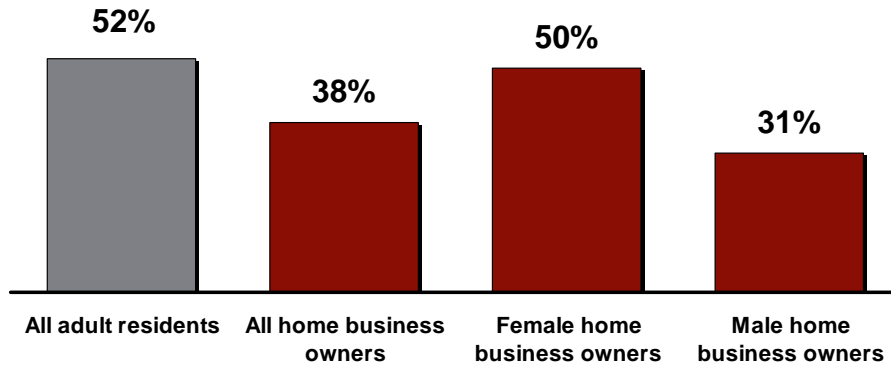


Q: To the best of your knowledge, what is the approximate download speed or bandwidth provided by your Internet service provider? (n= 1,383 TN & OH residents with a broadband connection at home)

Source: July 2009 Connected Tennessee® and 2009 Connect Ohio® Residential Survey

Figure 9 reports the level of satisfaction respondents have with the speed of their home broadband delivery. Home business owners on average are less satisfied with the speed of their broadband delivery than the average home broadband subscriber. While 52% of all home broadband subscribers are very satisfied with their broadband speeds, only 38% of home business owners are. Furthermore, female home business owners appear to be more satisfied than their male counterparts. One half of female home business owners report being very satisfied with their connection, compared to 31% of their male counterparts.

Figure 9. Home business owners who are “very satisfied” with the speed of their broadband delivery

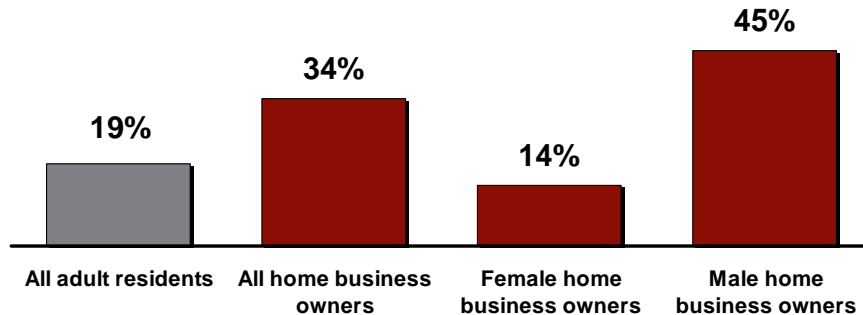


Q: To the best of your knowledge, what is the approximate download speed or bandwidth provided by your Internet service provider? (n= 1,383 TN & OH residents with a broadband connection at home)

Source: July 2009 Connected Tennessee® and 2009 Connect Ohio® Residential Survey

The data in Figure 10 demonstrate the respondent’s willingness to pay more to double their current download speeds. Among home broadband adopters 19% report that they would, compared to 34% among home business owners. Male home business owners are most likely to pay more to double their home broadband speeds at 45%, compared to only 14% of their female counterparts who report they would do so.

Figure 10. Home business owners who are likely to pay more to double their current download speeds



Q: To the best of your knowledge, what is the approximate download speed or bandwidth provided by your Internet service provider? (n= 1,383 TN and OH residents with a broadband connection at home)

Source: July 2009 Connected Tennessee® and 2009 Connect Ohio® Residential Survey